

Passiflora

ONLINE JOURNAL

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sub sole sub umbra virens



THIS MONTH'S ISSUE Passiflora 'Poseidon'.
The early history of Passiflora.
Reunion Island Passiflora.
Passiflora UK Newsletter.
History of Czech Passiflora growing.
Passiflora recipes and more.

Letter From the Editor



The role of Facebook must be acknowledged. Facebook has become a behemoth in social, cultural, technological, economic, and even political spheres. For millions of individuals it has become a primary means of communication. For some

countries it has been a catalyst for revolutions. Movies have been made about it (most notably “The Social Network”). But why write about it in a journal about Passiflora? The answer is simple: the role of Facebook specifically in the Passiflora community cannot be overestimated.

As a means for connecting Passiflora enthusiasts - amateur to expert - Facebook stands on the shoulders of giants. The Passiflora Society International, the online L-list, and numerous other online forums have been connecting Passiflora enthusiasts since Facebook's creator, Mark Zuckerberg, was in diapers. When he did start Facebook in 2004, though, he started a phenomenon that has outstripped any expectations anyone ever had. One of the editors of this journal joined Facebook just a few months after its inception in 2004 and has watched it evolve from a small directory of college students in the Northeastern US, to now being the dominant international forum for most social networking. As of July 2011, Facebook boasted over 750 million active users. They engage in networking spanning virtually every known major culture, subculture, personal interest, the arts, inside jokes, and yes even Passiflora.

The Passiflora group on Facebook was started by Myles Irvine in 2007, and has grown in logarithmic fashion. It has become the major hub for Passiflora enthusiasts worldwide with over 800 users and 1,600 pictures as of July 2011. People around the world utilize the Facebook Passiflora group for help with everything from learning the basics about these marvelous plants, to assistance with difficult identification questions, to discussing the finer points of their taxonomy and genetics, to uploading pictures of new hybrids, to simply sharing excitement about a new flower in bloom or fruit with good flavor or viable seeds. Though English is the dominant language, French, German, and Spanish are not uncommon, and other languages make occasional appearances. New friendships and collaborations evolve on a daily basis, many of them across thousands of miles. The tangible results so far include open sharing of images, plants, seeds, and information.

The burgeoning Passiflora social network has already grown dramatically because of Facebook and is likely to continue to do so. Easy access to a large community of Passiflora enthusiasts from anywhere in the world with an internet connection has drawn an ever-increasing number of people into a love of Passiflora and a commitment to their preservation both in collections and in the wild. It is hard to imagine that together we will not improve the odds See you on Facebook.

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We invite submissions from all *Passiflora* enthusiasts, from cartoons, garden tales, recipes and growing tips to articles about new species and hybrids and reports of wild collecting trips. Please contact any of the editorial team above. Even if you have not written anything before we are here to help.

Articles in any language are welcome but will usually be translated and published in English only for reasons of space. We reserve the right to edit or refuse articles but ask contributors to note that we are not set up to offer scientific peer review. Please note that contributors will not be paid. Letters to the editor for publication are also welcome.

Note that new species should first be submitted to the appropriate scientific botanical journals so that the validity of the name is established, after which time we may carry an article about them. If you wish to formally register a hybrid, which is optional, you should apply to the *Passiflora* Cultivar Registrar who, if your application is accepted, will publish your hybrid in the *Passiflora* Society International Journal & Newsletter.

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P. 'Poseidon' © 2011
Eric Wortman

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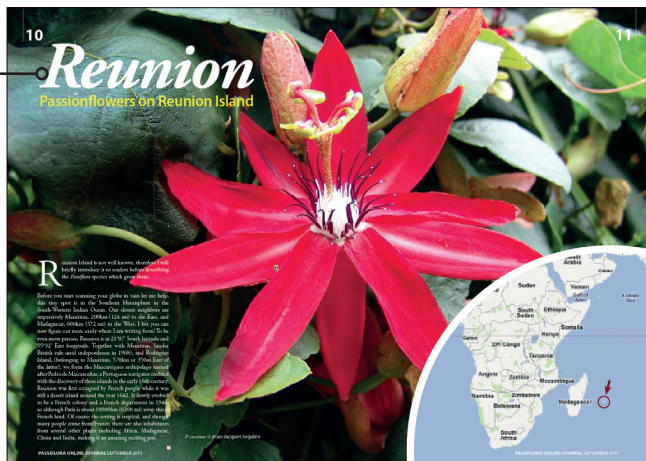
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The UK National Collection of Passiflora Newsletter Feb. 2011



The UK National Collection of *Passiflora*

Newsletter Feb. 2011

In the late spring of 2010 we had 189 *Passiflora* species and 112 cultivars, and when varieties were taken into account the total was 339 taxa. Sadly this number has been reduced by the cold spell in December last year when one of our green houses that is frost protected recorded -6°C and now stands at 283 taxa.

The trip to French Guiana with Christian Feuillet, Maurizio Vecchia and friends in 2009 proved very successful and all the cuttings that we were able to collect during our trip soon rooted when I arrived back in the UK. Having tried several times before to cultivate plants from FG with rather mixed success I decided to cultivate all these new taxa in ericaceous compost and only water with rain-water. This proved most successful and in spite of a cold snap in January 2010 we managed to overwinter all the young plants. During the late summer and early autumn *P. davidii* Feuillet, *P. curva* Feuillet and *P. fanchonae* Feuillet all produced flower buds. *P. curva* flowered continuously until the middle of December and set several fruit when crossed with *P. vitifolia* Kunth. Sadly the exceptionally cold nights of December caused *P. davidii* and *P. fanchonae* to abort their flower buds and both plants perished in early January 2011, having only been subjected to overnight air temperatures as low as 6°C with a minimum soil temperature of 10°C . On the plus side, cuttings of all these species seem to be just hanging onto life.

P. bicuspidata © 2011 John Vanderplank

In 2010 Ron Boender from Butterfly World, Florida sent over cuttings of a species believed to be *P. hyacinthiflora* Planch. & Linden found wild in Colombia. This is a slender weedy mountain species that likes cool moist conditions which are easy for UK to provide, even in summer. When it flowered it turned out to be *P. bicuspidata* (Karst.) Mast. a very similar and closely related species.

In 1998 Phil Holmes and Tom Fox gave me seed of several *Passiflora* including *P. biflora* L. from Playa Ventana, Costa Rica. When my plant was about 20 cm tall I got quite excited, the leaves were very different from any *P. biflora* I had ever seen, a new species I thought! So with fastidious attention I tended my plant and willed it to flower. Did it flower? Oh no! The next year, after nearly losing it in the winter, I tried again hoping that a larger plant was more likely to flower, but did it flower? Oh no! In subsequent years I tried growing it in cooler, mountain like conditions, in very hot and sunny conditions, and in very humid conditions, and did it flower? Oh no! I tried for ten years to get it to flower, and even asked Tom for more seed which he kindly sent. They grew and flowered and turned out to be true *P. biflora*. So I left my plant to its own devices and didn't pay much attention to it. Last year it escaped with a few of its vigorous shoots finding holes in its polythene tent where it had overwintered. The conditions outside the tent were much cooler with more sunlight, but the roots of the plant were in lowland tropical temperatures of 25°C. Yes, as you've probably guessed, it flowered and flowered and flowered, and set lots of fruit. It wasn't a new species as I had hoped but *P. talamancensis* Killip which actually was new to me! If anyone would like seed I'll send some to the seed bank.



