Pha Tad Ke - The Cliff to Untie and Resolve
The frangipani is the national flower of Laos but many Lao people regard it with rather mixed feelings of both admiration and fear. This ambiguity is not only prevalent in Laos, so Biba Vilayleck will try to unravel why such a pretty plant should excite such contradictory emotions.

Rik Gaddella, Pha Tad Ke Botanical Garden
The Pha Tad Ke Newsletter is distributed 3 times a year via e-mail.
Big thanks to our volunteer collaborators, and if anyone is interested to writing articles or help us with occasional translations please let us know.
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In January 2010 the Friends of Pha Tad Ke Association was created in France followed in July 2011 in the Netherlands and September 2011 in Laos. Each of these non-profit associations helps the creation of the Pha Tad Ke Botanical Garden with scientific support, fund raising efforts and educational projects. In addition the Luang Prabang Fund for Culture and Conservation that was created in 2011 in the USA accepts donations that are tax-deductible for the benefit of Pha Tad Ke Botanical Garden or other cultural and conservation projects in the Lao PDR.

Helping the Friends of Pha Tad Ke will allow you to follow the day-to-day evolution of the garden, look behind the scenes of its operations and participate in the Pha Tad Ke adventure!

Information: www.friends-pha-tad-ke.com
When you become a member for the creation phase, your 5-year (2010-2014) membership will entitle you to:

Member - € 100:
- Our newsletter (3 times a year, english/french) contains news about the garden, on-going work and actions, and articles about the flora, arts and culture of Laos.

Friend Member - € 300:
- Private visit to PTK, including boat trip and picnic (for 2 pax, booking required)
- A 30% reduction on the garden’s publications and products (except Folies)
- Access to our favoured travel agent in Laos, reductions on hotels and restaurants etc. (see list of the partners of the Friends)
- Mention of your name on our website
- An invitation for two people to the official opening.

Support Member - Institutions & Companies - € 2,000:
- Mention of your name on our website with your logo
- Discount of 10% on one of our editions « Folies »
- A private reception at the pre-opening for a group from your institution/company.

Donor Member - € 5,000 €, or more:
- Discount of 10% on two of our editions « Folies »
- Inclusion of your name on the donor plaque at the entrance to the garden.

Members can increase their involvement in the creation of Pha Tad Ke by supporting one or more of our individual projects:

- **Adopt a tree: from € 50 to € 2,000**
  Buying and planting a tree is only a beginning. It must then be fed, cared for and pruned. This takes time, money and care. Love your tree and adopt a seedling or a mature tree.

- **Sponsor a Bookparty: € 400**
  Guided visits to the gardens for groups of children or students, who will spend a day learning about Pha Tad Ke’s work and plants. The package includes transport to the garden and lunch. At the end of the day, every participant will receive a copy of our specially published books.

- **Sponsor a student: € 4,400 for 4 years**
  In conjunction with three institutions, PTK has set up a grant for the best first-year student. At the end of the first year of study, the winning student will be offered a scholarship that will allow him or her to continue his or her studies. In exchange, the recipient will be required to do a two-month work placement at the garden during summer recesses and to work at the garden for one year at the end of his/her studies.

- **Sponsor a research post: € 1,800 for one year**
  Given the heavy workload at the university and the very low salaries in Laos, there is little time left for building research projects. With this grant PTK will enable a post doc to do a year’s research on a topic chosen in consultation with PTK.

- **Sponsor a field trip: € 10,000**
  In conjunction with the Royal Botanic Garden Edinburgh, we have set up a three-year partnership to train our horticultural team and to carry out an ambitious program of monthly field trips to gather specimens for a collection of living plants that will be unique in Laos. At the same time we will collect specimens for a herbarium. Each trip will require a substantial investment in time and money but this work is imperative as it will form the very foundations of our garden and its collections.

