**Caesalpinia pulcherrima (L.) Sw.**  
**CAESALPINIACEAE**

**Synonym:** *Poinciana pulcherrima*

**Common names:** Peacock flower, dwarf poinciana

**Dhivehi name:** Fa’thangu

**Status:** Common

**Description:** An evergreen, low-branching and fast growing shrub that can grow up to 4 m tall. Canopy is round, moderately dense and wide spreading with smooth outline. Occasional pairs of thorns can be seen at nodes. Leaves are bipinnately compound and opposite or sub-opposite in arrangement and 20 to 30 cm long. Each leaf has four to six pairs of pinnae and each pinna has 7 to 15 pairs of leaflets, which are oblong or ovate in shape. They are 1 to 1.5 cm long and have smooth margin. Inflorescence is a corymb. Flowers are very showy, large, red, orange or yellow in colour. Each flower has five sepals and five petals and the fifth petal is far smaller than the other four. Fruit is a pod, which is flat, compressed, and green when young, brown when ripe. Each pod is about 10 cm long and contains five to six seeds.

**Uses:** Feathery foliage and brilliant scarlet and yellow flower and quick growth rate make *C. pulcherrima* a popular ornamental plant. It blooms all year round. In the Maldives, it is found grown commonly in home garden, parks and other public places. A variety of *C. pulcherrima* that has red flower with yellow margin is the National Flower of the Maldives.

**Ecology and Management:** Grows well in all kinds of soil including sand, clay, loam, acidic or alkaline soils. It is highly drought tolerant but is intolerant to flooding. It is moderately tolerant to aerosol salt and thus can be planted along the beach. Though it can grow in partially shaded places it requires full sun for flowering. Propagation is by seeds. Germination will be faster if the seeds are sanded slightly or soaked in hot water for hours. Wildlings that grow below the mother tree in home garden, parks and other public places can also be used for outplanting and they perform quite well. Tipping of the branches during the growing season creates a fuller shrub and more flowers. It needs pruning and normally grown with trainer, otherwise trees will droop as they grow.
Caesalpinia sappan - Bey's fathangu
**Caesalpinia sappan** L. 

*CAESALPINIACEAE*

**Synonyms:** *Caesalpinia minutiflora*, *Binacaea sappan,*

**Common names:** Indian redwood, sappan wood

**Dhivehi name:** Bey’s fathangu

**Status:** Rare

**Description:** A small- to medium- sized sized, shrubby spreading tree that grows to 4 to 8 m tall. Bark is greyish-brown in colour with distinct ridges and sharp prickles. Young branches and buds are covered with soft small hairs. Leaves are bipinnately compound, 20 to 45 cm long and are alternately arranged. Each leaf has about 8 to 16 pairs of pinnae, which may be up to 20 cm long and with prickles at the base. Each pinna has ten to 20 pairs of oblong or oblong-rhomboid shaped leaflets, which are attached neither parallel nor at right angle to rachis and thus, give a distinctive shape to whole leaves. Leaflets are slightly shiny. Inflorescence is a raceme with long peduncle and located at the tips of the branches. Flowers are yellow coloured, 2 to 3 cm long with five shiny sepals and five haired petals. Fruit is a pod, which is shiny, thick, flattened, oblong and woody. Fruits are 7 to 8 cm long and 3 to 4 cm wide and dark-brown in colour with prominent recurved beak. Each pod contains two to five flattened brown seeds.

**Uses:** It is a multipurpose tree. Wood, which is known as redwood or Brazil wood, is dark red in colour, hard and lustrous and resistant to termite. It is of great value for making violin bows. It is commonly used for making walking sticks. It is also used for inlaying work and cabinet making. The heartwood yields a valuable dye, which is used in colouring leather, silk and cotton. This dye is also used to colour meat, wine etc., and has the potential to be used as a safe natural colouring agent. Leaves contain a pleasant smelling volatile oil. Decoction of the heartwood is used as a powerful agent to stimulate menstrual flow and a tonic for women for fast recovery after childbirth.

