

NOTES ON INTRODUCED PLANTS IN SIAM.

BY A. KERR.

The following notes have been written with the object of putting on record some of the facts that the writer has been able to gather concerning the introduction of plants into Siam. Anyone who has paid any attention to the subject will recognize how imperfect these notes are. Many plants well known in the gardens of Siam are ignored, chiefly because nothing of their past history could be learned. On the other hand, not infrequently plants already indigenous to the country have been introduced by keen gardeners, unaware that they were natives of Siam. It is hoped that the publication of the present notes will induce those who have information on this subject to send it in to this journal.

Besides plants that have been introduced to, and remained in cultivation, there are others that have run wild since their introduction. Of the latter, some have been purposely, others accidentally introduced. During the present generation several plants have been introduced and run wild over a great part of the kingdom, as, for instance, Java weed and the eupatorium weed. Even in the case of some of these recent introductions, nothing is on record concerning their first appearance. The previous history of the great majority of the older introductions is a blank. As the writer has pointed out elsewhere, ⁽¹⁾ a large proportion of the introduced, naturalized element in the flora of Siam comes from Tropical America or the West Indies. It is not difficult to account for this element, which may have reached Siam both from the east and the west. After the conquest of the Philippines by the Spaniards in 1521, a regular service of two galleons a year was run from Acapulco in Mexico to Manila, and continued up to the year 1852. During this period of nearly three hundred years the Spaniards introduced many American plants of economic importance into the Philippines; and doubtless many tropical weeds were inadvertently introduced at the same time. The question of the flora so introduced into the Philippines is very fully discussed by Merrill, in a paper in the Philippine

(1) *Siam, Natural Features*. Pp. 30-33. Bangkok, 1925.

Journal of Science.⁽¹⁾ The plants introduced by the galleons into the Philippines no doubt spread westwards, and reached many of the countries of Southeast Asia, including Siam.

On the West the Portuguese were active in introducing American and other plants into India from the beginning of the seventeenth century. These, no doubt, continued their travels eastwards to the various countries with which India was trading. Siam, lying about half way between India and the Philippines, may have sometimes received the same plant from both sides. This might have been the case with tobacco, which was introduced into India about the year 1605, as Watt tells us.⁽²⁾ On the other hand De Candolle⁽³⁾ quotes Raffles as giving 1601 for the date of the introduction of tobacco into Java, having probably come *via* the Philippines.

The circulation of plants was not, however, all towards Siam. We find, for instance, that Rumphius,⁽⁴⁾ writing in Amboina about 1650-1670, called one of his plants *flos siamensis* (now *Telosma odoratissimus*), no doubt because it came from Siam.

The books on Siam resulting from the visit to the country of the two French embassies, in 1685 to 1688, speak of a number of the introduced plants as if they were then well established. Gervaise⁽⁵⁾ mentions such plants as papaya, pine-apple, custard-apple and maize. Onions and tobacco are listed as products of Pourcelone (Pitsanulok) by L. D. C. (l'Abbé de Choisi).⁽⁶⁾ La Loubere⁽⁷⁾ notes pomegranate, guava, tamarind and tuberose, among others.

(1) Merrill, E. D. *Notes on the Flora of Manila with Special Reference to the Introduced Element*. Philip. Journ. Sc., C, Botany, Vol. VII, pp. 145-208.

(2) Watt, C. *Dictionary of the Economic Products of India*. Vol. V, 1891.

(3) De Candolle, A. *Origin of Cultivated Plants*. London, 1884.

(4) Merrill, E. D. *An Interpretation of Rumphius's Herbarium Amboinense*. Manila, 1917.

(5) Gervaise, Nicolas. *The Natural and Political History of the Kingdom of Siam* A. D. 1688. Translated into English from the original by Herbert Stanley O'Neill. Bangkok, 1928.

(6) Mr. L. D. C. *Journal, ou Suite du Voyage de Siam*. Amsterdam, 1687.

(7) La Loubère. *Historical Relation of the Kingdom of Siam*. London, 1693.