- **Sponsor a building: from € 15,000**
  Several buildings will be required to house our collections and staff, and provide facilities for visitors. These buildings will include: Nurseries (€ 15,000), Orchid House (€ 27,000), Butterfly Farm (€ 32,000), Reception area (€95,000), Restaurant (€ 95,000), offices for research staff (€ 130,000), Traditional Medicines House (€ 135,000) and Library or Herbarium (€ 190,000).
Dr. Jana Leong and Dr. Michel Roda from Singapore Botanic Garden and Dr. Monthone Norsengsy from Queen Sirikit Botanic Garden in Thailand surveyed with Pha Tad Ke staff plants in Northern provinces of Laos: Xiengkhouang and Houaphan provinces from the 1st to the 14th of June 2013
Dr. Jana Leong and Dr. Monthone Norsengsy gave lectures about the importance of Botanical Gardens and study and research about botany to the students from Souphanouvong University at Pha Tad Ke Botanical Garden on the 15th of June 2013
Khamphien and Khanthong, agriculture and forestry staff from Phoukhoud district in Xiengkhouang province received a training supported by TABI, about orchid care at Pha Tad Ke Botanical Garden from the 12th to the 24th of July 2013.
Kongngern Sengdee and Khamphat Thongchan participated in a botanical illustrations training at the Biology Department of Khon Kaen University in Thailand in July. The study trip was sponsored by a SDC grant. Kongngern Sengdee continued his drawing studies at the Art College of Vientiane in July and August of 2013.
PhaTad Ke Botanical Garden and the Northern Agriculture and Forestry College (NAFC) collaborated on the installation of a medicinal plant garden at NAFC. A joint field trip surveyed and collected medicinal plant specimens at Ban Houay Hia and That Houay Khod in Xiengngeun district. Supported by SURAFCO.
The Friends of Pha Tad Ke Association held a presentation at the Department of Education and Sport in Vientiane on the 12th of October to present the activities of the association to school children, teachers, journalists and VIP representatives of University and Ministry. Opening of the presentation by Mr. Somphou Keophanya the director of the Department of Education and Sport in Vientiane. Mr. Somsanouk Mixay, president of the Friends of Pha Tad Ke Association gave a talk on the Friends of Pha Tad Ke Association. Assoc. Prof. Dr. Bouakhaykhone Svengsuksa, scientific advisor of PTK and board member of the Association, gave a talk on Pha Tad Ke Botanical Garden’s creation with its objectives and its activities in the term of plants study and conservation, as well as its efforts to strengthen the ability of its staff. Mrs. Somsanith Bouamanivong, Department of Ecology and Biodiversity, Head of National Herbarium of Laos gave a talk on local medicinal plants and how to preserve them.
At the end of October 2013, Pha Tad Ke Botanical Garden coordinated with the Nadou Orphanage School a book party at Ban Non Sa Art in Luang Prabang. The book party was sponsored by a group of tourists from Exotissimo Travel.
With support from Korean Forestry Department and organised by BGCI and Auckland Botanic Garden our director Rik Gadella participated in a training program with 15 participants from SE Asian institutions. After which he participated in the 5th BG Congress in Dunedin, New Zealand from October 21st to 26th.
The frangipani is the national flower of Laos but many Lao people regard it with rather mixed feelings of both admiration and fear. This ambiguity is not only prevalent in Laos, so we will try to unravel why such a pretty plant should excite such contradictory emotions. But first, there are other mysteries to consider.

**Botany**

Writers say that the frangipani is one of the most representative trees of the tropics. It is quite widespread in all the warm humid areas of the globe because it is easy to propagate; it copes well with heat and humidity and has a long flowering period. It flowers in many colours; white, red, pink, yellow and orange, usually with a yellow centre. As well, the flowers have a sweet but fairly strong fragrance; “the scent is as if one has crushed together orange blossoms and vervain leaves”, observed Descourtilz in 1827. The tree itself, which is not very big, has many varying features. It can be covered in flowers and leaves, or quite denuded, and can sometimes produce flowers even on its old, grey, gnarled branches. These variations depend on humidity and on the age of the plant.