**Ecology, propagation and management:** It performs well in all kinds of soils and withstands any amount of drought but is less tolerant to wet soil. It requires full sunlight for better performance. Propagation is by seeds and stem cutting. Seeds are viable for about three months, which require scarification or soaking in warm water for about ten minutes before sowing. It is a fast growing species and within a year it reaches a height of 3 to 5 m. Stem cuttings, about 2.5 cm in diameter and 10 cm long are also used for propagation. Initially sappan wood grows straight, but after reaching a height of 2 to 3 m, branches start to droop and by means of this spine entwine with branches of nearby tree to form thickets. In commercial cultivation, tree is cut about 1m above the ground and stump sprouts profusely within two weeks.
Calophyllum inophyllum - Funa
Calophyllum inophyllum L.  

CLUSIACEAE

Common name: Alexander Laurel wood

Dhivehi name: Funa

Status: Abundant in the southern islands and common in the northern islands.

Description: A large- to medium-sized, slow-growing evergreen tree that grows 8 to 20 m in height but is capable of reaching 45 m in favourable environment. Crown is spreading with many large irregular branches and is round or pyramidal in shape. Bark is thick and light grey to grey in colour with alternately arranged diamond-shaped fissures and flat ridges. Leaves are stiff, shiny and oval, oblong-oval shaped. They are arranged oppositely along the branches and dark green in colour with close set of parallel veins. Both the tip and base of the leaves are round. Inflorescence is a stalked raceme. Flowers are white and small with four oblong, spreading petals. Stamens are golden yellow in colour and pistil is pink coloured. Flowers are fragrant and sparkling like stars against the dark green background of the leaves. Fruit, which grows in a cluster, is a round, ping-pong ball-like drupe with leathery skin. It is green when young, turning to yellow and then brown and wrinkles when ripe. Fruit skin covers a hard woody shell with corky inner layer, containing a seed. Trunk exudes a gum when wounded, which solidifies quickly.

Uses: It is one of the finest timber trees of the Maldives and widely used in boat building. Wood is hard, durable and fine textured with moderately dense and interlocked grain. It shrinks appreciably upon drying and thus is difficult to work with. Seed is roasted and made into a paste by grinding with the charcoal from the coconut husk and this paste is applied in between the plates in boats as waterproofing. Seed oil is poisonous but used to light lamps, as it lasts for a long time. The seed oil is also used in ayurvedic medicines. It is also a handsome ornamental and shade tree.

Ecology, propagation and management: It tolerates a wide range of soils but grows best in well-drained sandy soil in coastal areas. It is a hardy species, tolerates high wind, aerosol salt spray, drought and even brief period of water logging. It is also tolerant of shallow and saline soils. Propagation is mainly by seeds. Seeds may be sown directly or seedlings can be raised in nursery for outplanting. In order to increase the rate and timing of germination, ripe fruits may be soaked in water overnight, which will facilitate easy removal of skin and then shells can be cracked just prior to sowing. Nursery raised seedlings can be outplanted after one to three months. Seedlings should be hardened off before outplanting. Performance of transplanted wildlings is poor.
Calotropis gigantea - Ruvaa
Calotropis gigantea (L.) R. Br.  

ASCLEPIADACEAE

Common names: Giant milkweed, bowstring hemp

Dhivehi name: Ruvaa

Status: Occasional; found mostly in wasted land nearby residential areas.

Description: A medium sized shrub that may grow up to 3 m tall. Bark of the stem is yellowish-grey and has longitudinal fissures. Leaves are elliptic to oblong in shape, 8 to 10 cm long and 5 to 8 cm wide with pointed tip and heart-shaped base. Leaves are thick and feathery to touch, covered with soft white hairs. Flowers are arranged in auxiliary or sub-terminal simple or compound flower head. Flowers are drawn on the outside. Corolla is about 2 to 3 cm in diameter and dull purple or purplish-lilac in colour. In a variety of giant milkweed flowers are white in colour. Fruit is follicle, recurved, oblong in shape and about 7 to 10 cm in length. Seeds are ovate in shape, 5 to 6 mm long with bright, silky-white fibrous material (floss). Flowers are produced throughout the year.

Uses: Strong fibre can be extracted from the stem, which is durable under water. In the Maldives, giant milkweed stems are kept in the seawater till they become soft and then fibre is extracted from the softened stems. This fibre is so strong that it is commonly used to make loops in the fishing lines from which hooks are suspended. Fibre extracted from the stems was once used as bowstring. Wood is used to make fine quality charcoal and gunpowder. Floss obtained from the fruit is used to stuff mattresses. The plant as a whole can be allowed to mulch in the soil to provide protection to crops against soil-borne microbes. In the traditional medicine of the Maldives, five parts of the plant, namely, roots, bark, leaves, flowers and fruits are used to treat rheumatism. Leaves are considered as a good pain reliever. The matured leaves are smeared with sesame oil, warmed and pressed on aching body parts to provide relief from pain.