Much light would be thrown on the extent of the alien flora of Siam one hundred and fifty years ago if the collection of plants made by Koenig⁽¹⁾ in this country in 1778-1779 could be found. In his Journal he speaks of a large number of plants, among them many introduced species. The following introduced plants, additional to those mentioned by earlier writers quoted above, are taken from this Journal:

Cassia alata Linn.

Canna indica Linn.

Clitoria ternatea Linn.

Gomphrena globosa Linn.

Ipomoea batatas Poir, mentioned under the Linnean name, *Convolvulus batatas*.

Oxalis repens Thunb., for which Koenig uses the name *Oxalis corniculata*.

Pithecolobium dulce Benth. No doubt it is this species which Koenig calls *Mimosa bigemina*, and mentions frequently. It is unlikely to be *Pithecolobium bigeminum*, which is not known from anywhere near the Bangkok region.

Ricinus communis Linn.

Sesbania grandiflora Pers. This is probably the plant which Koenig designates *Oviedia pinnatifolia*. His description of the sleep-movement of the leaves, and the long thin pods fit this species and no other tree found near Bangkok.

The plants not mentioned by Koenig may also be of interest in this connection. For instance, though he paid a great deal of attention to grasses, he makes no mention of *Chloris barbata*, now one of the commonest and most noticeable grasses about Bangkok and Paknam.

A number of the introduced plants bear evidence of their foreign origin in their Siamese names, which include an epithet like 'tet' or 'farang'. There is one curious case, however, where the name of the introduced plant gives no indication of its foreign

(1) Koenig, J. G. *Journal of a Voyage from India to Siam and Malacca*. Journ. Str. Br. Roy. As. Soc., Nos. 26 and 27. Singapore, 1894.

origin, while its supposed indigenous representative is designed 'tai' (Siamese). The introduced chili, or red pepper, is commonly called 'prik', while the probably indigenous true pepper is called 'prik tai' (Siamese pepper). No doubt this has come about from the red pepper being used much more commonly than the true pepper.

The main object of this paper is to give a list of the introduced plants about whose introduction something is known. Many friends have helped with this information; particularly Mrs. D. J. Collins (E.C.), Mrs. W. Harris (C.H.), Dr. M. Carthew (M.C.) and Phya Winit Wanadorn (W.W.). Initials put in brackets after any statement that follows indicate that such a statement is taken from one of the above authorities.

***Achras zapota* Linn.**

Sapodilla plum, or *lamut* (ลุมุต ฝรั่ง).

This tree was introduced to Siam, probably more than fifty years ago, by Chao Phya Bhasakarawongs (W. W.). When Mrs. Collins came to Bangkok in 1885 the lamut was then in the market, though at that time she had not seen it either in Burma or Singapore. Roxburgh,⁽¹⁾ however, writing before 1820, tells us that there were trees both from China and the West Indies growing in the Botanic Gardens at Calcutta. The species is a native of Tropical America.

***Amherstia nobilis* Wall.**

Amherstia (โศภน ะย้า).

When King Chulalongkorn visited Burma about 1872, the Regent, who was with him, brought back some trees of this species to Bangkok. (E.C.). The trees were planted at the place that later became the Old King's College, on the west side of the river (M.C.). Trees are said to have been seen wild in forests near Me Hawng Sawn (W.W.), so possibly the species is not an introduction, and should not, therefore, be on this list. Brandis⁽²⁾ states that it is believed to be wild near the Yunzalin River, below Papun, which is on the opposite side of the Salween to Me Hawng Sawn Province.

(1) Roxburgh, W. *Flora Indica*. Reprint of Carey's edition, Calcutta, 1874.

(2) Brandis, D. *Indian Trees*. London, 1907.

***Angelonia salicariaefolia* Humb. & Bonpl.**

Angelonia.

Introduced to Bangkok by Mrs. Collins, who brought it from Mandalay in 1910. It is now widespread in Bangkok gardens. The species came originally from Tropical America.

***Antirrhinum majus* Linn.**

Common snapdragon.