However, most of the frangipanis that we see nowadays are hybrids. The colour of the flowers described by the scientific names is no longer any criterion for distinguishing the species, which is determined by the shape of the leaves. Botanists distinguish seven or eight species of frangipani, but there are many hundreds of hybrids.

One can say that *Plumeria obtusa* is the most common in the Southeast Asian peninsula, and perhaps the most beautiful, with its thick, shiny leaves, with a rounded tip and white flowers with a yellow centre. It comes from Mexico. *P. acutifolia* has the same origin. Its leaves are pointed, but not shiny, and its flowers can be white or red. Some botanists think that *P. rubra* is actually the same species and it is from this one that so many cultivars have been propagated.

*P. alba* originated in the Antilles. Its leaves are lanceolate, often curled at the edges, and its flower is large and white with a yellow centre.

1 Descourtilz; 2 Plumeria obtusa
P. pudica has recently appeared in Laos. It can be recognised by its leaves, which form a point and widen into a lozenge shape. The flowers are large and white.

One hybrid is worth mentioning, which is *Plumeria tricolor*, with a big flower with a yellow throat and white petals edged with bright pink.

The fruit of the frangipani is rarely seen, being two blackish, leathery follicles which Australians call 'Dead Man's Fingers'.

**Names**

Before we talk about the common names we should take a look at the generic name *Plumeria*. It was given by Linnaeus in honour of French botanist Charles Plumier (1646-1704) who was considered the first to describe this tree after one of his four voyages to the Antilles, although the priest Francisco de Mendoza actually described the tree before him in 1522. Members of the clergy were once quite prominent in botanical research.

The names of the frangipani in European languages are inspired by that of an Italian, the Marquis Frangipani, who, in the 16th century, created a popular fragrance for perfuming gloves and later for some kinds of pastry. The first travellers to America are said to have recognized this fragrance as that of the *Plumeria*. Not surprisingly, in English, the tree is called Frangipani but also *Temple Tree, Graveyard Tree* and, like the Australians, *Dead Man's Fingers*. How did such a pretty flower become both the flower of the temple and of the cemetery? We will try to answer this a little later.

1. *P. acutifolia rubra* ; 2. *P. acutifolia* ; 3. *P. pudica* ; 4. *P. tricolor*
In Southeast Asia, the names for Plumeria are often similar to the Thai and Lao name of champa. There is champaca or campa in many Indian languages, cempacka in Malaysian, champei in Khmer … etc.

Cham, Champa, Champaca

But where does this name Champa come from? There are two theories. According to the first, an explanation which we get from a blog about Laos, says that: “The name of the flower Dok Champa comes from dok, meaning flower, Cham, the name of the people and pa or paa, meaning to leave or abandon. Together they mean the flower that was left by the Cham people”. So the Dok Champa dates from the 5th century, during the reign of the Kingdom of Champa in the south of Laos. They planted the flower everywhere and after the Cham people disappeared, the Lao people made it their national emblem and gave it that name.”

The theory that the Cham people knew the frangipani is supported by some writers, mainly from India, who think that Plumeria was known in southern Asia since the beginning of the Christian era.

In the Guide to Myanmar by Michel Ferrer, we read that, “The legend says that the King Ashoka made a statue of frangipani wood. The city that developed afterwards around the statue and its temple, was called Sagar which meant frangipani in the local language.” But, the great Buddhist King Ashoka lived in the 3rd Century B.C. More seriously, Charles Archaimbault, in ‘Presence of the Lao Royalty’, writes that the Khmer king, (in around the 13th century), made annual human sacrifices at Wat Phou. “In the sixth month, when the frangipani flowers began to fall, he climbed to the sanctuary and presided over the sacrifice of a virgin couple.”

To see the temple now, nestled among the gnarled, grey frangipani trees like ancient walls, one cannot but think that they have always been there, but, Harmand, a medical botanist who visited the site in February 1877, gave detailed descriptions of quite a number of trees, and never mentioned frangipanis.