Playa Ventana, Costa Rica
© 2005 Martin Murray



P. talamancensis © 2011 John Vanderplank

In 2008 we built a large glasshouse for butterflies and planted it with quite a few *Passiflora* species including *P. adenopoda* DC. In the summer of 2010 our plant was large and flowering well. It self pollinated and is now laden with fruit which should ripen to a deep pink. This colour is unusual for species in subgenus Decaloba.

As the years have gone by my aims as a National Collection Holder have changed. We can no longer keep a living collection of all the know species and cultivars, there are just too many hybrids now, and Les King (*Passiflora* Cultivar Registrar) keeps publishing wonderful new cultivars every six months or so. In 1990 there were only 67 recorded interspecies cultivars but now there are 494, over 400 new cultivars in just 20 years.

In 1994 after a visit to Venezuela when I saw so many *Passiflora* species I had never seen before, I started a herbarium collection so that I could identify the living plants I collected at a later date. Some years later I had a disagreement with a friend over the identification of an old cultivar and the only way to resolve the disagreement was to find a herbarium specimen of the original plant. I was extremely fortunate in finding a herbarium specimen of the disputed taxa in the Royal Horticultural Society's Herbarium at Wisley, but having also searched Kew's Herbarium I realised that there are very few cultivars in British herbaria and none of the proliferation of new hybrids have vouchered specimens in any herbaria. That motivated me to make herbarium specimens of all the species and cultivars in our collection; we now have 959 herbarium sheets, with many "type and isotype" specimens of both species and cultivars.

So that there can be a permanent herbarium record of all cultivars we are asking for cuttings of all new hybrids from their breeders or custodians so we can cultivate the plant and make a permanent herbarium record for posterity. If any other collection holder has started a herbarium collection and wishes to collaborate with us, please get in touch.

Work on the *P. foetida* L. group of species is progressing, although a little slowly. I have photographed over 500 herbarium specimens from around the world but only about 10% of these sheets have any flowers, so identification of individual varieties becomes very difficult. We have received seed from Robert McPhail from several locations, and several well documented varieties from Jan Meerman in Costa Rica. Sincere thanks also to Doug Goldman, Ron Boender, Eric Wortman, Crystal Stone, Christian Houel, Francois Thuys, Elizabeth Peters, Richard Sutton, Yero Kuethe, Cor Laurens, Jorge Ochoa and Fred & Sula Vanderplank for gifts of seed and cuttings. Most of the seed germinated well and the plants went on to flower and fruit. We are still looking for seed or cuttings of any species from Subgenus (Killip) *Dysosmia* and *Dysosmiodes* including any *P. foetida* variety from any location.



P. adenopoda © 2011 John Vanderplank



P. adenopoda fruit' © 2011 JJohn Vanderplank

In 2008 Jorge Ochoa, Sula Vanderplank and I collected a *P. biflora* type *Passiflora* in Belize. The most noticeable difference of this plant was that it produced only one flower per leaf axil, not two like *P. biflora*. Its flowers were mauve and orange rather than white and yellow, but all the same resembled *P. biflora*. Luckily the plant had many ripe fruit and spare vegetative material for cuttings. Amazingly when cultivated from seed or cuttings the flowers became much paler and more *biflora* like, but the distinct differences in the leaf shape, leaf-laminar glands and stipules remained constant. Plants were grown by Ron Boender in Florida and Jorge Ochoa in California and by myself in the UK all with the same result: loss of flower colour. After consulting all the original descriptions and herbarium records of the species that E. P. Killip in his 1938 monograph recorded as synonymous with *P. biflora*, I concluded that the plant we had found was *P. transversa* Mast. Sara Edwards and I have written a paper removing *P. transversa* from synonymy with *P. biflora* which is due to be published later this year in Curtis's Botanical Magazine.

Dr John Vanderplank was born in Tanzania. He founded the UK National Collection of *Passiflora* in 1984, and since that time has studied and conserved these plants.

www.butterfliesandmore.co.uk

Reunion

Passionflowers on Reunion Island

Reunion Island is not well known, therefore I will briefly introduce it to readers before describing the *Passiflora* species which grow there.

Before you start scanning your globe in vain let me help, this tiny spot is in the Southern Hemisphere in the South-Western Indian Ocean. Our closest neighbors are respectively Mauritius, 200km (124 mi) to the East, and Madagascar, 600km (372 mi) to the West. I bet you can now figure out more easily where I am writing from! To be even more precise, Reunion is at 21°07' South latitude and 55°32' East longitude. Together with Mauritius, (under British rule until independence in 1968), and Rodrigues Island, (belonging to Mauritius, 570km or 350m East of the latter), we form the Mascareignes archipelago named after Pedro de Mascarenhas, a Portuguese navigator credited with the discovery of these islands in the early 16th century. Reunion was first occupied by French people while it was still a desert island around the year 1642. It slowly evolved to be a French colony and a French department in 1946, so although Paris is about 10000km (6200 mi) away this is French land. Of course the setting is tropical, and though many people come from France, there are also inhabitants from several other places including Africa, Madagascar, China and India, making it an amazing melting pot.

P. miniata © Jean-Jacques Segalen



Apart from the population it can be compared to Hawaii, although smaller with a total area of 2512 sq km (1560 sq mi). It is a volcanic island hosting one active volcano, Piton de la Fournaise. The highest spot is 3069m (10069ft) high and is called 'Le Piton des Neiges' (Snow Peak), though you will not see snow there. The island has an overall round shape, with the West coast protected from eastern winds by the mountains making it rather dry, while the East coast gets much more rain and the whole island gets soaked during the cyclone season. The wide diversity of climates and micro-climates allows for a large number of plants to grow, with a high level of endemism. Although the island when free of men was an Eden for many animal species such as parrots, tortoises, solitaires (the local 'dodo'), ibis and so on, all were exterminated or eaten by sailors and the first settlers. On the other hand, the vegetable kingdom offered very little to eat besides the heart of endemic palm trees, *Dictyosperma album*, the "Hurricane Palm", and *Acanthophoenix rubra*, the "Barbel Palm", which are both now gone from the wild but are still cultivated for food. This lack of edible fruit and vegetables was soon remedied by the new inhabitants who brought species from nearby Africa and Madagascar as well as many species from Asia during the 18th and 19th centuries when both Mauritius and Reunion were

used as essay gardens by navigators and naturalists. Folks brought over to work in the coffee fields and later in the sugarcane fields, mostly African and later Indian and Chinese, also introduced a number of plants, either edible, medicinal or magical. This leads us to the presence of various species of passion flowers on the island though we are quite far from their places of origin. Let us see what we can find in gardens and gullies here and there!

The most widespread ones will unsurprisingly be species known worldwide as pan-tropical weeds, the seeds probably brought over with fruits, veggies, dirt, wind, soil, you name it. *Passiflora foetida* and *P. suberosa* are those "bad guys". The first one may be considered a "not so bad guy", as it produces edible fruit, though they usually are rather despised and enjoyed mostly by birds and trappers like me. It is found all over the West coast of the island as it prefers dry areas. Although very common and found in most tropical locations it is nonetheless interesting because it is so variable. Indeed John Vanderplank mischievously called it '*P. variablata*' in his book *Passion Flowers*, First MIT Press second edition 1996. Leaves are usually either 3 or 5-lobed, hairy, pale green, with a fetid smell of decay when crushed, sometimes described as smelling like a damp goat! Flowers range from white



P. foetida © Jean-Jacques Segalen



P. miniata fruit © Jean-Jacques Segalen



P. edulis fruit © Jean-Jacques Segalen



P. edulis fruit © Jean-Jacques Segalen



P. edulis © Jean-Jacques Segalen

to pink, purple, dark rose or even bluish. On Reunion they are pale pink with purple corona filaments, though I once found a pure white one in a ravine of the North. They are surrounded by rather decorative dissected bracts which will later close around the fruit. This can be yellow, orange or red, the size of a pea or larger, containing a grayish sweet edible pulp and numerous flat seeds. Called on Reunion 'poc-poc' which describes the sound made if you crush the fruit. It is considered a weed and never purposely grown (except by some maniacs...).