The snapdragon seems to have been introduced to Bangkok gardens about five or six years ago. Who the introducer was is unknown to the writer. It is a native of the Mediterranean region.

***Beaumontia grandiflora* Wall.**

Beaumontia.

This climber was brought from Peradeniya to Bangkok by Mr. Rivett-Carnac, about the year 1890. It is a Himalayan species. There is an equally fine indigenous species, *B. Murtonii* Craib.

***Bignonia Unguis-cati* Linn. (*Doxantha Unguis-cati* Rehd.)**

This Argentine climber was introduced to Bangkok from Ootacamund about twenty-five years ago by Mrs. Williamson. It was brought to Chiangmai somewhat later by Mrs. Harris.

***Bignonia venusta* Ker (*Pyrostegia venusta* Baill.)**

A Brazilian species introduced by Dr. M. Carthew from Peradeniya in 1910.

***Bougainvillea spectabilis* Willd. var. *laterita* Lem.**

When the common *Bougainvillea* (*B. spectabilis*), a native of Brazil, was introduced, is not known. This variety was brought to Bangkok by Dr. and Mrs. Highet somewhere about 1910. Other varieties have since been introduced.

***Brownea grandiceps* Jacq.**

A Venezuelan species, introduced by Phya Pradibaddha Bhubal, some twenty years ago (M. C.). *B. Ariza* is a much older introduction.

***Chloris barbata* Sw.**

(หญ้าตีนนก)

Though this grass is now well established and common in Lower Siam, it has probably been introduced within fairly recent

times. The writer, in making a trip to Chiangmai in October 1921, noted the occurrence of this grass along the line. While it was particularly abundant in Lower Siam, it grew scarcer towards the north, finally disappearing altogether. The last piece of it seen was by the western end of the Kun Tan tunnel.

Chloris Gayana Kunth

Rhodes grass.

A Tropical African species introduced as a fodder grass to Pak Chawng by Mr. R. P. Jones about two years ago.

Coffea arabica Linn.

Coffee tree.

Gerini,⁽¹⁾ writing in 1911, tells us that the culture of coffee was introduced into Siam some sixty years previously, which would make its introduction about 1850. Mouhot,⁽²⁾ who visited Chantabun in 1859, notes that that place was already known for the superior quality of its coffee. More recently other cultivated species of coffee have been introduced.

Cycas revoluta Thunb.

(ปรง ฝรั่ง or ปรง จีน)

This cycad, a native of China and Japan, has been in cultivation in Bangkok for about fifty years. It is not known who first brought it into the country. Its cultivation is on the increase, in view of the fact that its leaves are in growing demand for making up wreaths. Some quantities of dried leaves are being imported to supplement the present limited local supply (W. W.).

Desmanthus virgatus Willd.

This American shrub is probably a fairly recent introduction. It was found growing by the Tachin railway line, near Wat Sing, by Mr. Marcan in 1922. It is still to be found in the original locality, but is not showing a tendency to spread. It has long been introduced in India.

(1) Gerini, G. E. *Siam and its Productions, Arts and Manufactures*. 1911.

(2) Mouhot, H. *Travels in the Central Parts of Indo-China (Siam), Cambodia and Laos*. London, 1864.

***Duranta repens* Linn.**

(พญาไม้)

It is not known certainly who introduced this Tropical American plant, now commonly cultivated here. Possibly it was Mrs. McGilvary, as the species has long been known in Chiangmai. The white-flowered variety was introduced by Mrs. Collins from Mandalay in 1910.

***Eichornia crassipes* Solms (*Eichornia speciosa* Kunth).**

Java-weed, water-hyacinth (ผัก ตบ ขมา)

This plant had its original home in Tropical and Sub-tropical America. It is now a wide-spread pest in the eastern tropics. It was first brought to Siam in 1901. In that year King Chulalongkorn visited Java. The flowers of the water-hyacinth were so much admired by the Royal Party that special pains were taken to bring living plants to Bangkok. Phya Pradibaddha Bhubal lays claim to being the person who actually introduced it. ⁽¹⁾ "It spread quickly up and down the Menam River, and about five years after its introduction made its first appearance at Ayuthia. The Ayuthian people then called the weed *pak tam sadet* (ผัก ตาม เสด็จ), as it was seen soon after King Chulalongkorn's visit there the same year" (W. W.). It was brought up to Chiangmai about 1908.

