Ethnobotanical Studies
4.0 Muntingia calabura L.

*Muntingia calabura* L. is a member of the family Elaeocarpaceae. There are approximately five species in the genus *Muntingia*. *M. bartramia* L., *M. calabura* L., *M. calabura* var. *trinitensis* Griseb., *M. glabra* Spreng. and *M. rosea* H.Karst. It has been nicknamed as strawberry tree (because its blossoms resemble strawberry blossoms) and cherry tree (named for its sweet sticky fruits, juicy and full of tiny seeds).

4.1 Taxonomy

Kingdom: *Plantae*
Phylum: *Magnoliophyta* (also placed in *Tracheophyta*)
Class: *Magnoliopsida*
Order: *Malvales*
Family: *Elaeocarpaceae* (also placed in *Muntingiaceae* and *Tiliaceae*)
Genus: *Muntingia*
Specific epithet: *calabura* L.
Botanical Name: *Muntingia calabura* L.

4.2 Common Names

Jamaica cherry (Florida), Strawberry tree (Jamaica and Florida), Panama berry (Hawaii), Japanese cherry (Malaysia), buah cheri (Singapore), capulin (Mexico, Central America), pasito (Panama), chitató, majagüito (Colombia), majaguillo (Venezuela), bolina yamanaza (Peru), calabura (Brazil), Chinese cherry (India)

4.3 Botanic Description

Small evergreen tree, 3-12 m tall, growing and flowering continuously on fan-like branches; mainline branches becoming erect after leaf fall and so in turn contributing to the formation of the trunk (Troll's architectural model). Branches horizontal, pendent towards the tip, soft hairy. Leaves simple, ovate-lanceolate, 4-14 cm x 1-4 cm, with prominent asymmetry of the leaf blade base; leaf margin serrate, lower leaf surface greyish pubescent. Flowers in 1-3(-5)-flowered supra axillary fascicles, hermaphrodite, pentamerous with white petals; number of stamens increasing from 10-15
Plate 1: Muntingia calabura L.
in the first emerging flower in the fascicle to more than 100 in the last; development of
the superior ovary declining in the same order, so that from the third and later, flowers do
not normally set fruit. Fruit a dull-red berry, 15 mm in diameter, with several thousand
tiny seeds in the soft pulp.

4.4 Ecology and Distribution

4.4.1 Habitat

It is a typical pioneer species, colonizing disturbed sites in tropical lowlands,
which can sustain continuous growth. The species is native to the New world from
Southern Mexico to Bolivia and Brazil. It is cultivated for its fruit in southern Florida and
for shade and beautification in the Bahamas, Cuba, Jamaica, the Dominican Republic,
and Puerto Rico. In South-East Asia it is one of the most common roadside trees,
especially in the drier parts such as in eastern Java. It establishes itself in trodden yards
and along shop fronts where no other tree takes root.

4.4.2 Environmental Requirements

- Temperature: This tree grows best under humid, tropical conditions.
- Altitude: Up to 1300 m
- Soil: The tree grows so easily and widely that it seems well adapted to many
different soil types. It is known to tolerate poor soil but prefers sand. The
preferred pH is 5.5-6.5.

4.5 Propagation and Management

4.5.1 Propagation

The tree is not normally cultivated it spreads spontaneously. Fresh seed
germination is enhanced by passage through the digestive tract of bats. The seed is well
represented in the seed banks of forest soils and requires the high temperature and light
conditions of large gaps in the forest for germination; the seedlings do not tolerate
shade.
4.5.2 Management

Seedlings flower within two years. Rich moist soils ensure continuous production, which is sustained by replacement pruning.

4.6 Functional Uses

4.6.1 Products

- Food: School children compete with bats and birds for the sweet berries, which can also be preserved, as indicated by the Sri Lankan name ‘jam fruit’.

- Medicine: Old sources in the Philippines mention the use of flowers to prepare an infusion against headaches, colds, etc. The infusion is highly valued as an antispasmodic. The flowers are said to possess antiseptic properties. The pliable bark can be used as rough cordage. According to Peruvian folklore, its leaf can either be boiled or steeped in water to provide relief from gastric ulcers or to reduce swelling of the prostate gland, respectively. The strips of its bark are boiled and used as a wash to reduce swelling in the lower extremities. Leaves and Roots found to possess anti-tumor properties. Leaves also possess good antinociceptive, antibacterial and hypotensive activity.

- Fiber: The bark provides a tough, silky fiber used for bark cloth and cordage. With a 43 percent yield of cellulose, the tree has been considered a potential source of paper pulp in Brazil.

- Timber: The wood is soft and is valued mostly as fuel.

4.6.2 Services

- Beautification: This attractive tree is commonly planted in residential areas for ornament.

- Shade: The tree serves as a roadside shade tree. It seems suited for interplanting among agricultural crops and makes a good shade tree for livestock.
4.6.3 Pests and Services

No serious diseases or pests have been reported, apart from bats.

4.7 Chemical Constituents

Flavanones and flavones are the major components present in *Muntingia calabura* L. (2R,3R)-7-methoxy-3,5,8-trihydroxyflavanone, 2(S)-5-hydroxy-7-methoxyflavone, 2',4'-dihydroxychalcone, 4,2',4'-trihydroxychalcone, 7-hydroxyisoflavone and 7,3,4'-trimethoxyisoflavone are some of the important components isolated from the leaves.  

![Figure 9: Berries of *Muntingia calabura* L.](image-url)