1 The rare fruits of the Plumeria; 2 Michelia champaca, dok champi
An Indian writer, Shakti M. Gupta, who specialises in the great myths of India and has studied them from the walls of temples, where she notes that champa flowers are one of the most popular motifs in floral decorations. In particular she discusses a statue of Rishyasringa, a mythical character with a crown of horns, which is found under a champa tree in the temple of Mathura which dates from the 2nd century B.C., and which she thinks is a frangipani tree.

The second theory suggests that the Lao name Champa, as noted, comes from Sanskrit. In India, campa means a tree with a white flower and a powerful fragrance, called miche- lia champa (or champaca), a variety of Magnolia. With the introduction of Plumeria, a highly fragrant tree with white flowers, the same name was used. The Lao people borrowed the name and made it into Champa, and gave the name champi to the Asian Magnolia.

In the Sanskrit texts, Vishnu is described as wearing a royal crown with a Naga flower at the centre, known as Nagapuspa. This flower is also one of the features of Bodhisativa Maitrey. So if you look up Nagapuspa, you will find magnolia and frangipani, but also Mesua ferrea, or Ylang-ylang, all highly fragrant flowers. Therefore, besides the modern-day names of Champa and Champaca, the name Nagapuspa designates a tree with fragrant white flowers, so it is impossible to rely on names to determine the origins of the frangipani.

From the West Indies to the East
Focusing on history rather than legend, we must remember that Plumerias are American. There remains the question if the Plumeria came from the west or the east. They were known to Europeans since the 17th century, according to the descriptions by Plumier in 1693. Some botanists still hesitate about the time of their origin, like Lamarck, who wrote at the end of the 18th century that, "The four known species of frangipani grow in the warm climates of America, the East Indies, and the islands of France and Bourbon."

But since 1797, Tournefort describes them as uniquely American. In 1788, Bernardin de Saint Pierre, who set his novel 'Paul et Virginie' on the island of France, (actually Mauritius), describes young girls with belts "made of garlands of frangipani flowers." He did actually live on this island in the Indian Ocean, but one suspects that his account was in response to the fascination of his contemporaries with ideas of exotic geography.
In other evidence, the frangipani tree was introduced in Marseille in 1867 from the island of Mauritius. In Tahiti, the first frangipani trees (*tipania*), were introduced by a nurseryman from Valparaiso in 1852.

So it is probable that the frangipani was introduced into Asia not via the west, but from eastwards, probably via the Philippines, as has been affirmed by a number of writers. It would have been the Portuguese, well known for their maritime exploration voyages from the West Indies to the East and back, who would have carried the trees in their ships.

**Cough Syrup and other uses**

It is in the West Indies that we find the first usage of Frangipani in Descourtilz, who described “a tree whose flowers were used to perfume the undergarments of the Creoles.”

But undoubtedly it was in the East Indies that the use of the flowers for their fragrance was more extensive. They produced sesame oil in which they macerated thousands of flowers. This oil and also perfumed water had many uses, both profane and religious. In cosmetics the flowers added “an exotic touch of honey and almond”, to creams and unguents.

In the West Indies, it’s said that the fruit is edible, a startling notion because it is well known that the Frangipani tress like most Apocynaceas, is a highly toxic plant. In Cambodia, it is reported that the flowers are eaten as fritters.

Descourtiz also tells us that the Plumeria flowers are used to make cough syrup, which is used in many countries. The sap of the frangipani tree is toxic and is sometimes used to burn off warts. In very small doses, it is used as a purgative or even for abortion. The bark of the trunk and roots are used for menstrual problems and for some venereal diseases. The leaves, often crushed, are used to treat bruises. All of these uses are reported in Laos. In Vietnam, a decoction of the leaves is applied to the chest of a mother-to-be to improve the quality of her milk.