***Enterolobium saman* Prain (*Samanea saman* Merrill).**

Rain tree (ก้ามปู)

The rain tree is a native of Tropical America, but it is now widely cultivated in the tropics. It seems that it was first introduced to this country, from Burma, by Mr. Slade, the first Conservator of Forests in Siam, about 1900. He planted trees along the road running down to the Forest Department office in Chiangmai. Probably nearly at the same time the rain-tree was introduced to Krabi Province, where it was first called *ton kim bee* (ต้น กิม บี) (W. W.), suggesting that it was the Governor of that name who was instrumental in introducing it. Its appearance in Bangkok was later, when it was quickly planted along many roads, and now forms num-

(1) *The Bangkok Times*, 30th. April, 1926.

erous fine avenues. It has become subsponaneous, seedlings being not uncommon on waste ground.

The writer would like to draw attention to the recent dying of a number of these trees, others being in a moribund condition. The disease, as it apparently is, begins with the dying of the terminal branches, and spreads downwards. This subject should be investigated by an expert. It would be a calamity if all these fine trees died.

***Eragrostis abyssinica* Link.**

Teff grass.

Introduced at the Pak Chawng Serum Farm about two years ago by Mr. R. P. Jones. It is an African grass.

***Eupatorium odoratum* Linn.**

(หญ้าเหม็นอาก)

This weed, a native of the West Indies, is now to be found in abundance throughout Siam. How it arrived here is not known, but it has probably not been in the country for more than sixty years. Possibly it came direct to Siam from its original home. In the Flora of British India, Hooker, ⁽¹⁾ writing in 1881, put this plant among excluded species, saying it "is a West Indian species, cultivated, but very rarely in India." Kurz, ⁽²⁾ writing in 1877, does not mention it at all among the compositae of Burma. In the Flore Générale l'Indo-Chine, ⁽³⁾ only plants from Siam are mentioned, though the part containing the genus *Eupatorium* was published as late as 1924. Ridley ⁽⁴⁾ does not mention it for the Malay Peninsula. However, there is little doubt that it is now to be found in all the above countries; as it has been seen near the borders of Burma, Cambodia and Perlis. The writer attempted to get approximate dates of its introduction into various parts of Siam, by asking villagers in different districts when they first noticed the plant. Practically all

(1) Hooker, J. *Flora of British India*. Vol. III. London, 1882.

(2) Kurz, S. *Contributions towards a knowledge of the Burmese Flora*. Journal of the Asiatic Society of Bengal, No. 11, 1887.

(3) Lecomte, M. H. *Flore Générale de l'Indo-Chine*. Vol. III, Fasc. 4, 1924.

(4) Ridley, H. N. *The Flora of The Malay Peninsula*. London 1922-1925.

of them, if they were men of middle age, agreed that there was none of it when they were children. The estimates of its first appearance varied greatly; in one village a man might say it had appeared twenty years previously, while in another only five or six kilometres off one might be told that it was first noticed only four or five years ago. While these estimates, in numbers of years, cannot be considered reliable, there are others to which more credence can be attached; such as where the appearance of the plant is connected with some event which can be dated. For instance: at Muak Lek the plant is said to have been brought by the railway, which was opened there in 1900. Again, in Chantabun Province, the species was first noticed at the time of the French occupation, i.e. about 1893.

Since the above was written, the writer has seen a recent article in the *Indian Forester*,⁽¹⁾ where it is stated that *Eupatorium*, by which, no doubt, *Eupatorium odoratum* is meant, has spread all over Assam during the last twenty years.

***Euphorbia pulcherrima* Willd.**

Poinsettia (โพธิ์เงิน).