Ecology, propagation and management: Calotropis gigantea is normally considered as a wasteland weed. It is found growing in all types of soil including wet clay soil to dry coastal sands. It grows in a xerophytic condition also. It is not normally cultivated but in some countries it is grown as an ornamental plant. In nature, seeds with a parachute of hairs (floss) are easily spread by winds. Seeds are also spread by water over a long distance. Local stands of C. gigantea normally increase through root suckers.
Carica papaya - Falho, veyo falho, rangu falho, ran falho
Carica papaya L.  

CARICACEAE

Common names: Papaya, papaw

Dhivehi names: Falho, veyo falho, rangu falho, ran falho

Status: Commonly cultivated in home gardens both in the northern and the southern islands.

Description: A fast growing, woody, tree-like herb that grows up to 3 m tall. It normally does not branch but if the top is cut off or injured, it produces a few branches. Trunk is straight, hallow and green or deep purple in colour with prominent leaf scars. Leaves are arranged spirally and clustered at the top of stem. Leaf stalk is about 1m long, hallow and succulent. Leaf is divided deeply into five to nine segments with prominent yellowish ribs and veins. Flowers are fleshy, waxy and slightly fragrant. Some plants bear only short-stalked female flowers whereas some other plants may bear only male flowers, which are clustered on 1.3 to 1.6 m long panicles. Some plants bear bisexual flowers. Male or bisexual plants may change completely into female plants after being beheaded. Fruit is a fleshy berry, oval to nearly round or somewhat pyriform or elongated club-shaped. Fruit has thin, waxy skin, which is green in colour when young, becoming light or deep yellow as it ripens. Flesh is succulent, yellow or golden-yellow or orange-red in colour, aromatic and sweet. Seeds look like pepper, about 5 mm long, black or grey-black in colour and attached to the flesh by a soft, white, fibrous tissue. All parts of the plant are rich in white latex.

Uses: Ripe fruits, available throughout the year, are eaten fresh and widely used in salads. Papaya juice, prepared from peeled fruit, is a delicious drink. In the Maldives, unripe fruits are used to prepare spicy curry whereas a special dish called “falho murubb” is prepared by cooking young ripe fruit in sugar syrup. Fruits and leaves can be used to tenderize meat.

Ecology, propagation and management: Papaya grows well in hot places and requires light and porous soil rich in organic matter for better performance. It is also capable of growing in marl, scarified limestone and other types of poor soils. However, it is very sensitive to water stagnation and even well-grown plants would be killed by root rot in excess moisture. Papaya is normally propagated by seed. Seeds, extracted from ripe fruits, are washed to remove gelatinous seed covering (aril) and then dried. Dried seeds are dusted with fungicide to avoid damping-off, which is a common cause of loss of seeds. Rate of germination is high, if the seeds are planted as soon as they are extracted from the fruits. Papaya can also be grown from semi-hard woodcuttings, which need to be hardened off for a few days before planting. Air-layering is also practiced in a small scale to reproduce certain varieties.
Cassia auriculata - Ranauraa
Cassia auriculata L.  

CAESALPINIACEAE

Synonym: *Senna auriculata*

Common name: Mature tea tree

Dhivehi name: Ranauraa

Status: Occasional; once it was common in wild in many of the islands of the Maldives but now it is found only in a few islands.

Description: A profusely branched, evergreen shrub that grows up to a height of 4 m. Bark is smooth and reddish brown in colour. Leaves are bipinnately compound and are 5 to 10 cm in length. Each pinna has seven to nine pairs of leaflets; leaflets at the tip of the pinna are broadly ovate whereas lower leaflets are oblong-elliptical in shape. Stipules are auricle or lunar shaped and persistent, by which it can be easily distinguished from other shrubs of *Cassia*. No gland is present on the petiole but they can be seen along the rachis, opposite to leaflets. Flowers are yellow in colour, 2 to 5 cm long and 5 cm in diameter and arranged in terminal compound inflorescence. Fruit is a thin flat pod, pale brown in colour, about 15 cm in length and 1.5 cm in breadth and crumble easily. Each pod contains 6 to 12 small, compressed seeds.