Frangipani flowers are seen everywhere in daily life in Laos. They are used as a trademark for a number of products; washing powder, cakes, chips and is seen on all the aircraft of the Lao airlines. They are the inspiration for artists, singers and painters.
Cemetery Tree

Actually, the frangipani tree, even when it looks to be dead, seems to be able to regenerate itself. Without the least trace of foliage or flowers it will simply burst into new leaf. A cut branch will re-grow even after a long time out of the ground and thus seems to offer the hope of rebirth. On Reunion Island, in the shade of the frangipani trees, the Muslim cemetery is a place of great solemnity. One could really speak of an ethnic visibility on the island because “The dwarf palm seems to be the emblem of the Hindu graves, and the frangipani marks those of Indian Muslims.” In India several observers have noted that frangipani flowers are only used for funerals. In Indonesia, among the largely Muslim population, the frangipani is considered the tree of the cemetery. One observer described “The atmosphere of calm, so typical of cemeteries in Java, where in the majority of cases, the trees are frangipanis (Kemboja).”

In the cemeteries of Polynesia, the graves are often sheltered by frangipanis and the flowers fall languidly onto the headstones including those of Gauguin and Jacques Brel at Hiva Oa. In 1931 in Indochina, Henri Goudon described the tombs of the ancient emperors of Hue as “Shaded by fig trees, banyans, pines and fragrant frangipanis, these gardens of the dead lie smiling and enchanting, and nothing reminds me of their funereal purpose except for the lone mound in an enclosure around the plate of bronze under which the emperor lies in eternal rest.”

In Laos, at the time of the New Year, young girls and women seek out a mysterious liquid in which they dip the flowers of frangipani and tuberose as a tonic. In his novel ‘The Poppy Trail’, Francois Cucchi describes a funeral in the north of the country where the body of a dead child is covered in frangipani blossoms to decorate the pyre.

Even literature is imbued with this image. Mia Couto, a Mozambican writer, in ‘The Frangipani Veranda’ tells a strange story of life, death and madness to which a frangipani is a mute witness. “I was buried beside this tree. The fragrant flowers of the frangipani rained down on me, so much so that I can smell the perfume of their petals.”

And finally, there is the poem published in 1861 in a literary review, entitled ‘Coconut Island’

I visited your grave
Surrounded by bamboo, coconut trees, Oleanders, frangipanis
Strewing their flowers on every stone.

But because it is a tree of death and immortality, the frangipani has a special connection with the spirits.

1 The grave of Paul Guaguin under a frangipani; 2 Frangipanis in a cemetery in the island La Réunion
Tree of the Spirits

Strong fragrances are associated with bad spirits, either because they like them or fear them. In Vietnam, many travellers have noted that “In inhabited areas, there are seldom any fragrant flowering plants like frangipanis, for fear of attracting bad spirits.” In Cambodia, Evelyne Poree-Maspero, who has studied rituals, has also remarked on this, saying “The frangipani flower is well-loved by spirits and demons.” It is offered to the arack, the ‘soul’ of a dead person.

In the south of Laos, they spray the mischievous spirits with water perfumed with frangipani flowers. In ‘A History of French Laos’, published in 1930, we read that “On April 19th, 1902, around 8 in the morning, the Commissioner at Savannakhet was surrounded by hordes of Laoians, groups of visionaries chanting and playing the khaen (Lao flute), convinced that the bullets of our guns would change into frangipani flowers.”

In the north, Anderson tells us that “There is an old legend which probably originated in China, about P. rubra. This plant is used by the religious leaders to protect the Lahu from evil spirits and to subdue some other spirits, particularly those which affected children. The shaman could prescribe the use of the flower in love affairs.”

The Tree of Unrequited Love

The frangipani is also the tree of love and more than that, of chaste love. In the Lao literary tradition, it grows from the bodies of two chaste lovers. “From their ashes grew a beautiful plant, a champa tree, whose elegant stature and straight branches recall their virtue and faith and whose soft and gentle perfume evokes eternal regrets. The whiteness of its flowers and the absence of pistil and stamen bear witness to the purity of their great love.”