*P. suberosa** is found in more humid areas, even in thickets in the rain forests of the South where they will produce decorative corky stems. Just like *P. foetida*, it is a very highly variable plant as leaves can range from entire to 2 or 3-lobed, oblong to transversely oblong. The flowers are very tiny, lacking petals, and the sepals are green to yellowish green. They are followed by fruit the size of a pea, dark blue when ripe. They stain fingers if crushed and are locally called 'Ti Grain d'encre' (small ink grain) and have been used as an ink substitute.

Let us now turn to voluntarily introduced species, first edible ones then decorative ones. The passion fruits you will more readily find in street markets, in private gardens and even in the wild is *P. edulis*, the "Grenadille violette". Probably the most commercially grown worldwide, it is one of the rare fruits produced on Reunion to be exported to Europe together with lychees, mangoes and pineapples. It is not grown on large scale like in

Brazil or Australia but mostly as an additional crop by farmers. CIRAD, a French-based international crops development agency, created two promising hybrids, 'Galea' and 'Maloya' which proved more resistant to pests such as viruses, nematodes and various cryptogams than the ordinary species. Those are hybrids between *P. edulis* and *P. edulis flavicarpa* which have been further submitted to selecting. The fruits are usually the size of the yellow granadilla (*P. edulis flavicarpa*) with a reddish purple skin color and sweeter than the purple granadilla (*P. edulis*). The yellow granadilla is also grown and offered for sale, but on a much smaller scale.

The sweet granadilla (*P. ligularis*) is also found seasonally in the markets and much enjoyed. This species comes from higher altitudes in Central and South America between 1000 and 3000m in elevation (3000 to 9000ft), hence requiring some coolness to grow correctly. Its large scented pendant flowers can be hidden amongst the large glossy leaves, though they will soon turn into egg-shaped fruits with a green-bluish brittle skin turning orange when ripe, offering a sweet flesh.

The king of the passion fruits, by size and in my opinion by taste, is *P. quadrangularis*, the "Barbadine" or "Babadine". The vine itself is classified in the heavyweight category, reaching 45m (150 ft) in Java, according to John Vanderplank, and is often grown here over a metallic pergola which it will soon cover, bearing 50 to 60 fruits at once. They can become pretty impressive, the size of

a small football. The nice looking tender green skin will start to look disgusting before the fruit is fully ripe, becoming very soft with brown spots here and there. This is only if you are to enjoy it as a fruit, but people on Reunion and elsewhere in the tropics use the unripe Barbadee as a vegetable and cook it in various ways. A close cousin of the barbadine, Palata is one of the few edible species which escaped in the wild and can be sometimes found along a path or as a welcome surprise in the forest. The plant and flower are quite similar to *P. quadrangularis* but the fruit is much smaller and has a special taste. Surprisingly this one is never offered on street markets or shops and is obviously neglected by professional growers.



P. alata fruit © Jean-Jacques Segalen

A lesser known and enjoyed species is *P. maliformis*, locally called 'Coque en Fer' (iron shell) and it is very seldom seen in gardens but appears here and there in the wild, mostly in the South at low elevations. It comes from the Carribean and its introduction date on Reunion is unknown. It can reach several meters high and produces pendulous flowers similar to *P. ligularis*, but the fruit is so hard that one may need a stone to break it, and the flesh is rather deceiving, with an acid grape taste. The very last of edible passion fruits to be found on Reunion is the banana poka or taxo, curuba and locally "grenadille banane". It is not a hybrid of granadilla and banana as some humorous readers may think. It is just that *P. tarminiana* indeed produces fruits looking very much like tiny bananas; elongated and yellow-orange with a soft skin. The inside is packed with seeds surrounded by an orange aril with a good taste but not suitable to be eaten out of hand because of the numerous seeds. It is best used for juice which is not the habit on Reunion. This explains why this fruit did not catch on with consumers though it was introduced by CIRAD in order to diversify agricultural produce in the mountains. Though it is a high altitude plant which originates from the Andes where it is found between 2000 and 3000 m (6000 to 9000 ft), it is nonetheless starting to disseminate in the wild with the help of birds. It is not yet a serious invader as is the case in Hawaii and New Zealand, however it has to be closely monitored. It is quite a shame because the dropping large pink flowers are really gorgeous when they turn supporting trees or fences into a pink cascade.



P. tarminiana fruit © Jean-Jacques Segalen



P. Barbadine fruit © Jean-Jacques Segalen

Now that stomachs are full let us feed your eyes. Although all the species mentioned so far, maybe with the exception of *P. suberosa*, have showy flowers themselves, a few species have been brought over solely for decorative purpose. Those are surprisingly very few when one considers the stupendously large choice of species and hybrids available nowadays. This is due to regulations raised by local nature protection bureaus who feared potential weeds and decided that as there were already several members of the family genus who proved to be invasive, the whole family should be forbidden to enter the island. This means that we can only get four of those jewels here which were imported before the ban. *P. miniata* whose bright red flowers are the ones you will more commonly find in gardens and which was erroneously sold for years as *P. coccinea*. Closely resembling this is *P. vitifolia*, which most people confuse with the first one but can be distinguished by its grape vine like three lobed leaves. *P. caerulea* has of course made its way here but as it does not take too well to the humidity and heat of lowlands it is not such a common sight. Lastly is *P. 'Amethyst'* which is also quite rare although it does fairly well.

All in all, there is nothing exciting for those of you who ramble through the Amazon during your spare time or scan the Andes for new species, but I hope the amateurs and beginners will have enjoyed the reading! My next



P. suberosa © Jean-Jacques Segalen

article should cover a trip to French Guyana which will certainly be more entertaining.

Jean-Jacques Segalen is a professional horticulturist specializing in seed production, living on tropical Reunion Island with a keen interest in vines and passion flowers.

www.banbadine.com

*Editor's note. The *P. suberosa* species complex has been revised into a number of separate taxa by Kristen E. Porter-Utley. Revision of *Passiflora* Subgenus *Decaloba* Supersection *Cieca* (*Passifloraceae*) 2003.

Cover Story

Passiflora 'Poseidon'

(*P. umbilicata* x *P. tucumanensis*) x *P. sidifolia* A new hybrid by Eric Wortman and Crystal Stone

P. 'Poseidon' © 2011 Eric Wortman

Like most people who do so, when we first began to breed *Passiflora*, it was simply to see if we could make something unique. A few successful hybrids later, a focus starts to develop. For everyone, the focus is different, but in our case it became trying to do crosses that had not been accomplished before. After a few more hybrids, of which a percentage ended up in the compost pile, our focus evolved and became much more specific. "Different" is not quite good enough anymore. "Better" has become our goal, though subconsciously at the start. Better in any way than both parents, whether it be the appearance of the flower, the scent, the blooming period, floriferousness, cold and/or heat tolerance, leaf appearance, or even the overall growth and vigor of the plant. Before we had

even set these parameters, we created this hybrid *P. 'Poseidon'*, but thankfully it conformed to these guidelines perfectly.