Uses: *Cassia auriculata* has high medicinal value and is widely used in the preparation of different kinds of traditional medicines. Leaves and seeds are considered as natural laxative, frequently used to alleviate occasional and habitual constipation. Dried flowers are commonly used in the treatment of diabetes. In the Maldives, flowers are boiled and used as an ingredient in the preparation of a traditional medicine, which is given as a post-partum medicine to women after childbirth; this medicine is considered as a tonic for the young mother and also said to have properties to clean up the womb. It is also used to ease the discomfort in women during menstruation.

Ecology, propagation and management: This sun-loving plant grows well in all kinds of soil but the performance is good in porous soil, including coastal sands. It also grows well in dry areas. It is not cultivated in the Maldives but can be easily propagated by seeds. In the wild it often forms large clumps in open places.
Cassia fistula - An’malthassh
Cassia fistula L. | CAESALPINIACEAE

Common name: Golden shower

Dhivehi name: An’maalthehsh

Status: Occasional; grown as an ornamental tree in public places.

Description: It is a medium sized, deciduous, fast growing tree, about 5 to 10 m tall. Crown is oval or vase shaped. Trunk is straight. Bark is smooth, slender and pale grey when young, turning to brown and scaly in old trees. Branches are well spaced and dropping. Leaves are bipinnately compound, 20 to 40 cm long with four to eight pairs of leaflets. Each leaflet is about 8 to 10 cm long, 2 to 4 cm broad with distinct petiole. No gland is present in the leaf. Leaves drop from the tree for a short period of time during the summer. Flowers are bright or golden yellow in colour, 3.5 to 4 cm in diameter, arranged in drooping racemes, which are about 30 to 60 cm in length. Flower bunches appear when the branches are bare, just before the new leaves emerge and during that time it looks like as if the entire tree is clothed with flowers. Fruit is a cylindrical pendulous pod, 40 to 70 cm long, smooth and purple in colour. Fruit has numerous transverse septa between the seeds and walls of the septa are with black, sweetish pulp. Each pod contains about 25 to 100 seeds, which are light brown in colour, hard, lustrous but poisonous.

Uses: In the Maldives, it is grown as a shade and ornamental tree. However, it has many other uses. Wood, which is red in colour, is hard and heavy, strong and durable and thus suitable for cabinet work, interior work, posts, wheels and mortar. It is also used in ayurvedic medicine to treat various kinds of diseases. Roots are used to treat various skin diseases and syphilis. Leaves are useful in alleviating rheumatism. Flowers are used as a mild laxative and as an antipyretic.

Ecology, propagation and management: Golden shower grows on clayey, loamy, sandy, acidic and alkaline soils but it performs well in well-drained sandy soil. It requires full sun. It is moderately drought and saline tolerant and also tolerates aerosol salts. Thus, it is suitable to be planted in the coastal areas. Propagation is mainly by seeds. Seeds can be soaked in concentrated sulphuric acid for 15 minutes and washed thoroughly and soaked in water for 24 hours before sowing and such treated seeds will germinate within a day. Manual scarification can also be done before sowing. It coppices vigorously and produces root suckers freely. Young trees need staking and pruning for the development of a well-shaped and structured crown.
Cassia occidentalis - Dhigu thiyara
Cassia occidentalis L. \textit{AESALPINIACEAE}

Synonym: \textit{Senna occidentalis}

Common names: Coffee senna, fedegoso

Dhivehi name: Dhigu thiyara

Status: Common; grown near houses.

Description: A much branched, smooth, half woody herb or shrub about 0.8 to 1.8 m tall. Stem is erect and without hairs. Leaves are bipinnately compound and about 20 to 25 cm in length. Each pinna has four to seven pairs of leaflets, which are 3 to 9 cm in length and 2 to 4 cm in width and arranged oppositely. Leaflets are ovate or ovate-lanceolate in shape with a long, fine pointed tip. Each leaf has a distinct spherical-shaped gland, which is located about 0.3 to 0.5 cm from the base of the petiole. This is one of the features that can be used to distinguish coffee senna from other related species such as \textit{Cassia tora} (sickle pod) in the field. Inflorescence is a terminal or axillary raceme. Flowers are yellow coloured and about 2 cm long and 3 to 4 cm wide. Fruit is a pod, compressed, 8 to 12 cm long, 0.7 to 1 cm wide and curved slightly upwards. Each pod contains 20 to 30 seeds, which are ovoid in shape, smooth, shiny and dull brown to dark olive-green in colour.

