XLV. *The Copy of a Letter from* John Ellis, *Esq; F. R. S. to Mr.* William Aiton, *botanic Gardener to her Royal Highneſs the Princeſs Dowager of* Wales, *at* Kew, *on a new Species of* Illicium Linnæi, *or Starry Aniſeed Tree, lately diſcovered in* Weſt Florida.

SIR,

Read Dec. 13, 1770. YOUR extenſive knowledge in botany, and great ſkill in the cultivation of the rareſt exotic plants from all parts of the world in the celebrated botanic garden of her royal highneſs the princeſs dowager of Wales at Kew, will I hope, apologize for me to the Royal Society for the liberty I take in laying this letter, which I addreſs to you, before them; eſpecially as moſt of that illuſtrious body, who have made that agreeable ſcience their ſtudy, are fully convinced of the truth of it, by often having the pleaſure of ſeeing that moſt noble and truly princely collection, which is ſo happily placed under your care.

I confeſs myſelf particularly obliged by your ſkill and attention in raiſing not only the oak acorns, which were put into your hands by the Royal Society, after they had been preſerved by me a whole ſeaſon

ſeaſon in wax; but alſo for the care you have taken in raiſing one of the firſt tea-plants that has been produced from ſeed in this kingdom; eſpecially as it came to me in ſuch a ſituation, that it could ſcarcely be expected to vegetate.

You have further ſhewed your ſkill in raiſing many of the ſtarry aniſeed trees from Weſt Florida after they had been confined in a box under the ſhip's decks for near four months, a voyage near as long as from St. Helena, or even the Cape of Good Hope.

I ſhall now proceed to give you a hiſtory of this curious tree, both as a native of Japan, China, and other parts of the Eaſt, as well as both the Floridas in North America.

We meet with an account of the Eaſtern one, together with a figure of it, taken from Cluſius, in Parkinſon's Theatre of Plants, *p.* 1569. where he obſerves, that ſome branches of it, with the huſks and ſeeds only, without leaves or bloſſoms, were brought into England by Sir Thomas Cavendiſh, in queen Elizabeth's time, from the Philippine Iſlands, where he met with it in his voyage round the world. Theſe branches were given to Mr. Morgan, the queen's apothecary, and to Mr. James Garrat, of whom Cluſius received them.

Monſieur Geoffroy, in his Materia Medica, tranſlated in 1736 by Dr. G. Douglaſs, *p.* 322. calls it *Aniſum Sinenſe, Semen Badian,* & *Fructus Stellatus,* and ſays, it is highly eſteemed in China, and all over the Eaſt. That it is uſed to cure any bad taſte in the mouth, as a preſervative againſt the effects of bad air, and alſo for the ſtone and gravel. The Indians likewiſe

likewiſe ſteep this fruit in water, and afterwards ferment the infuſion, and thus make a vinous liquor: that the Dutch in the Eaſt-Indies, as well as the natives, mix this fruit with their tea and ſherbet.

Kæmpfer in his Amœnitates Exoticæ, *p.* 880. calls it *Somo*, or *Skimmi*, and has given us a very good figure of a branch of it, with the leaves, flowers, and fruit. He found it in Japan, and ſays that the Japoneſe and Chineſe eſteem it a ſacred tree, that they offer it to their idols, and burn the bark of it, as a perfume, on their altars; and lay the branches upon the graves of the dead, as an offering to the ghoſts of their pious departed friends; and that the public watchmen uſe the powder of this aromatic bark ſtrewed in ſmall winding groves, or little channels, on ſome aſhes in a box ſecured from the weather, for the following purpoſe. This powder being lighted at one end, burns ſlowly on, and being come to certain marked diſtances, they ſtrike a bell, and by means of this time-keeper, proclaim the hours of the night to the public. And laſtly, that it has the remarkable property of rendring the poiſon of the bladder fiſh (*Tetraodon Ocellatus* of Linn. Syſt. of Nature, *p.* 333.) more virulent, as many have experienced, that have uſed violent means to deſtroy themſelves.

We are indebted for the firſt diſcovery of this curious American tree to a negro ſervant of William Clifton, Eſq; chief juſtice of Weſt Florida, who was ſent to collect ſpecimens of all the rarer plants by his maſter, at my requeſt; and in April, 1765, he met with this curious tree growing in a ſwamp near the town of Penſacola; the ſpecimens I received in July following.

After

After this, in the latter end of January, 1766, Mr. John Bartram, the king's botaniſt for the Floridas, diſcovered it on the banks of the river St. John, in Eaſt Florida, as appears from his deſcription of it, and the drawing of a ſeed-veſſel, with ſome of the leaves, which he ſent to our late worthy member Peter Collinſon, Eſq; who was ſo kind as to communicate them to me. Mr. Bartram's deſcription of it, as it appears in his journal up the river St. John's, publiſhed by Dr. Stork, in his account of Eaſt Florida, is as follows:

" Near here my ſon found a lovely ſweet tree, " with leaves like the ſweet bay, which ſmelled like " ſaſſafras, and produces a very ſtrange kind of ſeed- " pop; but all the ſeed was ſhed, *the ſevere froſt* " had not hurt it, ſome of them grew near twenty " feet high, a charming bright evergreen-aro- " matic."