The maternal parent is an unnamed hybrid of *P. umbilicata* and *P. tucumanensis*.

It is similar to Henk Wouters' *P. 'Jutta'* of the same parentage, but is distinct in many ways. This hybrid has a small flower with a long blooming period and is both cold and heat tolerant, having survived in the ground at temperatures below 20 degrees, and continues to bloom even at over 100 degrees. It has viable pollen and makes a good mother as well. The fruit tastes wonderful, and is one of my all time favorite passion fruit. However, it has no scent, and could certainly be larger with more elaborate filaments.



P. 'Poseidon' © 2011 Eric Wortman

The paternal parent is *P. sidifolia*. It has a unique strong scent, unlike any other *Passiflora* we have smelled, and has a fairly large flower with wonderful corona filaments.



P. sidifolia
© 2011 Eric Wortman

It also has viable pollen and can accept foreign pollen to create fruit. It is cold and heat tolerant, but unfortunately, in our climate, which is very hot and dry from April to September, it only will bloom for a couple of weeks in spring.

P. 'Poseidon' should doubtless be just as hardy as its parents, if not more so. The fact that it bloomed for the first time in the heat of late June gives me hope that it will continue in the future to be a long term bloomer like its mother. It has beautiful leaves, appearing exactly like a mixture of its parents, but the flower took its father's distinct scent. The white petals and sepals reflex very far as its mother does, likely an influence of *P. umbilicata*.



P. umbilicata x *P. tucumanensis*
© 2011 Eric Wortman

More obvious of that influence is the strong dark red to purple bracts that hold the bud, flower and fruit, and even stay on the plant after the flowers drop. The corona is large and curved much like *P. sidifolia*, and the entire flower is held pointing downward at an angle from the plant on 2-3 inch peduncles, unlike its father, which holds the flowers on short peduncles directly below the leaves, sometimes hiding the flower from view.

As with all new hybrids, there are unanswered questions which will only come in time. Are the fruits tasty? How long will it take them to ripen, as its mother can be as short as 45 days, and its father can take up to 9 months? At the time of this writing, the fruits are still immature at 60 days. Will it be as floriferous as we hope? Will the pollen be viable?

Even with many questions unanswered, we feel that this is an improvement on both parents in many aspects, and hopefully next year we will learn that it is an improvement in even more.

Most of our hybrids have names derived from mythology or theology. This one is no exception. It immediately conjured up images of the sea with its mystery, depth, and character. As *Poseidon* was the God of the sea in Greek mythology, we thought the name befitting.

We hope to have this plant available for sale in mail order nurseries in the US by fall of 2012.

Eric Wortman and Crystal Stone have been growing *Passiflora* for over 10 years in Northern California. Their focus is currently on hybridization and the advancement of the *Passiflora* community.

Website - www.bloomingpassion.com



Passion fruit Balls.

- 1 lb. crushed vanilla wafers
- 1 lb powdered sugar
- Shredded coconut
- 1 stick butter or margarine



- 3/4 cup Passionfruit (tart) or if not tart add 1/4 lemon juice
- 1/3 cup finely chopped nuts, toasted almonds, walnuts, hazel nuts

Mix the ingredients and roll in to small balls, refrigerate covered in the refrigerator...they will keep several days in the refrigerator or freeze.

Passion Bars.

Yield: Makes 16 two-by-two-inch squares

- 1 cup plus 2 tablespoons all-purpose flour
- 1/2 cup (1 stick) butter or margarine, softened
- 1/4 cup confectioners' sugar
- 1/2 cup granulated sugar
- 1/2 teaspoon baking powder
- 2 eggs, beaten



4 tablespoons fresh passion fruit juice (add some lemon or lime juice, up to 1 tbs, if the passion fruit juice is not tart. I use *P. edulis flavicarpa* juice which is always tart)

Confectioners' sugar, for dusting

Cooking Directions

Preheat the oven to 350 degrees F.

In a bowl, blend together the 1 cup of flour, the butter, and the 1/4 cup confectioners' sugar. Press this dough into a greased 8-x-8-inch pan. Bake for 15 minutes. Remove the pan from the oven, but leave the oven on.

While the dough base is baking, mix together the granulated sugar, the 2 tablespoons flour, the baking powder, eggs, and the passion fruit juice. When the base is removed from the oven, pour this lemon mixture over it and return the pan to the oven. Bake for another 20 to 25 minutes.

Cool in the pan. Cut into squares and sift confectioners' sugar over all.



Passion fruit snow drop cookies

Yield: Yields about 3 dozen cookies.

These stay fresh for up to a week; reroll them in confectioners' sugar before serving.

8 oz. unsalted butter, at room temperature

2/3 cup confectioners' sugar

2 teaspoons tart passion fruit juice, add up to 1/2 tsp of lemon or lime juice if the juice is not tart

Pinch salt

2 2/3 cups all-purpose flour

For Rolling:

1 cup confectioners' sugar



Cooking Directions

Heat the oven to 325 degrees F. Beat the butter and sugar together with a wooden spoon or a mixer until creamy. Add the passion fruit juice, and salt; mix until combined. Add the flour; mix until just blended. Shape the dough into 1-inch balls and set them 1 inch apart on ungreased or parchment-lined baking sheets. Bake until the cookies are light golden and give slightly when pressed, 18 to 20 min. Let the cookies cool slightly on the baking sheet; while still warm, roll them in confectioners' sugar. Transfer to a rack to cool completely.

The history of the Passion flower



Almost 500 years ago a traveller with the imagination of a poet, perhaps a mendicant friar, set foot on a dangerous mission of salvation in a strange new world. Perhaps the pangs of hunger were great. Starvation was always a prospect, and he could not depend upon the natives, whose food supply was limited.

Let us visualize a hot summer noon, when the sun was full and the bees circulating. We see this reverent man, clothed in his heavy simple robe, reaching out along a jungle path and plucking from a vine a red or purple painted flower of showy parts, irresistible in its beauty, provocative to an orchestra of insects. Beneath it, perhaps on the ground, lay the small mellow fruit he had seen the native women preparing.

He examined the flower, turning it over in his poetic ear and mind's eye. Perhaps he began to discuss this flower with others of his order. The Church was not reluctant to find messages in nature. This odd flower seemed to convey to the friars a useful tale of comfort and redemption.

Here was something they had been searching for, an enduring symbol of God in the new world that would help them carry the gospel to the native peoples. Moreover, it was much-sought evidence that the New Testament embraced people and lands unseen and undiscovered by Europeans at the time of Christ. This metaphor of botanical salvation was repeated by many, and in the course of time, it even reached the ears of the Pope.

The story of the discovery of the passion flower is steeped in the religious imagination, making it a one of the most storied of all plants discovered by explorers in the New World. To the believing mind of the sixteenth century, and to this religious man, the flower told the story of the crucifixion of Jesus Christ and provided a message to the heathen. A delicate bloom usually lasting only for hours, it opens and vanishes, a challenge for the artist and fodder for the religious mind contemplating the brevity of life.

Much of what is known about the history of *Passiflora* is ably presented by Emil A. Kugler and Leslie A. King in the chapter 'A history of the passionflower' in *Passiflora: Passionflowers of the World* by Torsten Ulmer and John M. MacDougal (Portland, Oregon: Timber Press, 2004). We are indebted to them for laying out a path for further exploration.