This is how Pham Suan Ghiai reinterpreted the legend, adding, “We can see with naked eye that the frangipani flower has neither pistil or stamen.” Actually, the reproductive organs are not visible because they are hidden well inside the corola of the flower. This assertion is also made to suggest that the frangipani tree can dampen the sexual ardour of monks.

“There is no happy love”, says the poet. The frangipani is called lan thom in Thai, which, slightly modified to ranthom, means sadness, and has been chosen as the name of a famous television drama. It has had such an impact that the Princess Maha Chakri Sirindhorn has suggested re-naming it Plumeria lilawadi. But nothing was done about it and the negative image of the tree remains. It has influenced neighbouring Laos and in both countries, the frangipani has become the tree of unhappy love, forbidden love, hopeless love, discontent and narcissism.
The Temple and Offering Tree
This hasn’t always been the case. We have quite a few accounts of the use of this flower as an offering as much secular as religious. The first travellers were received with “bewitchingly fragrant baskets” filled with frangipani. Accompanied by candles, “they are a sign of respect and genuine welcome.”

They are part of many domestic religious practices along with incense sticks, betel chews and alcohol. Even more, they are a material symbol of the Buddhist religion; as expressed by Amphay Dore who wrote, “The red hibiscus, the flower of the spirits, embodies the primary Lao cultural identity, as opposed to the frangipani, the flower of offering at monasteries which symbolizes Buddhist thought. The Lao soul is found somewhere between these extremes, impassioned like the colour of the first, captivating and subtle, like the second.”

Amnat
The image of the frangipani has evolved rather in the last few decades. Before, the flowers were well represented in both religious and secular ceremonies. Women threaded them on bamboo sticks to decorate the baci tray. It was planted in the courtyards of temples and other public places. You will see the gnarled grey branches of old trees along streets and in sacred precincts. But the young feet are now rare in the temples and we have not seen dok champa on a baci table, even less as an offering at shrines.

Perhaps the superstitions of the Thais have revived the ancient images of legends. In the narrative Champa si tone, (the four feet of the frangipani) the tree gives new life to four young princes who were murdered by their wicked stepmother. They are immortal, cannot be uprooted and now wander over the waters.

It was Somdi, a young Lao gardener who solved the mystery of the Frangipani tree for me. He told me the preceding story and then what happened to him. He spoke of the frangipanis and his father planted some against the advice of his neighbours and then his brother was killed, so his father cut them down and threw them away. Somdi thinks that people

1 Rares are these days offerings with frangipani flowers
2 At vat Phou
who do not have the power or the authority, like you and I, should not plant frangipani trees. Only those with amnat or power, like the monks in the temple or the king in his palace, can plant them.

This perception of the frangipani is the same all over Southeast Asia. People can try to tame the tree but it remains “a brooding presence, a primordial force.” The poet speaks of it as does Pierre Nginn in ‘Champa, Flower of Laos’ but he knows that there are no answers to his questions.

O flowers, precious gifts, refuge of symbols,
You who speak of love to young girls, of return
To exile; you who live in parables,
You who are the people’s offerings to the temple,
You who are born and die every day,
How long have you reigned over this ancient earth?
Aeschynomene indica, Fabaceae
Desmodium styracifolium, Fabaceae
Phyllodium vestitum, Fabaceae
Mucuna hirtipetala, Fabaceae
Cassia hirsuta, Fabaceae
Flemingia sp., Fabaceae
Canavalia gladiata, Fabaceae
Clitoria mariana, Fabaceae
Project Space • Luang Prabang

Project Space • Luang Prabang is a multifunction nonprofit space for producing exhibitions and events. The building with three floors, and a rooftop terrace with stunning views, is in the centre of Luang Prabang and will host several exhibitions per year and collaborate with other cultural institutions in Luang Prabang and elsewhere, on joint events and projects.

Project Space • Luang Prabang is an initiative of Jean-Pierre Dovat and Rik Gadella.

Project Space • Luang Prabang
Kitsalat Road 6 (Opposite Dara Market)
Luang Prabang, Lao PDR
Tel: + 856 71 21309

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