This obſervation of Mr. Bartram, relating to its bearing a ſevere froſt, may afford us a uſeful hint in the cultivation of this tree, eſpecially as I am convinced, from repeated accounts of the weather in Weſt Florida; that the froſt is much more intenſe there, from whence thoſe plants, which you now have in vigour, were brought, than in Eaſt-Florida; ſo that the experiment is well worth making with one of them, to ſee how far it will ſtand the ſeverity of our winters. Should it ſucceed, it would be a very great acquiſition to our gardeners, and be highly ornamental to our plantations of evergreens.

The medicinal properties of this tree are certainly worth enquiring into. The leaves afford a moſt agreeable bitter. A ſprig of it ſet to putriſy in a phial

of

of water, the bark ſoon became full of a clear mucilage. The young bloſſoms put into water with a ſmall quantity of oil of tartar *per deliquium* from a dark reddiſh color, became a light brown; but from the ſame proportion of oil of vitriol in water, they turned to a fine carmine color, which ſtained the paper of a fine red. This points out its aſtringent quality.

Before I come to the botanical characters of our Florida *Illicium*, I muſt obſerve, that it appears to me to be a *different ſpecies* from the oriental one.

The ſeed veſſels from China, which are to be ſeen in collections of the Materia Medica, eſpecially among foreigners, ſmell very diſagreeably of aniſeed: our Florida ſeed veſſel is agreeably aromatic, as are the leaves and young branches. The flower, according to Kæmpfer, is of a yellowiſh white, and looks at a diſtance like a Narciſſus: ours is of a dark red color.

Kæmpfer reckons the number of petals ſixteen, and the rays or ſeed-veſſels eight: the number of petals in ours is from twenty-one to twenty-ſeven, and the ſeed-veſſels twelve or thirteen that ripen. In reſpect to the form and growth of the tree, they are much the ſame; for inſtance, they both grow to the ſize of a cherry-tree; their leaves are of an oblong oval ſhape, pointed at both ends, fleſhy, with few veins, growing alternately, and in tufts at the ends of the ſmall branches.

Dr. Linnæus, who takes his characters of the *Illicium Aniſatum* (Gen. Plant. *p.* 244.) from Kæmpfer, places it among the Dodecandria Polygynia. But I am perſuaded you will agree with me, that from the

the following characters, ours muſt be of the Polyandria Polygynia, and ſhould ſtand next to the *Magnolia*.

Characters of the ILLICIUM FLORIDANUM, Or FLORIDA STARRY ANISEED TREE.

CALYX. The perianthium, or flower-cup, conſiſts commonly of five little membranaceous and colored leaves, that ſoon fall off; they are of a concave oblong oval form, pointed at the ends. Sometimes we meet with only four little leaves, ſometimes ſix, in the flower-cup. Kæmpfer obſerved four in his.

COROLLA. The flower conſiſts of many petals (from twenty-one to twenty-ſeven) which are lanceolated: theſe are of three ſizes, and equal numbers in each circle, the outward ones are long (about an inch) concave, obtuſe, and ſpreading open. The next are a little ſhorter and narrower; and the innermoſt are ſtill ſhorter, much narrower, and very ſharp pointed; but are not nectaria, as Dr. Linnæus ſuppoſes.

STAMINA. The filaments are many, (about thirty) very ſhort and flat, placed over one another, ſurrounding the germina, or embryo ſeed veſſels. Theſe ſupport as many antheræ, or ſummits, which are erect, oblong, and emarginated, or having a ſmall indenture at top, with a cell on each ſide full of farina, of a globular form when they are magnified.

PISTILLUM, or female organ. The germina, or embryo ſeed-veſſels, are twenty, or more, in number, placed in a circular order above the receptacle of the flower; they are compreſſed, erect, and ending in ſo many ſharp pointed ſtyles, bending outwards at the top. The ſtigmata, or openings on the top of the ſtyles, are downy, and placed lengthways along the upper part of each ſtyle.

PERICARPIUM, or ſeed-veſſel, conſiſts of twelve, oftner thirteen, little pods, or capſules, that ripen. Theſe are of a compreſſed oval ſhape, and a hard leather-like ſubſtance, with two valves to each, and are diſpoſed edge-ways in a circular order, like ſo many rays of a ſtar.

SEMINA. The ſeeds are ſmooth and ſhining, of an oval ſhape, a little compreſſed, and appear obliquely cut off at the baſe. There is one ſeed in each capſule. I am,

Sir,

Your affectionate friend,

John Ellis.

EXPLA-


Illicium Floridanum *Vulgo* Starry Aniseed Tree.
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EXPLANATION of PLATE XII.

A A branch of the Illicium Floridanum, drawn from a plant in her Royal Highneſs the Princeſs Dowager of Wales's garden at Kew. The flowers and ſeed-veſſels were drawn from ſpecimens ſent over from Penſacola by his honour lieutenant governor Durnford.

BB The front view of two flowers.

C The back view of a flower.

D The bud of a flower unopened.

EEE The piſtilla, or female organs, being the embryo ſeed-veſſel, ſeparated from the ſtamina, or male organs.

F One ſingle piſtillum, with the germen, ſtyle, and ſtigma.

G The male and female organs, a little magnified.

H Two ſtamina, a little magnified.

I The farina fœcundans or male duſt.

K K The calyx, with five little leaves.

L L The ſeed-veſſels, with thirteen capſules.

L l The ſeed-veſſel of the Chineſe *Illicium*, with only eight capſules. Kæmpfer reckons the ſame number in the Japoneſe *Illicium*, which he calls *Somo*, or *Skimmi*.

M Two of the ſeeds; they are called ſemen badian, and uſed in medicine in Germany, Denmark, and Sweden. The Dutch import large quantities of them from China.