New discoveries in its history, with a faux flower added to a Renaissance painting, along with purported Hebrew words, as well as some question as to whether some of the purveyors of the Christian flower were actually descendants of Conversos (Jews forcibly converted to Catholicism during the Inquisition) bring questions of ironic mystery and interpretation that require at least a one or two footnotes to the history of the flower. We can also add some Meso-American history from what may be the first printed mention of the flower, in the Aztec-Mexican work known as both the *Libellus de Medicinalibus Indorum Herbis* (little book of medicinal herbs of the Indians) or the *Codex Badianus*.

The first years of contact with Western Europe stamped the flower and its fruit with a symbolic identity that builds upon the story of the last days of the suffering Christ. The essential parts of the flower illustrated to the Church its *raison d'être*; the three stigma the nails of the cross; the five stamen the wounds of the savior; the filaments the lashes of the whips of the Roman soldiers; the 10 petals and sepals the disciples of Christ, minus two who were in disfavor. (If these disciples were actually present at the cross, the New Testament gives no report).

Several interpretations of the symbolism exist, as they do with the many other flowers adapted to the story of Christ, from Gabriel's ever-present innocent white lily in almost every depiction of the annunciation, to the plucked carnations found in the Renaissance paintings of Madonna and child, which flowers were said to have sprung up from the Virgin Mary's tears as she followed the cross to Golgotha.

Kugler and King state that the first reports to Europe of the passion flower came from explorer Cieza de León in 1553. A Spanish civil servant who wrote a history of Peru (which included Colombia), he described the "granadilla" as a delicious and fragrant fruit growing near the town of Cali, now one of the largest cities in Colombia. The word "granadilla" comes from the Spanish "granada" for pomegranate, the ancient Old World fruit, full of fleshy seeds, like the New World passion fruit. León's flower is thought to be the species *Passiflora ligularis*, whose lemon-sized fruit are sweet and aromatic, exported and grown around the world. His early work can be found online at openlibrary.org and is mentioned on a page of botanist Francisco Hernandez Rerum Medicarum Novae Hispanae Thesaurus, published in 1648 and reprinted in 1992.

Cieza de León wrote:

"The banks of this river (the Lile) are well covered with fruit trees, amongst which there is one that is very delicious and fragrant called granadilla."

A lovely pre-Columbian gold pendant of a passion flower from Palmira, Valle del Cauca, dated 200 B.C. - 200 A.D. is displayed in the Museo del Oro, Bogotá. The museum states it is "one of the few floral examples of pre-historic metalwork found to date."

In addition, one can trace an interesting meso-American craftwork back to an early South American civilization. A Moche jug handle dating back to perhaps 400 A.D. , with



Museo Larco
Lima - Perú

stylized fruits and leaves of what is described as a passion flower is exhibited at the Museo Larco of Lima.

The museum catalog states that the Moche jug handle shows the "tumbo" or fruit of the banana passion flower, one of a group of passion flowers native to the valleys of the Andes. The question of its identification is apparently still open, as the stylized leaves and the vine lead to questions. Museum cataloguer Isabel Collazos Ticona, in correspondence, says the museum still seeks experts to comment on its catalog. She describes the fruit as possibly a "sweet pepino" often represented on Moche pottery. The oblong fruit also is also shaped like that of the cocoa, points out journal editor Myles Irvine. To complicate interpretation, neither the cocoa or the pepino grow from a vine.

Among the passion flower "banana" species is *P. tripartita* var. *mollissima*, which has a beautiful light pink flower. Journal editor Myles Irvine has pointed out that the banana passion flowers, which are native to the valleys of the Andes, are about 3-4 inches long and are found widely in local markets. The fruit is named for its shape rather than its taste. Originally thought to be one species, *P. mollissima*, now known as *P. tripartita* var. *mollissima*, others have now been identified including *P. tarminiana*, which was named as a new separate species of banana passion flower by Coppens & Barney et. al. in "*Passiflora tarminiana*, a new cultivated species of *Passiflora* subgenus *Tacsonia*." *Novon* 11(1): 8-15. 2001. There are several other common *Tacsonia* species closely related to *P. tripartita* var. *mollissima*, such as *P. mixta*, *P. cumbalensis* and *P. pinnatistipula*. Another, *P. antioquiensis*, is often called the red banana passion flower. All are thought to be hummingbird pollinated with the flowers varying from red to pink, occasionally white, and little or no corona filaments. It is unclear which of these is represented on the Moche jug.

The Mexican Mystery

The Cieza de León date of first mention, 1593, may be superseded by an earlier date if one takes into account a Mexican contribution. The native American-Spanish nexus took on new meaning there as the Spanish established institutions including schools. The first printing press in the New World was built in Mexico City in 1539. Conversion of the natives to Christianity was the goal, although this did not come without bloody rebellion against the clergy. A blood-curdling tale of pacification attempts and human sacrifice in Mexican provinces of Manche and Lacandon is told by Antonio de León Pinelo, a court reporter to the king,

in his 1639 Report Made in the Royal Council of the Indies (Labyrinthos, 1986). It was Pinelo, a prolific chronicler, who later wrote that Peru contained the mythical Garden of Eden and the fruit of temptation had been the passion fruit.

At the same time, the Inquisition against the Jews had been exported from Spain, and its offices were not closed until 1820. As late as 1649, twelve crypto Jews who refused to convert to Christianity were strangled and burned publicly, and another burned alive.

Despite these thorny problems from the pernicious unbelievers, the Spanish thought they could not only save souls, but learn valuable secrets, some more precious than gold. The Old World had been decimated for hundreds of years by sickness and plague. The plague broke out periodically and killed more than 100 million Europeans from its inception in the Fourteenth Century. An estimated 80 percent of the population of Spain died. In the spring and summer of 1568, a year before Monardes published his book on herbal medicine, 8,000 citizens of his city lost their lives to the plague.

In Seventeenth Century Spain, the death toll was estimated at one and a quarter million. Spanish missionaries and medical emissaries were sent to seek new healing herbs. Medicine had lain moribund for centuries. The revered Greek physician Dioscorides (ca. 40-90 A.D.), who listed more than 4,000 herbal remedies, remained an authority in an age where germs were undiscovered and the four humours, unbalanced, stole one's health away. In the "doctrine of signatures" promoted by the botanist Paracelsus (1493-1541) it was thought that a plant resembling a body part might cure what was wrong with that part. Thus a flower with heart-shaped petals might cure what ailed the heart. Astrological botany was devised by a man named Nicholas Culpeper (1616-1664), with every disease caused by a planet and cured by an herb related to a planet.

The church tried its best to reconcile all aspects of science with religious dictates including the pedigree of the practitioner. For more than two centuries after the discovery of the New World, and even after mercantilism began to broach religious barriers, no one who could not prove himself a Christian was safe from inquisitorial powers. Even before that, sometime around 1320, the great poet Dante, himself a medical man and orthodox in his beliefs about the divine Church, consigned Dioscorides, Hippocrates, Avicenna and other pre-Christians like Moses, Homer and Caesar to wander in limbo, aimlessly. They were condemned to

inhabit a box-seat level of the inferno in Dante's Divine Comedy, roaming aimlessly in the outer circle of Hell as the result of never having been baptized.