Uses: Coffee senna has many medicinal value and is reputed as a tonic, diuretic and antihelminthic agent. In the Maldives, seeds are roasted and powdered to prepare strong coffee. It is given as a substitute to coffee and also as a tonic. It is also given to alleviate asthma and to persons suffering from hysteria. In the Maldives, the leaves, which are laxative and liver detoxifying, are widely used as a leafy vegetable and eaten either raw or mixed with coconut, chilly and onion.

Ecology, propagation and management: It grows on a variety of soils but prefers slightly acidic to neutral soil. It requires high soil moisture for better performance. It is not cultivated in large scale but grown near houses or even in home gardens. It can be easily propagated by seeds. Seeds can be collected from mature pods, which split upon maturity. Seed may be manually scarified to increase the rate of germination.
Cassia surrattensis - Ranuwia
Cassia surrattensis Burm.f.  

CAESALPINIACEAE

Synonym: Cassia glauca

Common names: Scrambled egg tree, galucocus cassia

Dhivehi name: Ranuwia

Status: Occasional; grown as dooryard ornamental plant.

Description: An evergreen, fast-growing shrub to small tree, about 2 to 5 m tall. Leaves are bipinnately compound, 9 to 15 cm long with eight to ten pairs of leaflets. Leaflets at the distal end of the leaf are larger in size and narrower, 2 to 5 cm long and 1 to 2 cm wide and obovate to elliptic-ovate in shape. Leaflets at the bottom of the leaf are almost round in shape. Upper surface of the leaflets are dark green in colour and usually without hairs but lower surface has sparsely appressed hairs (pubescent). Tip of the leaflets is round and emarginated and the base is obliquely rounded. Nectar glands are present between the first, second and sometimes third pairs of leaflets. Stipules are linear, 0.5 to 1.5 cm long. Inflorescence is an axillary raceme. Flowers are bright yellow or orange yellow in colour, 1 to 3 cm long. Fruit is a pendulous pod, about 6 to 10 cm long, strongly compressed and with a stipe (spine like structure at the base of the pod) of about 0.5 to 0.8 cm length. Seeds are pale brown in colour, shiny and oblong-ellipsoid in shape.

Uses: Widely grown as an ornamental tree. It is attractive since the bright or golden yellow flowers are excellently offset by the dark green leaves. It is capable of blooming almost every day and blooms look like scrambled eggs.

Ecology, propagation and management: Scrambled egg tree is capable of growing on all kinds of soil including coastal sands. Like other species of Cassia it also loves full sun but is capable of growing in partially shaded places also. Initially it requires frequent watering but tolerates drought once established. Propagation is by seeds. Pods are allowed to dry on the plant itself and after that they are opened manually to collect the seeds. Seeds are sown directly and no pretreatment is required.
Citrus aurantifolia - Lun’boa
Citrus aurantifolia (Christm. & Panzer) Swingle  
RUTACEAE

Common names: Lime, sour lime

Dhivehi name: Lun’boa

Status: Common; grown widely in home gardens.

Description: A small, densely and irregularly branched, evergreen tree, about 3 to 4 m tall. Short, sharp, stiff spines are present in the branches and twigs. Leaves are elliptic to oblong-ovate in shape, 4 to 8 cm long and 2 to 5 cm wide and arranged alternately on the branches. Leaf stalk is narrowly winged and the leaf margin is crenulated. Leaf tip is variable, blunt in some and sharply pointed in other leaves. Leaf surface is dark green to pale green in colour. Flowers are small, white, with cup-shaped calyx, four to six lobed. Number of petals varies between four and six. Flowers are either perfect or male and they are seen in a cluster of ten flowers in the leaf axis of mature shoots. Sometimes single flower can also be seen in the axils of the shoots, which are just emerged. Fruit is a globose to ovoid berry, 3 to 6 cm in diameter with thin skin, which is characterized by the presence of a large number of minute glands. Fruit is green when young, turning to yellow when fully ripe. Flesh is yellow-green in colour, juicy, very acid and fragrant. Seeds are small in size, ovoid in shape and smooth. It bears fruit throughout the year. Root suckers are common.

