

TFH: E03: Cracking the Mac Nut Exploring the Fascinating History of the Macadamia

SPEAKERS

Tony Vega, Randy Paty, Glenn Sako, Cathy Nock, Ian McConachie

Intro 00:01

Transmissions from Hawaii!

Tony Vega 00:18

Randy Paty has an interesting claim to fame: he's the owner of the only commercial macadamia nut farm on Oahu.

Randy Paty 00:26

And the owner of North Shore Macadamia Company in Haleiwa and growing macadamia nuts here for 50 years.

Tony Vega 00:33

Since 1971 Randy has been the owner of Kamananui Orchard, a 24 acre macadamia nut orchard with over 1700 trees. It's located in the old sugar town of Waialua, in the foothills of Iowā, whose tallest peak Mount Kaala. And as you might expect, being a macadamia nut farmer comes with its own challenges.

Randy Paty 00:55

You know, my father said "If you're not an optimist, you should not be a farmer." So we, you know, like any we pray for rain sometimes, do a little dance here and there, but you know, it's mainly getting the macadamia nuts off the ground, especially when it is raining, you don't want them to sit too long on the ground, because they are just seeds and they will germinate eventually. So you want to get them up, up off the ground as soon as possible and husk them right away, get the husk off of them. So then they don't develop our flavors as they start to change. As soon as they start going into sprout mode, the kernel gets really bitter, it's no good anymore. And we, we contend with wild pigs to come down from the hills.

Tony Vega 01:35

Oh really?!

Randy Paty 01:35

And they're very, very aware of the macadamia nuts. 300 pounds per square inch and these pigs pop them like nothing, you know,

Tony Vega 01:43

Really! Huh.

Randy Paty 01:45

It has been passed down from generations and generations, just this way of cracking nuts. So, you know, you know, what are, you gotta get him before the piggies get them, and before the rain gets them, and so, it's a bit of a hustle.

Tony Vega 02:00

But despite whatever frustration Randy may feel from time to time, from having to deal with things like macadamia nut popping wild pigs, at the end of the day, it seems that Randy just loves what he does.

Randy Paty 02:12

But aside from just being in the most beautiful places on the island, and secluded and away from everything, I like the part where we're pouring the husk macadamia nuts into the cracker or into the drying bins after it's all said and done, you know?! I just, and enjoying, oh the flowering season is amazing that the snow, the blossoms are incredible. Their blossoms are similar to the Protea, some Protea varieties, but they smell so sweet and just watching the nuts develop on the trees, and you know, February, March, we don't want too much wind, because, you know, we don't want the blossom to blow off. So just waiting for the nuts and watch them grow, and just feel, it's just a great lifestyle, it's more, more a lifestyle than making a million dollars, so embrace it but it's really, we're quite blessed.

Tony Vega 03:10

I'm Tony Vega, and on this episode of Transmissions from Hawaii, we are cracking open the history of the macadamia nut. As you probably already know, the macadamia nut is one of Hawaii's signature crops and pretty much anybody that visits the islands ends up taking home with them at least a box of chocolate covered macadamia nuts, if not cookies, or something else with macadamia nuts in it. But aside from just being a delicious snack, the macadamia nut actually provides us with a really interesting window into Hawaii's history and connection with the outside world. For example, did you know that the macadamia nut is not actually from Hawaii, it's originally from Australia? And today we're going all the way from Hawaii to Australia and learning all about what is actually technically a seed, but the macadamia nut is you know, we just call it nuts, so we're just gonna call it a nut, but keep in mind it's actually a seed. Alright, so anyway, let's get started.

Tony Vega 04:07

Let's begin on Hawaii Island aka the Big Island. So that is where the vast majority of Hawaii's macadamia nuts are produced. And Glenn Sako grew up on Hawaii Island. So it shouldn't be all that surprising that he developed an affinity for the macadamia nut at a pretty young age.

Glenn Sako 04:24

You know, as a kid, we would get them, and we'd crack them, and eat them, and we enjoyed them.

Tony Vega 04:31

Yeah.

Glenn Sako 04:31

But later on, when we, when we discovered the roasted nuts, that was, it was much, it's much easier because it's already been cracked.