As explorers fanned out toward the New Golden Land, plundering for wealth, seeking the fountain of youth and the original Garden of Eden, transporting the first Indian slaves back to the Old World, they carried both the instruments of the Inquisition, and its refugees, with them. Whether the passion fruit was among the first plants sent back, perhaps with the wondrous sweet pineapples transported by Christopher Columbus, history does not tell.

History does tell us that sailing within the ranks of explorers were Conversos, or New Christians, many of them seeking new territory where they hoped to find safety from religious persecution. The Jews had been formally expelled from Spain the same year Columbus set sail from Spain.

These ships, guided by fallible humans, were regarded by some natives as transport for the Gods. But these were not their Gods. And the explorers, many of whom admired the naked social innocence of those they conquered, were appalled by customs which, included, in some instances, human sacrifice and cannibalism.

Salvaging the "savage" souls of the natives was a priority. Schools were set up to teach Christianity. Native muscle and talent was used to harvest crops and to build and decorate monasteries. Thus, the monastery at Malinalco, 115 kilometers southwest of Mexico City, was adorned with a rococo Aztec version of the passion flower, shown by Jeanette Favrot Peterson in The Paradise Garden Murals of Malinalco: Utopia and Empire in Sixteenth Century Mexico (University of Texas Press, 1993). The Spanish, of course, also wanted to know of the native peoples' secrets of healing. As a product of collaboration, what appears to be the first botanical guide to the New World was produced.

The Libellus de Medicinalibus Indorum Herbis was written in Nahuatl by a native, Martín de la Cruz, and translated into Latin by Juan Badiano at the first Old World style school of higher learning in Mexico, the Colegio de Santa Cruz de Tlatelolco, built by the Franciscan order to produce an indigenous priesthood among the Aztecs. The two authors were native born but given European names.

The original Nahuatl manuscript apparently no longer exists, but the Latin translation, with its pages of painted flowers, was sent to Spain in 1552. After 438 years, like many Vatican treasures, this work was returned to the Mexican nation by Pope John Paul II in 1990. The book is held in the Mexican National Institute of Anthropology and History. The Latin translation contains what may be the first European-American drawing of the passionflower, known to the Aztec as the "coanenepilli" (with several similar spellings). This stylized flower



is thought by the majority of sources to be *Passiflora jorullensis*, although, as fate would have it, experts disagree. Paul D. Sorensen names this flower "the world's first representation of a dahlia." Arnoldia (Volume XXX, 1970). He relies on a translation of the Codex by Emily Emmart - The Badianus Manuscript, An Aztec Herbal of 1552 (Baltimore: Johns Hopkins Press, 1940).

Here we have a conundrum. Another translator, perhaps a colleague, seems to dispute Emmart. William Gates identifies this same flower as "Dorstenia contrayerba, or *Passiflora mexicana*." Gates was also associated with Johns Hopkins, through the Maya Society which he helped resurrect.

Both authors were working on an English translation of the rediscovered Vatican manuscript at the same time. Each apparently came up with a different interpretation of this plant. The history of the manuscript and its ethnobotanical role is discussed by Peter T. Furst in an essay "This Little Book of Herbs: Psychoactive Plants as Therapeutic Agents in the Badianus Manuscript of 1552" in Ethnobotany: Evolution of a Discipline by Richard Evans Schultes and Siri von Reis (Portland, Oregon: Dioscorides Press, 1995).

Gates' 1939 book was reproduced by scholar Bruce Byland as An Aztec Herbal- The Classic Codex of 1552 (Mineola, New York: Dover Publications, 2000). The introduction to the edition is helpful in understanding the story of therapeutic plants making their way into Europe.

Gates writes of the Aztec flower, depicted more roughly in the codex:

"Famous in Yucatan as the Ixcambalhau as a stimulant and tonic, it owes its name to its primary reputation as an antidote against snake bites."

And as a result, the curious reader will see several forks thrown into the road.

The Religious Transition

The Spanish doctor Nicolás Monardes (1493-1588), who never visited the New World but received faithful correspondence, was the first to provide to Europeans the story of the botanical as well as the religious significance of the passion flower, write Kugler and King. His works were translated into Latin, French and English and appeared in several editions including a reprint of a 1577 English edition as Joyfull Newes Out of The Newfounde Worlde (London: William Norton, 1970). Wrote Mondardes, translated:

"the plant that this fruite beareth is like to ivy, and so it runneth up and clingeth fast to anything that is neere to it, wheresoever it be set, it is faire when it hath fruite, for his greatnesse it is a perticular hearbe and onely in one place is it found, it casteth a flower like to a white Rose, and in the leaves he hath figures whiche are the thynges of the Passion of our lorde, that it semed as though they were painted with much care, whereby the flower is more perticulare then any other that hath been seen. The fruite is the little graines, which wee have spoken of, and when they are in season they be full of Licour, sumwhat sharpe, and all full of seede, whiche are opened as one doth open an Egge, and the Licour is to bee supped up with greate contentment of the Indians, and of the Spaniards. And when they have supped it up, many doe not feelee paines in their stomakes, rather they soften the Belly, they seeme to be temperate, with some moysture."

A few years later, in 1590, Jesuit José De Acosta wrote about the granadilla in his Historia Natural Moral de las Indias (republished by Duke University Press, 2002, edited by Jane B. Mangan with introduction and commentary by Walter

Mignolo, translation by Frances M. López-Morillas). De Acosta, a theologian, founder of colleges in the new world and missionary for 25 years in Peru and Mexico, wrote:

The blossom of the granadilla, or passion flower, is believed to be a remarkable thing; they say that it has the signs of the Passion, and that the nails and the pillar and the blows can be found in it, and the crown of thorns and the wounds. There is something to be said for this belief, although in order to imagine it one needs a touch of piety to help one see it all; but much is very clearly visible, and its appearance is beautiful in itself, although it has no odor. The fruit it produces is also called granadilla, and it can be eaten or drunk, or rather sucked as refreshment; it is sweet and some think it excessively so.

He goes on to say that Indians carried flowers in their hands during dances and festivals, and “the great lords and kings used them as a sign of greatness.”

Reinforcing the religious message in 1602 was an epic poem, written in Spanish, by Martin del Barco-Centenera with the name translated into English by Kugler and King (p. 19) as “Argentina and the Conquest of the Rio de la Plata with Other Events of the Kingdoms of Peru, Tucuman, and the State of Brazil” The poet wrote (translated by Kugler and King):

The flower of the granada or granadilla
Of the Indians and concealed mysteries
Who is not amazed?
Representing the twelve apostles,
Of a green and yellow color.
The crown of thorns and three nails
The flower is so natural and almost alive
And now I admire it and so write it down.

Seven years later, in 1608, Spanish Jesuits would present the passion flower in its dried parts and with a drawing to Pope Paul V of the Borghese family, write Kugler and King, and shortly thereafter rough and mostly symbolic drawings of the flower circulated throughout Europe. It was typical of these drawings that the ring of five stamen formed into a stylized crown of thorns, and the three stigma were sometimes represented as blades or nails. More lifelike sketches were made as the demand for the flower spread to caretakers of the royal and clerical gardens in France, Italy and Spain in the early years of the century. Within the gardens of Europe a truer illustration

came from a drawing of *Passiflora incarnata* in a catalog by French royal gardener Jean Robin.