Uses: Lime is widely used for flavoring a variety of food. Drinks are commonly prepared either with sugar or salt. It is also widely used in the preparation of pickles. In the Maldives, rice is mixed with "garudhiya" (tuna stock) and a dash of lime to make a delicious food. Another favorite item of Maldivians is "lonu lumbo" which is prepared by ripening the lime in salt water and drying them in the sun until the interior turns brown. It is also regularly used in the preparation of curries and chutneys. Leaves and fruits have many medicinal values.

Ecology, propagation and management: Lime is capable of tolerating very infertile and poor soil and is capable of growing well in sandy soils with proper drainage. It is affected severely by water logging. It is highly drought resistant but requires irrigation to produce quality fruits. Propagation is mainly by seed. Air-layering is common in South-east Asia. Suckers are prepared for air layering and layers are potted and nursed for about two to four weeks before outplanting.
Citrus aurantium - Naarin’gu
**Citrus aurantium L.**

**RUTACEAE**

Common names: Sour orange, bitter orange

Dhivehi name: Naarin‘gu

Status: Commonly grown in the home garden in some of the southern islands.

Description: An erect, much branched evergreen tree, about 3 to 9 m tall. Crown is compact and rounded. Bark is brown and smooth. Young twigs are angular, flexible and bear slender short spines. In older branches spines are stout and longer, about 8 cm in length. Leaves are simple and arranged alternately. They are broadly ovate to elliptical in shape with minutely toothed margin and obtuse or bluntly pointed tip. Upper surface of the leaf is dark-green and pale beneath. Leaf petiole is 2 to 4 cm long, upper half is narrowly to broadly winged and triangular-obovate in shape. Leaves are aromatic when crushed. Flowers are borne singly or in small clusters in the leaf axils. They are white in colour and have recurved, widely separated four to five petals surrounding a tuft of up to 24 yellow stamens. Fruit is round or oblate or oblong-oval in shape, 5 to 8 cm wide, with thick, smooth to warty and aromatic skin. Matured fruit is reddish-orange to yellow-orange in colour and central core is usually hollow. Fruits have ten to 12 segments with bitter walls containing acid pulp. Fruits have a few to numerous seeds. Sour lime has a number of well-established varieties.

Uses: An essential oil called neroli is extracted from the flowers of the bitter orange, which is an essential component of high-quality perfumes and of the toilet water ‘eau-de-Cologne’. Bitter orange juice is considered as a digestive tonic, helps to relieve nausea and soothe stomach disorders. In the Maldives, sour orange is mostly used to prepare sweet or sour drinks. It is also used in the traditional medicinal system of the Maldives to treat kidney stones. The skin of the fruit is crushed and mixed with warm water and drunk regularly to get rid of the stones.

Ecology, propagation and management: It is adaptable to a wide range of soils including dry coastal soil. It does well in rich soils with high water table. It tolerates high temperature, provided soil moisture is adequate. Dry hot winds may reduce leaf size and may cause heavy withering during flowering. Propagation is by seed, grafting and budding. Seeds are planted in seed beds and then transplanted in containers before outplanting. It is generally grown for rootstock for sweet oranges. Seedlings are raised in nurseries for one or two years and then budded. During the first year after planting, pruning is necessary to keep the foliage off the ground.
Citrus limon - Dhoalhan’bu, Jambhoshi
**Citrus limon** (L.) Burm.f

**RUTACEAE**

**Synonym:** *Citrus medica var. limonium*

**Common name:** Lemon

**Dhivehi names:** Dhoalhan’bu (common), Jambhoshi in some northern islands

**Status:** Common in the northern islands and occasional in the southern islands.

**Description:** A large, low-branching, sometimes spreading tree, about 3 to 6 m tall. Some individuals have upright branches. Both the young and old twigs have sharp and stiff spines. Leaves are oblong, elliptic or long ovate in shape, 6 to 12 cm long with finely toothed margins. Wings on the petiole are narrower and slender. Leaves are dark green on the upper surface and light green below and sometimes young leaves are reddish in colour. Flowers are single or a cluster of two or more and borne in the leaf axils. Flowers have four to five petals, which are white inside and purplish outside. Flower buds are used to be reddish in colour. Fruit is oval with a nipple like protuberance at the apex, 6 to 12 cm long with thick, aromatic skin, which is dotted with oil glands. Skin is green in colour in young fruits, turning to light yellow in ripened fruit. Fruit has eight to ten segments, containing juicy, acid, pale-yellow pulp. Most of the fruits have only a few seeds, which are about 1 cm in length, elliptic to ovate in shape, pointed and smooth.