Tony Vega 04:41

Right, yeah.

Glenn Sako 04:42

You know, that, that hard shell takes 300 pounds of pressure per square inch to crack it open. And so you'd have to get a hammer and, and hit it the right way on that micropiles to minimize just a mash of, of smashed nut.

Tony Vega 04:59

Yeah, yeah.

Glenn Sako 05:01

So drying and, drying it first so that it pulls back from the shell and then just being able to crack it with and recover a whole kernel, that was quite an art back in those days.

Tony Vega 05:13

As far as I know these days, Glenn isn't smashing macadamia nuts in his backyard anymore. Instead, he works as an Economic Development Specialist for the County of Hawaii, Research and Development department. As part of his job, Glenn keeps an eye on Hawaii's agricultural industry, including of course, Hawaii's multi-million dollar a year macadamia nut industry. Glenn explains that usually Hawaii produces upwards of 40 million pounds a year of macadamias. And for example, in the 2019 to 2020 crop year, that came out to about \$49 million worth of macadamias. But how is it that this industry came to be? Well, we began by talking a little bit about that history.

Glenn Sako 05:59

This started way back in 1937, 1936. There was the Hawaii Agricultural Experiment stations and they were tasked with developing the varieties that could bring this industry, make it a commercial industry. We had, and I'm sorry, I have to look at my notes on this..

Tony Vega 06:24

That's all right.

Glenn Sako 06:25

So there was this, three gentlemen, Winston Jones, John Beaumont, who's an established name here. Well, what they initially did was they developed the grafting to propagate macadamia nut trees. The thing that has to be understood is that if you take the seed of a macadamia nut tree and germinate it and grow it out, that, the seed does not, is not true to the parent, it will revert to its what we call the wild type, which then have a lot of spines and the leaves and would may maybe have a different kind of configuration, and in, and different kind of characteristics which is not desirable. So they developed the grafting to allow for the propagation of the parent

plan. Now, in 1936, they started a variety selection program with again, John Beaumont, Ralph Moltzau and Williams Story. And they were with the Hawaii Agricultural Experiment Station. So out of roughly 20,000 trees that they looked at, there were five named varieties that came out of that. And today, there's still two of them that are, that are available commercially. One is called the Keaou, which has the number 246, and Kaikea, which is, has the number 508. And so they are still used today, and that's that's very impressive after all this time. So they, you know, they continue to work and develop these, I'm going to say varieties, and made sure that they were able to grow and produce a good yield here in our climate. And some of the things that they looked for as they were developing these, or looking at these varieties, #1, it had to have a high yield, because otherwise they wouldn't be able to produce a profitable crop. They wanted vigorous growth, because they wanted to plant the tree to get up to a good size quickly. It had to have strong branches to support the, I guess the nuts. They wanted a good shape of the, of the tree, because they wanted to, they didn't want something that was sprawling all over the place, they wanted something a little more compact, so they could have a tighter spacing and put more trees per acre. Nuts, the nuts had to be you know, roughly uniform in size and shape. They were looking for disease resistance, and also for resistance to insects. Good kernel recovery. High oil content - that's one of the key things, it had to have at least 72% oil in the kernel, that, that adds to the good flavor.

Tony Vega 09:27

Right.

Glenn Sako 09:28

And you know, when they crack, when they crack the nuts, because there's a very hard shell, you know, they wanted to get as high of a whole nut recovery as possible, because that is what the chocolate industry, and the whole, and the nut industry wants for their consumers.

Tony Vega 09:49

Now in case you're wondering what grafting is, well, it's a way of connecting two or more plants together so that they can grow as one. As Glenn explained, you want to graft in order to get the desired variety of macadamia so that you can produce more, and it's easier to harvest, and it just has all of those desirable characteristics that growers are looking for. If you just plant the seed, which we generally refer to as the nut, then you end up getting an undesirable variety of macadamia. So of course, there is much more to it than just that, but a very simple way of looking at it is that grafting is a way to clone the desired variety. In any case, what happened after that research was conducted in the 1930s?