Kugler and King ascribe a painting of a passion flower to illustrator Giovan Fabri, working for a patron of the famous Accademia dei Lincei, published later as a pamphlet with a copperplate. Art historian and botanical expert Sam Segal identifies a Jesuit priest as the first artist who depicted a passion flower in a commercial painting. Daniel Seghers lived in Rome from 1625 to 1627 before returning to his home in Antwerp. His paintings, usually bright, painstakingly accurate floral wreaths surrounding a



cartouche of religious figures painted by other artists, were in good demand and highly acclaimed. Segal writes in a private letter that the early works by Daniel Seghers with a Passion flower are St. Ignatius Within Flower Garlands, Vatican Museum no. 40418; and Triumph of Love, a flower wreath encircling putti, in the Louvre, no. 797. Both are illustrated in Hairs', The Flemish Flower Painters of the XVIIth Century, 1985, figs. 31 and 34. Segal identifies individual flowers in paintings and examines the history of botany in art in Flowers and Nature: Netherlandish Flower Painting of Four Centuries (Hijink International b.v., Amstelveen 1990) with English translation by Ruth Koenig.

In a valuable contribution to botany, John Parkinson, gardener to Charles I, published the herbal Paradisi in Sole Paradisus Terrestris in 1629. Parkinson associated himself with the most famous herbalists of the time, and

the fascinating story of his rise from poverty to eminence as grocer, apothecary and gardener in times of religious tumult is told by Anna Parkinson, a descendent, in Nature's Alchemist: John Parkinson, Herbalist to Charles I (London: Francis Lincoln Limited, 2007).



His drawing of the flower was botanically accurate, but he also included an early Jesuit symbolic illustration to make a point that the Jesuits had exaggerated the flower. Despite the fact the queen was a faithful Catholic, and that his book was dedicated to her, Parkinson, in Paradisus (p. 393-4) attacked the religious significance given the flower by the Jesuits. He wrote:

Some superstitious Jesuite would faine make men believe, that in the flower of this plant are to be seene all of the marks of our Saviour's Passion; and therefore call it Flos Passionis; and to that end have caused figures to be drawne, and printed, with all the parts proportioned out, as thorne, nailes, whippe, pillar, etc. in it, and all as true as the Sea burnes, which you may perceive by the true figure, taken to the life of the plant, and the figure set forth by the Iesuites . . . these bee their advantageous lies (which with them are tolerable, or rather pious and meritorious) wherewith they use to instruct their people: but I dare say, God never willed his Priests to instruct his people with lyes: for they come from the Divell, the author of them.

By the early 1600s the *Passiflora incarnata* and its fruit had been discovered growing among the crops of the native Americans in the colony of Virginia. Its fruit was used by tribes in what is now the southeastern United States.

In North Florida, seeds of the fruit have been found in archaeological digs at Mission San Luis, where Apalachee Indians lived with the Spanish. The mission was torched by the English, in a raid from South Carolina, in 1704. One use of the plants may have been to make cakes. This information can be traced to Capt. Bernard Romans, a Dutch-born naturalist and surveyor who worked for the British, and who first printed in 1775 A Concise Natural History of East and West Florida. (Reprinted Gretna, La: Pelican Publishing Company, 1998).

He wrote that the Creek Indians “also prepare a cake of the pulp of the species of the *passi flora*, vulgarly called may apple . . .”

The plant was also called the “maracock” by the native Americans and the British, and “granadillo” or variants by the Spanish. The Dutch in Brazil had called the passion flower plant “maracua.” The flower is known by the Guarani language spoken in Argentina, Brazil, Bolivia, Paraguay and Uruguay in South America as “mburucuyá” from which the name maracua or maracujá is thought to have originated. It was also called “flos passionis” in Latin.

When Antonio de León Pinelo, announced that he had found the Garden of Eden

at a confluence of rivers in Peru, he said that the passion fruit was, indeed, the one hanging from the Tree of Knowledge of Good and Evil. This theme followed some previous speculation through history that the true Tree of Knowledge in the Garden of Eden boasted as its fruit the pomegranate. Written between 1645 and 1650, Pinelo's book *Paraiso en el Nuevo Mundo* was not printed until the mid-Twentieth Century, writes Jorge Cañizares-Esguerra in "How Derivative was Humboldt?" in an essay in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, edited by Londa Schiebinger and Claudia Swan (University of Pennsylvania Press, 2007).

Herbalists, whether Catholic or newly Protestant, followed a religious path and Linnaeus in 1753 called the newfound western genus "*Passiflora*." It fit in well with the theory of "the great chain of being," each object, from humans and descending downward, reflecting the power of the Creator. The topmost power was represented in herbals, scientific books, legal and moral treatises and illustrations by the anagram for the name of the most Holy in Hebrew –YHVH. It usually appeared in a cloud at the top of the frontispiece of early botanicals by Clusius, Parkinson and others.

The rest of the story of the flower is not without a good deal of mystery, some of it discussed elsewhere by this author and in abbreviated form here. Much can be found on his website² and related sites.

Art and the Possibility of Counterfeit

Sprouting from a red carnation held by the Madonna, a highly stylized passion flower has been regarded as a focal point of a particular Madonna and Child, at the Cincinnati Art Museum, painted by the Flemish artist Joos Van Cleve.



Of three known versions of the painting, it is the only one with the Virgin holding a passion flower. Van Cleve finished this work between 1530 and 1535, according to biographer John Oliver Hand of the National Gallery in Washington, D.C.

A search of hundreds of Renaissance Madonna paintings, still ongoing, suggests that this painting is possibly the only Virgin and Child with passion flower painted during the Sixteenth and Seventeenth centuries, or perhaps in any

century. Van Cleve's knowledge about the passionflower is doubtful, even if Antwerp were the bustling port it was, with ships transporting silks, metals and spices from around the world.

It is, of course, possible that word of the flower was transported to Europe through early chronicles, such as that of Charles V's royal chronicler Gonzalvo Fernández de Oviedo's 1535 *La historia general de las Indias*. Replete with eyewitness drawings of wondrous New World plants and animals, it is, most unfortunately, missing many manuscript pages. The latest take is found in a brilliant and valuable book by Kathleen Ann Myers, Fernandez de Oviedo's *Chronicle of America*, (University of Texas Press, 2007). Then, too, it is possible that word of the passion flower and tentative descriptions were brought back by clergy who sailed with Cortez, or even, as mentioned previously, by Columbus. Perhaps the closest source to all of the traffic and gossip of the time was Peter Martyr, friend of Columbus, who did not travel to the New World but whose *Decades de Orbe Novo*, circa 1520, mentions the importance of acidic fruit in the New World, including the "granada" by which he probably meant the pomegranate, although it is possible he was speaking of passion fruit. Columbus had brought seeds of citrus fruit to the New World as well as sugar cane. Pomegranates were transported to the New World soon after Cortez conquered Mexico.

Given the probability that in 1535 no educated ear in Europe would have heard of this flower or its incipient symbolism, the anomaly in the Van Cleve painting was brought to the attention of the art museum by this writer. A museum curator subsequently in 2006 removed the painting from the wall and put it under the microscope. He surmised, from physical evidence of paint layering, that the passion flower was added to the Madonna and child somewhere between 70 and 100 years after the original was painted. Thus, the mystery was solved. The flower, in fact, was consistent with some of the early Seventeenth Century clerically-inspired drawings, but an exact copy with what appear to be bloody filaments has yet to be discovered by this writer. Some likely candidates appear here³.

A further discovery by this author of what seems to be Hebrew writing on the tunic of the virgin is discussed further here⁴ and associated websites.