**Uses:** It is mainly grown for the fruit. Lemon juice, which is marketed fresh, canned, concentrated and in powder form, is mainly used for the preparation of lemonade. Lemon juice with ginger is commonly used as a cold remedy. In the Maldives, particularly in the northern islands, lemon juice is used as an alternative to lime juice and it is squeezed on cooked fish before eating. In some islands, leaves are boiled in the water used for bathing to get relief from skin allergies. In the traditional medicinal system of the Maldives, roots of lemon are used to treat rheumatism. Like *Citrus aurantium*, oil from lemon peel is used to blend perfumes and colognes. Wood is fine-grained and easy to work with to carve small articles including toys.

**Ecology, propagation and management:** Lemon grows both in dry and humid conditions. It tolerates a variety of soils, from silty-clay loam to fine sand. It is also capable of growing in very poor soil. Normally best quality lemons are produced only in the coastal areas. Defoliation is very common in high winds. Propagation is mainly by seed and also by cuttings and budding. Trees require pruning when young and it should be kept 3 to 3.5 m in height for easy harvesting. A number of varieties of lemon are cultivated in different parts of the world.
Citrus maxima - Banbulhabos
**Citrus maxima (Burm.) Merr.**

RUTACEAE

**Synonyms:** *Citrus aurantium* var. *grandis*, *Citrus grandis*, *Citrus decumana*

Common name: Pummelo

Dhivehi name: Ban’bulhabos

Status: Occasional in the home gardens in southern islands.

Description: An evergreen tree, about 5 to 10 m tall with round but open crown. Branches start emerging on the lower part of the trunk and spreading. Bark is light brown in colour and smooth. Seed propagated trees have long spines, about 5 cm in length whereas vegetatively propagated plants are spineless. Leaves are large in size, 5 to 15 cm long and 3 to 8 cm wide and ovate to elliptical in shape, shiny, dark green in colour and dotted with minute glands. Leaf margin is smooth or shallowly toothed. Leaf stalk is broadly winged, which is up to 7 cm wide. Inflorescence is axillary, with single or a cluster of a few flowers. Flowers are large in size with 5 white petals and are strongly fragrant. Trees flower two to four times in a year, mainly in conjunction with shoot growth. Fruit is round or pyramid in shape, large, 10 to 30 cm in diameter with thick densely glandular dotted rind, which is soft and easy to peel away. Fruit segments are large containing yellow to coral pink flesh and vary from juicy to slightly dry and from spicy sweet to tangy and tart. The dull green coloured skin of the fruit brightens up upon ripening as the oil glands become more prominent and shiny. Seeds are few, large, heavy, ridged and yellowish in colour.

Uses: Fresh sweet juicy pulp vesicles are eaten out of hand and lesser sweet varieties are eaten with sugar. It is also used in fruit salads and in making sweet drinks. Flowers are used to make perfume and leaves are used in the preparation of aromatic baths. In some countries leaves, flowers, fruits and seeds are used in traditional medicines to alleviate cough, fevers and stomach disorders.

Ecology, propagation and management: It is adapted to grow in a variety of soils, from coarse sand to heavy clay. However, it performs well in deep, medium-textured fertile soils, which are free from injurious salts. Propagation is by seeds, air-layering and budding. Fleshy seeds with their thin coat dry out easily and require an ideal biophysical condition to germinate. A seedling progeny consists largely of a slender tree with long spines. In the initial stages of growth, shade and frequent watering is required for better performance of the seedlings. Young trees need to be pruned to prevent lower branches from touching the ground.
Citrus medica L.  

RUTACEAE

Synonyms: Citrus aurantium, Citrus var. medica

Common name: Citron

Dhivehi name: Bodu Lun’boa

Status: Found in a few places in some of the southern islands.