Glenn Sako 10:30

Back in 1946, Castle & Cooke, which was one of the big five plantations in Hawaii, and they were known for the Dole Pineapple Company, they started the first orchard in Keaou, which is just outside of Hilo, and it was under the Royal Hawaiian Macadamia Nut Orchard brand. There was a, I guess, a superintendent Harry Clements, and he pushed for the commercialization of macadamia nuts. Soon after that, Cebu & Company, another of the Big Fives, it began to invest in macadamia nut orchards and bought this Keaou orchard from Castle & Cooke. And, you know, then they, and they eventually started marketing the well known Maunaloa brand, which has that distinctive trademark, blue cat. And the, one of their best marketing things that they did was handing out those small tetrapacks to the airline passengers that are coming in to Hawaii.

Tony Vega 11:42

Right.

Glenn Sako 11:43

They got their first taste of the macadamia nut there and would go to the stores to, to look for it. So that was, that was roughly how, you know, it got started and, and the merchandising and promotion was, it just took off after that.

Tony Vega 12:02

Hawaii's macadamia industry has come a long way since the 1930s, but that's not to say that it hasn't faced any challenges. The past few decades has seen increased competition from places like China and Australia. But like so many other industries in Hawaii and around the world, perhaps the biggest challenge that Hawaii's macadamia industry is facing is the COVID-19 pandemic and its lingering effects.

Glenn Sako 12:26

You know, there was an agricultural meeting in which one person who had information about said, you know, his particular processor could not move, you know, 20 million pounds of nuts, because there is no market. And we've also have, you know, even discussions with producers who are intimately connected to a processor in which the processor again, can't buy the nuts, who doesn't want to buy the nuts. Now, what happens then is for the producer, you cannot leave the nuts on the ground for the next year because the quality goes bad, and then you also increase the amount of disease or pests that's going to affect your next year's crop, and even you know, other generations. So the, the producers are really in a bind of whether to spend the money to collect the nuts and then they don't know what to do with it. So, so it is, it is a difficult situation, and you know, we'll probably, this COVID-19 will probably have a negative economic impact for the next maybe three to four years, because as the industry, once we get out of the pandemic, the industry then has to recover, and it also has to - I'm sure they've cut back on fertilizer and other orchard work in the meantime, because they had to save money. So all of that then has to be, you know, slowly, the orchard has to slowly be brought back up to speed and, you know, they might have lost some workers also in the meantime. So yeah, there's gonna be a negative impact for, for a bit.

Tony Vega 14:30

If you would like to learn even more about the development of the macadamia nut industry in Hawaii, a great place to start is an article titled "Macadamia nuts in Hawaii, history and production." It's by Gordon T. Shigeura and Hiroshi Ooka. You can find a link in the show notes at TransmissionsFromHawaii.com or in your podcast app. Next up, we'll be exploring when exactly the macadamia arrived in Hawaii and its origins in Australia.

Tony Vega 15:03

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Tony Vega 15:55

As mentioned earlier in the show, the macadamia is not actually from Hawaii. It's indigenous to Australia and was brought over to the islands in the late 19th century. Historical records show that the first introduction of the macadamia to Hawaii took place between 1881 and 1885. The individual said to be responsible for this introduction is a Scotsman by the name of William Herbert Purvis, who at the time was in his early 20s and co-managed a sugar plant on Hawaii Island. Just a few years later, though, there was a second introduction and that was on Oahu in the Nuuanu Valley. This introduction is credited two brothers Edward Walter and Robert Alfred Jordan. Of course, as we learned early in the show, it would still be a few more decades before the macadamia nut industry in Hawaii really got going. However, as I was looking into this part of the story, I came across an article on the Smithsonian Magazine website with a very eye catching headline. The headline read "Most of the world's macadamias may have originated from a single Australian tree." Thoroughly intrigued I read the article and came across the work of this Australian plant scientist.

Cathy Nock 17:04

I'm, I'm Cathy Nock. I'm a research fellow at Southern Cross University, which is located in northern New South Wales of Australia.

Tony Vega 17:14

Dr. Cathy Nock is the lead author of the 2019 academic paper that the Smithsonian Magazine article mentioned just now was based on. So wishing to find out more about the origins of the macadamia nut, I got in touch with her.