The poinsettia, a native of Tropical America, was probably introduced from Hongkong by Dr. Wilson in 1894 (C.H.).

***Filicium decipiens* Thwaites**

Tan sien (ตานเลี้ยง).

This tree was first planted in the Palace Gardens, about twenty-five to thirty years ago. It is now to be seen in some other gardens. It is a native of Ceylon. (W.W.).

***Fragaria vesca* Linn.**

Strawberry.

Though even now the cultivated strawberry can hardly be said to be well established in Siam, it is interesting to note that Holt Hallett⁽²⁾ records eating Mrs. McGilvary's strawberries, and, incidentally, drinking coffee made from her home-grown berries, in

(1) De, R. N. *Lantana and Cowdung Problem.* *Indian Forester*, Vol. LVII, August 1931.

(2) Hallett, Holt, S. *A Thousand Miles on an Elephant in the Shan States.* London, 1890

1884. Mrs. McGilvary's strawberries died out, but the plant has been re-introduced by Mr. A. L. Queripel.

Gerbera Jamesoni Bolus

Gerbera.

This South African plant was introduced to Bangkok about 1908 by Dr. M. Carthew. It is now frequently cultivated here. There are some native representatives of the genus, but they are mountain plants, and, so far, have refused to grow well in Bangkok.

Gliricidia sepium Steud.

Gliricidia (แมคฝรั่ง).

This small tree, a native of Tropical America, was introduced from Peradeniya in 1910 by Dr. M. Carthew. It is now very commonly cultivated in Bangkok.

Grias cauliflora Linn.

Anchovy pear.

This tree, which is a native of the West Indies, was introduced some five or six years ago by Phya Prabha Skarawongs. It has flowered, but not yet fruited.

Haemanthus coccineus Linn.

It is said that this plant, a native of South Africa, was brought to Bangkok about twenty years ago by Phya Pradibaddha Bhubal (M. C.).

Ipomoea carnea Jacq.

(ผักบุ้งฝรั่ง)

A South American plant, brought to Bangkok in 1893 by the late Mr. Stewart Black (E. C.). It is now abundant about Bangkok, but apparently never spontaneous.

Jacaranda ovalifolia R. Br.

Jacaranda.

A Brazilian tree, now cultivated throughout the Tropics. It is said to have been first introduced into Siam at Trang by Phya Rasada (Kaw Sim Bee). Thence it was brought to Bangkok about eighteen years ago by the late Dr. Yai Sanitwongse (W.W.).

Licuala grandis Wendl.

This palm, from New Britain, was introduced by Phya

Pradibaddha Bhupal about twenty years ago.

Limnocharis flava Buchenau

(ตะลันต์ ฝรั่ง)

This is a marsh plant indigenous to America. It is now not uncommon in shallow ditches and marshes, and even in rice fields, in many parts of the country. It has probably been introduced within the last thirty years or so. In Pattani, where it is called 'bawn chin', it commonly grows in flooded rice fields, and is said to have been introduced within the last twenty years. Not much information is available as to the occurrence of this species in other countries of Southeast Asia. It is not mentioned in the Flora of British India, the Flora of the Malay Peninsula or in the Enumeration of Philippine Flowering Plants. In Java, however, the plant is common. Possibly it was introduced to Siam from that country. There the young leaves, petioles and inflorescences are eaten as a vegetable. J. J. Ochse⁽¹⁾ tells us that "it is one of the most sold tropical vegetables of Western Java". It can be served prepared like endive or spinach. No use seems to be made of it in this country.

Monstera deliciosa Liebm.

This is a climbing aroid with edible fruit, sometimes known as ceriman. It is a native of Central America. A plant was introduced to Bangkok, about 1924, from Calcutta, by Phya Winit Wanadorn. It has grown well, but, so far, has not fruited.

Muntingia Calabura Linn.

Manila cherry (ตะขบฝรั่ง)

Though sometimes called here the Manila cherry, this tree is really a native of Tropical America.