Description: A small, slow-growing evergreen shrub or tree, about 2.5 to 4.5 m tall. Twigs angled and purplish when young, becoming rounded quickly as the tree grows. Both branches and twigs are very stiff and have long stout spines in the leaf axils. Leaves are ovate-lanceolate or ovate-elliptic in shape, 6 to 18 cm long with rounded or blunt tip. Leaves are leathery, fragrant, dark green in colour with minutely serrated margins. Wing of the leaf petiole is slender and very narrow. Flowers are borne singly or in short clusters, most of them are bisexual while some of them are male flowers. Flowers are pinkish or purplish on the outside, whitish inside and fragrant. Fruit shape is highly variable; some are oblong or obovoid while others are oval. Pyramidal shaped fruit can also be seen. One form, called fingered citron or Buddha’s hand is wholly or partially divided into five finger like segments. Size of the fruit is generally large, rough, bumpy with furrowed or smooth surface. Outer rind of the fruit is thin and green in colour in young fruits, turning to yellowish green in ripened fruit. Inner rind of the fruit is thick, white and tender. Each fruit has 14 to 15 segments, which are pale yellow to green in colour. Fruit pulp is firm, not very juicy and sour to slightly sweet in taste. Seeds are smooth, ovoid and numerous.

Uses: Fruit is used to prepare pickles and sometimes used as an alternative to lime. In Europe and the United States of America peel of the citron is an important part, which is processed in saltwater, candied in a strong sucrose or glucose solution and used as an ingredient in fruitcake, plum pudding, buns, sweet rolls and candy.

Ecology, propagation and management: Citron is adapted to a variety of soil but sensitive to intense heat and drought. Propagation is mainly by cuttings. Small cuttings with leaves are taken from the branches two to four years old trees and are quickly buried deep for better results. It can also be propagated by budding. There are two types of main cultivars; one cultivar possesses pinkish new growth, purple flower buds and purple tinged petals with sour pulp and dark inner seed coat and the other cultivar is with white flower, non-acid pulp and colourless seed coat.
Clerodendrum inerme - Dhun’gethi
Clerodendrum inerme (L.) Gaertner  

VERBENACEAE

Synonym: Clerodendron neriifolium

Common names: Seaside clerodendron, garden quinine

Dhivehi names: Dhun’gethi

Status: Common in all islands of Maldives; grown as a hedge plant.

Description: An evergreen, much branched, erect or somewhat straggling shrub, about 1 to 3 m tall with slender, dark green coloured terminal branches. Main stem is woody and smooth. Leaves are simple and opposite decussate in arrangement (as in the case of Calophyllum inophyllum) and vary in shape from ovate, oblong-ovate to elliptic-ovate. Leaves are about 4 to 8 cm long, 2 to 5 cm wide, green and shiny with smooth margin. Inflorescence is a cyme, three flowered and borne in the axils of the leaves. Flowers are erect and fragrant; calyx is green, narrowly funnel-shaped with five very short teeth. Petals are five and corolla is about 3 to 4 cm long and comprises a slender, purple coloured spreading tube with white or purple-tinged lobes. Stamens four, filaments long, reddish to purple in colour, protrude out and upwardly curved. Fruit is obovoid in shape and about 1.5 cm in length and split into four parts upon drying.

Uses: Fragrant white flowers that form in clusters and accented by purple-coloured delicate protruding stamens and green foliage and bushy habit make seaside clerodendron an attractive plant and are thus considered as one of the candidate species for hedge. It is a versatile plant and can be grown as topiary or as a bonsai. In the Maldives, it is popularly grown as a hedge plant in almost all types of buildings. Its long twigs are used as purlins in roofing structures and side shades of timber built houses. It is reported that decoction of leaves are effective against intermittent and remittent fevers and also used as a substitute for quinine in controlling malaria.

Ecology, propagation and management: It grows in all kinds of soil but performance is better in sand. It grows well in hot sun and tolerates salt spray. It can be propagated by seeds and cuttings. Plants easily spread vegetatively and seeds may be dispersed by birds. It has aggressive growth characteristics and has the potential to form dense cover over other plants. It is also hard to remove as it roots at the nodes and produce large amount of biomass. It can be grown as an understory species in multispecies multi-tiered coastal bioshield.
Colubrina asiatica - Raarohi, raaruhi