Conversos, New Jews and the Passion Flower

Ironies exist in the history of the passion flower, as the victims of the Inquisition may have also been the propagators of this most Catholic flower.

In Spain and Portugal, and then in their colonies in the New World, those who practiced Judaism did so at the peril of their lives. Even those who converted and were known

as "New Jews" were suspected because of their Jewish blood. Many who adapted to Christianity were tested further by the inquisitors. Physician-botanist Garcia de Orta (ca 1501-1568) fled from Portugal to Goa to write his works on tropical medicine. The Inquisition followed him to India. Discovering that he was still a professing Jew when he died, the inquisitors exhumed his body and burned his bones. His sister met her fate in an auto-da-fé, burned alive before robed clerics.

Thousands of the Sephardim (the name for Spain in Hebrew was Sefarad) fled to Portugal, North Africa and Northern Europe. Some converted, and remained in Spain, always under suspicion. Others took flight aboard ships for the New World.

Historians tell us that one who left Spain may have been Dr. Francisco Hernández (1515-1587) translator of 37 books of Roman naturalist Pliny the Elder (CE 23-79). Hernández, a royal physician to King Philip of Spain, was sent to Mexico 1572-78 to study the miraculous plants of the new world which offered wondrous products like chocolate and tobacco, as well as cures for the diseases that plagued Europe.

Hernández became one of the first trained botanists in the New World, and his expedition the first scientific expedition there. During his time in Mexico (1572-1577) Hernández wrote 24 volumes on plants, one on minerals, one on fauna, and accumulated ten volumes of illustrations. Among the drawings in a 1650s edition of his work, published long after he died, are those of the passion flower. It may be that Hernández was the first botanically trained witness to draw and describe the flower.

The late scholar Simon Varey of UCLA, in his two volumes on Hernández, speaks of the age-long rumors that Hernández was a descendent of Conversos, or Jews who had been forced to adopt Christianity. Hernández was a graduate of the medical school at Alcalá 20 miles outside of Madrid, suspected as a haven of Conversos. Writes Varey, "The broad community in which Hernández lived and worked, that of Spanish medicine and science, included plenty of men who were functioning under cover." For more information, see *Searching for the Secrets of Nature: The Life and Works of Dr. Francisco Hernández*, edited by Varey, Rafael Chabrán and Dora B. Weiner and *The Mexican Treasury: The Writings of Dr. Francisco Hernández*, edited by Varey and translated by Chabrán, Cynthia L. Chamberlin and Varey. (Stanford University Press, 2000).

His work was variously lost and misplaced by a slew of editors and translators, partially printed after 1628 (perhaps), never printed completely, and much of what was original destroyed in 1671 in a fire at the Escorial, but the drawing of the flower appeared many years after his death in books under his name, particularly the edition by Recchi. With no law of copyright, and woodcuts being shared or copied indiscriminately throughout Europe, it is difficult to trace the provenance of early depictions of the flower. The sharing or plagiarizing of illustrations was rampant, as observed by Agnes Arber in her 1938 second edition of *Herbals: Their Origin and Evolution*: A chapter in the history of Botany 1470-1670 (Cambridge University press, 1988) While most of the herbals printed by early presses contained a frontispiece with an illustration of their eminent authors, no likeness of Hernández is known to exist.

Oddly enough, the Madrid Edition called the Opera of Hernández, published in 1790, edited by Casimiro Gomez Ortego "from manuscripts that survive today in the Biblioteca Nacional and the Ministerio de Hacienda" raises some questions about Monardes, the first popularizer of the flower. The description of the granadilla in this book is almost sentence for sentence, translated, similar to that of Monardes.

They say that this grows in the land of the Peruvians and that it is voluble and like ivy, that its flower is similar to a white rose, and that in its leaves one can see the figures and symbols of the instruments of the Passion of Christ. . . (Page 260, Varey, *The Mexican Treasury*).

A Spanish translation of the Latin text was published in Mexico City (1942-1946). And so the question can be asked from whom Monardes got his information about the granadilla, and whether there was a closer relationship between these men then is accounted for in what we have seen. Monardes, in Seville, depended upon correspondence for his descriptions of New World plants. He and Hernández, contemporaries, lived in Seville (before Hernández departed for the New World) and they were both graduates of the University of Alcalá. If Monardes, son of a Genoese bookseller, had any Converso connections, he took great pains to hide them, as he was buried as a priest. (See Alexandra Parma Cook and David Noble Cook, *The Plague Files: Crisis management in sixteenth-century Seville* (Louisiana State University 2009)).

Hernández, himself thought to have had a Jewish background, may have had help from another purported Converso who was actually

a cleric. Sojourning in Mexico during this time was the great Spanish historian and chronicler of the Aztec, Franciscan friar Bernardino Sahagún, himself, suspected of Jewish origins. Sahagún had a deep interest in things botanical and was author of the famed Florentine Codex, the remarkable history and account of the culture of the Aztecs. His original family surname had been "Ribeira," remaining today a Spanish/Jewish Sephardic name.

At one of their common destinations we see one of the earliest representations of the passion flower, four cornered, on a mural at the paradisiacal Augustine monastery at Malinalco, southwest of Mexico City. Historian Jeanette Favrot Peterson writes in *The Paradise Garden Murals of Malinalco* that both may have been visitors to that monastery. It was Sahagún who may have shared his corps of artists, ones who helped him produce more than 2,000 illustrations for his 2,400 page codex.

To cap it all, in a most fantastic way, the family Borghese maintained a natural interest in plants. We know that Pope Paul V viewed the passion flower. Scipione Borghese (Pope Paul V's nephew) seemed to have also had an acquaintance with medicinal and healing plants and built a "Temple of Aesculapius" in the vast Borghese Gardens in Rome. It is the second largest public park in Rome (80 hectares or 148 acres) after that of the Villa Doria Pamphili, according to Rod Borghese in a private letter to this author. Writes Borghese:

I am a Borghese (Southern Italian branch / Dipignano Calabria 1800's) and in doing some Family Tree Research stumbled on some other interesting tidbits. A genealogist named Guy Stair Sainty claims that the Borghese Family has ancient Jewish Roots . . . So it is possible that this Pope was also a crypto Jew (and Kabbalist) (and) thus the Passion Flower symbol? 5

He also writes that male line of a branch of the Borghese family, (can be) considered of ancient Jewish origin, originally from Germany, becoming Catholics in the late 14th or early 15th centuries and the name may derive from the Hebrew "bar Jesse" or "son of Jesse."

And so, given the challenges presented, we tentatively leave these mysteries on the doorstep of history, where they await the pliant imagination of a novelist.

A number of other historical figures have played roles in the discovery and diffusion of the passion flower, and for these the reader is referred to King and Kugler, whose work is mentioned above.

Errors, if any, contained within this particular article are of course the responsibility of the author, alone, and will be corrected if brought to his attention. Much recent scholarship has been vital in telling this story.

I have not found a more intriguing story than that of the passion flower, and its twists and turns throughout the centuries. On the stage of mankind, it provides much more than background, for this plant can be used as a key to understand much about the advent of the new ages of discovery and turn the key to the lockbox of history.

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<http://www.flwildflowers.com>.

1. www.banrep.gov.co/museo/eng/o_cali_O33277.htm
2. www.flwildflowers.com
3. www.flwildflowers.com/clues.
4. www.flwildflowers.com/hebrew
5. www.chivalricorders.org/nobility/nobjews.htm





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