It is said to have been first brought to Siam from Java by King Chulalongkorn, after his visit there in 1901. In the earlier period of its introduction it was a popular shade tree, to be found

(1) J. J. Ochse in collaboration with R. C. Bakhuizen van den Brink. *The Vegetables of the Dutch East Indies.* Buitenzorg, Java, 1931.

even in the remotest Karen hamlets of Northern Siam, but it has now rather fallen out of favour (W.W.). It is often self-sown, but is showing no tendency to spread.

***Musa nepalensis* Wall.**

(กล้วย สาสนา)

This plant has been observed by the Tap Tao cave, a religious sanctuary in the Muang Fang district of Chiengrai Province. It is a native of Nepaul, where Buddha ceased his earthly existence. Probably on account of this association it has come to be looked on as a sacred plant. A pilgrim is said to have brought the original plant to Tap Tao from Burma some years ago.

***Panicum maximum* Jacq.**

Guinea grass.

This fodder grass seems to have been first introduced to Bangkok about thirty years ago by Chao Phya Suriwongse. Apparently that introduction died out, but the grass has been re-introduced.

***Panicum muticum* Forsk.**

Mauritius grass.

A grass, native of Mauritius and Ceylon, introduced to Pak Chawng farm by Mr. R. P. Jones about two years ago.

***Parkinsonia aculeata* Linn.**

Jerusalem-thorn.

In spite of its name this small tree is probably a native of America. It was brought from Mandalay by Mrs. Collins in 1910, and planted in Sriracha and Bangkok. It has grown well here, but is showing no tendency to spread, as it has done in the dry zone of Burma.

***Paspalum dilatatum* Poir.**

Dallis grass.

This grass, a native of South America, is being grown at the Pak Chawng Serum Farm, where it was introduced by Mr. R. P. Jones about two years ago.

***Passiflora quadrangularis* Linn.**

Granadilla.

The granadilla, a native of Tropical America, is only occasionally seen in cultivation in this country. It was probably first introduced by Mrs. McGilvary about 1880. When Holt Hallett,⁽¹⁾ talking of Mrs. McGilvary's garden in 1884, tells us that "the passion-flower grows in great luxuriance and affords a luscious fruit which can either be eaten raw as a vegetable, or like a papaw or melon", he is probably referring to the granadilla.

Pennisetum purpureum Schum.

Napier grass

A fodder grass from Tropical Africa, introduced to Pak Chawng about two years ago by Mr. R. P. Jones.

Persea americana Mill.

Avocado

Dr. Taylor of Nan was probably the first person to introduce the avocado, a Tropical American tree. Dr. Taylor's trees were brought to Nan within the past twenty years or so, and are now fruiting well. Later, in 1924, Dr. H. M. Smith brought trees to Bangkok, which were planted in Chao Phya Boladeb's garden, where they have since borne fruit.

Phyllocarpus septentrionalis Donn. Smith

A flowering tree with brilliant red flowers, produced when the leaves have fallen. It was brought to Bangkok in 1924 by Dr. H. M. Smith, and grown in Chao Phya Boladeb's garden. It bloomed in February 1930 for the first time. The species is a native of Guatemala.

Physalis peruviana Linn.

Cape gooseberry

This plant, probably originally a native of South America, was introduced about two years ago by Mr. R. P. Jones, and cultivated at the Pak Chawng Serum Farm.

Plumbago capensis Thunb.

Plumbago (เจตมูลเพลิงฝรั่ง)

This plant has long been in cultivation in Bangkok gardens. It is not known by whom it was introduced, but the white-flowered

(1) *Loc. cit.*

variety was first grown in Bangkok a few years ago by Prince Sakol.

Podocarpus macrophylla Sw., var. *maki* Sieb. (*Podocarpus japonica* Sieb.)

(ผ้านมญี่ปุ่น)

This shrub, a native of China and Japan, is said to have been first brought to Bangkok by the Japanese, for decorating the rockeries at Dusit Palace gardens, about thirty years ago (W. W.).

Pyrus serotina Rehd.