Cathy Nock 17:27

So historical records show that the first macadamia, presumably its seed, was taken to Hawaii in the late 1800s by somebody called WH Purvis. And the, and trees were planted first on the Big Island, and a few years later, a guy called RI Jordan took more seed to Hawaii, and this was planted in Honolulu. And even though macadamia is an Australian native, we have a lot to thank Hawaii for, because it was there that the first commercial orchards were planted and that reliable grafting techniques were developed in the mid-1930s. And this allowed for the best trees to be grafted. In fact, the bet, the grafted varieties that were first bred in Hawaii still represent most of the trees that are grown in orchards around the world today.

Tony Vega 18:21

Hmm. Okay, so yeah, that, I mean, the findings of your research, like really, you know, point back to, you know, yeah, we have all these macadamias around the world, but it all, you know, it goes back to, especially perhaps a single tree, and I will get to that, but can you explain, like, what your research kind of set out to do, what was the goal of the research?

Cathy Nock 18:44

So the research that, that I did with Dr. Craig Hardner from the University of Queensland and his team, I tend to try to understand where the seed that was taken to Hawaii came from in Australia, because, because there wasn't much information available on that.

Tony Vega 19:04

Mm hmm. Okay. And so then, and I was reading in the paper, right, you you use, like many, many samples from different parts in Hawaii, but I believe also in Australia, and you, I guess, you sequenced the genome and tried to figure out where it all came from. Is that fairly accurate?

Cathy Nock 19:25

Yeah, that's right. So Dr. Craig Hardner, he's, he's a colleague of mine from University of Queensland, he, he got a Churchill Fellowship a few years back and came to Hawaii and he spent six months there. And then he collected samples from much of the germ plasm that's, that's still in Hawaii today. And, and he brought lay samples back to Australia. And then and then we got a student, there were a student involved and the team involved on the project, and we then collected leaf samples from wild macadamia trees from across the distribution, and we sequenced the data and so, I, a few years back I'd already sequenced the chloroplast genome of macadamia. So this is, this is maternally inherited part of the genome, much like the mitochondrial genome of humans, it's, it's only passed through the female line, so we knew that it would be a good way to trace that maternal lineage. So to try to understand where the seed had come from. So in Australia, back in the 80s, a fairly large effort was undertaken to survey the wild populations and, and then cuttings were taken from those trees and they were planted in ex-situ plantings in Australia, that's known as the National macadamia Germplasm Collection. And that was the source of most of the wild trees that we included in the study.

Tony Vega 21:04

Okay.

Cathy Nock 21:05

Yeah. So once once we had all these, all the DNA from, from all the Hawaiian samples, and the, and the wild trees in Australia, we, we sequenced them, and we matched all of that data back to the chloroplast genome, and, and we used that to try to find the origins of the, of the seed that came from Hawaii. And it was actually, we were actually able to do it, we pinpointed the particular populations that were the Hawaiian varieties had come from. It was interesting, because all the, the two of the samples that Craig collected in Hawaii, shared exactly the same maternal genotypes. So they, they were very closely related, and they were also really closely related to this one site near Gympie in, in southeast Queensland. So we now think that that, that that pocket, that site, was the source of the seed that was taken to Hawaii.

Tony Vega 22:12

Now it should be pointed out here, though, that Dr. Nock says that her research does not trace the origins of the samples that were taken in Hawaii to a specific introduction. So we don't know if these samples trace their origin back to the first introduction on Hawaii Island by William H. Purvis, or the subsequent one that took place a few years later on Oahu.

Cathy Nock 22:33

We aren't sure whether it was the Purvis introduction or the Jordan introduction that, that was, was ended up being the ones that we used to develop the Hawaiian, the varieties in Hawaii. But we do know that one of them must have collected seed from around Gympie and another site, a little bit further north, at this place called Mount Bauple, those two areas are the likely source.

Tony Vega 23:04

Hmm. I, I first learned about your research through this Smithsonian article, and the headline is all of the, was it, I think "most of the world's macadamias can be traced back to a single tree." Would you say that's accurate or is that too much of an oversimplification?

Cathy Nock 23:22

I think that's possible. So we still haven't found that tree, but given that, given that most of the Hawaiian cultivars share exactly the same chloroplast genotype, it's possible that Purvis saw Jordan collect seed from a single tree, and, and that was what was taken to Hawaii. So it's possible but the jury's still out on that one, we still need to do some more work.