Chinese pear, or *sand pear* (สลัดจีน)

The Chinese pear tree was first introduced to Chiengmai from the Te Chew Province of China by Luang Prathet Chin Chorn, a Chiengmai trader, about 1908. The plant was brought overseas as a cutting, and began to fruit three years after planting. The original tree has since been spread by cuttings (W. W.).

Ravenia spectabilis Griseb.

(มัจฉินทร์ or วัจฉินทร์)

This pink-flowered rutaceous shrub, not uncommon in Bangkok gardens, is a native of Cuba. It is supposed to have been introduced to Bangkok about twenty years ago by Phya Prabha, late Minister in London (W. W.).

Rosa spp.

Roses

The first cultivated roses must have been introduced a very long time ago, but in only a few kinds. In the seventeenth century they were apparently rare, as la Loubere tells us that he saw no roses, though he was told there were a few. The late Mrs. McGilvary of Chiengmai introduced, some fifty years ago, a number of varieties, such as Marechal Niel, Gold of Ophir and Gloire de Dijon. More recently other varieties have been introduced by Mr. A. L. Queripel and others.

Ruellia tuberosa Linn.

(ตั๋ยบ ตั๋ง)

Now become a garden weed, this plant was probably introduced for the garden. The writer first noticed it as a road-side weed in the Oriental Avenue, in 1911. It is spreading now to places out-

side Bangkok. A white-flowered variety has appeared in Wireless Road.

***Solidago* sp.**

Golden rod (สร้อยทอง)

When Dr. H. M. Smith arrived in this country, in 1923, he stayed at the Royal Hotel, in the garden of which he noticed quantities of golden rod. He was informed that, a few years previously, an American lady who was staying at the hotel, feeling rather homesick for American flowers, had sent for seeds of this species and sown them in the hotel garden. It is now common in Bangkok gardens, and often self-sown, but, so far, it is showing no tendency to spread outside gardens.

***Swietenia macrophylla* King**

Mahogany.

The 'mahogany' tree is well established as an avenue tree in Bangkok, and is being also used for that purpose in provincial towns. It is probably a native of Honduras. It was first introduced to Bangkok by Chao Phya Suriwongse, somewhere about twenty-five years ago (W.W.).

***Tabebuia spectabilis* Nichols**

This Tropical American tree was introduced by Dr. M. Carthew, from Peradeniya, in 1910.

***Thryallis glauca* O. Kuntze (*Galphimia glauca* Cav.).**

Galphimia (พวงทองต้น)

A shrub, native of Mexico and Central America, introduced from Buitenzorg in 1919 by Mrs. Collins. It is now very common in Bangkok gardens.

***Tridax procumbens* Linn.**

This weedy composite, a native of South America, was first noticed in Bangkok by the writer in 1920, by the railway line near Bangkok Noi station and on the roadside by the Royal Pages College. It is also found in India, the Malay Peninsula and French Indo-China.

***Verbena tenera* Spreng.**

This is a South American plant, now commonly cultivated in

Bangkok gardens. It was introduced from Hong Kong by Dr. M. Carthew in 1918.

***Viola odorata* Linn.**

Violet.

The violet was probably first brought to Siam and cultivated by Mrs. McGilvary in Chiengmai, about 1880.

***Wormia suffruticosa* Griff.**

This shrub was introduced to the Palace Gardens about four years ago, from Java (W. W.). It is indigenous to the Malay Archipelago and Peninsula.

***Zea Mays* Linn.**

Maize, Indian corn (ข้าวโพด).

Gervaise,⁽¹⁾ writing about 1688, notes that "although it is only twelve or fifteen years since maize was first sown in the Kingdom of Siam, nevertheless, great plains are to be seen covered with it." If this is to be taken literally, the cultivation of maize must have been more extensive then than it is now.

***Zephyranthes citrina* Baker ?**

A yellow-flowered *Zephyranthes*, perhaps the above species, was introduced by Mrs. Collins from Penang in 1928. *Z. citrina* is a native of Guiana.

(1) *Loc. cit*