Tony Vega 23:49

Gotcha. So that actually brings me to the next thing that I want to ask you about that, because there is such a, I guess, small or narrow genetic diversity in so much of the world's cultivated macadamias, is that like dangerous or concerning in some way? Does that make them more susceptible to diseases or pests or something like that?

Cathy Nock 24:13

It may do. I think that, I think that will work, work is needed on that. But this isn't a problem that's unique to macadamia - most of the horticultural tree crops that are grown around the world are clones. So even, you can look at an orchard and there may be 1000 trees in the orchard, but, but they rea-, there might only be three or four different individuals that and their clones. So that's why finding new varieties and bringing in new genetics that's available in the wild, is probably going to be important in future as the climate changes and different, there's different stresses on the, on the trees, whether it be water supply or new pests. So it's important, and it's recognized that it's important to conserve the wild relatives of our food crops to safeguard them in future.

Tony Vega 25:12

If you'd like to read Dr. Nock's 2019 article or the Smithsonian Magazine article that led me to her work, you can find the links in the show notes in your podcast app or you can go to TransmissionsFromHawaii.com and look for the show notes for episode 3. Do you enjoy eating macadamia nuts?

Cathy Nock 25:32

I love to eat macadamia. And to cook with them. And I think

Tony Vega 25:37

Really?!

Cathy Nock 25:38

Yeah, yeah. I think they deserve their reputation as the world's finest mouth.

Tony Vega 25:44

What, what kind of things do you enjoy cooking with macadamia nuts?

Cathy Nock 25:48

Well, I make pesto, so

Tony Vega 25:50

Oh really?! Oh yeah, yeah.

Cathy Nock 25:51

I use coriander or basil with, with grounded macadamias and a little bit of oil, a little bit of parmesan cheese, put it on some pasta. That's probably my favorite way to cook with macadamias. And of course with desserts and cakes.

Tony Vega 26:17

So far, we've gone over the history of the macadamia in Hawaii and its introduction to Hawaii. But what about the history of the macadamia in Australia? There is so much more to discuss. For example, where did the macadamia even get its name? Well, in order to learn more about that, I ended up having a conversation with an absolutely delightful gentleman from Australia, who also happens to be one of the world's leading authorities on the history of the macadamia.

Ian McConachie 26:45

My name is Ian McConachie, I guess I'm the macadamia industry dinosaur. I've been, I've been around for probably 50 years with macadamias.

Tony Vega 26:57

That's, I like that introduction. So okay, so let's just start with you then. So how did you get involved with the whole macadamia thing?

Ian McConachie 27:06

Well, I grew up in Brisbane in Queensland, where it was almost mandatory to have a macadamia tree and a mango tree in your backyard. And my, my auntie who was a wonderful mentor to me, she, she had four macadamia trees, and she used to collect the nuts, and we used to dry them, and crack them with a hammer, and roast them in butter. And this is when I was 10 years old and she told me to remember them because one day macadamias would be famous. So then, then I worked for a large food manufacturing company who processed peanuts and cashews and almonds, and I convinced them that macadamias were going to become a viable retail nut, and so they allowed me to go to Hawaii to study the industry there and to build a macadamia processing factory in 1975.

Tony Vega 28:12

Wow. That's, that's so fascin- because, you know when you talk to people here, on for example, Hawaii Island, the Big Island, you know, often you hear "Oh yeah, yeah, I had trees in my backyard, we used to just you know, have some for ourselves, you know?!" So I guess that happens over there, as well, huh?!

Ian McConachie 28:27

Yes, there was about 30,000 backyard macadamia trees just in Brisbane. And we're actually now looking for a very old backyard macadamia trees to study their DNA because I, by my reflect, wild macadamia trees that have been lost.

Tony Vega 28:47

Oh, very interesting. But alright, so let's talk about the macadamia and its origins in Australia. Could you tell us a little bit about how long the macadamia has been around and its background there?

Ian McConachie 29:04

Good, be happy to tell you. Macadamias evolved initially about 115 million years ago with the first flowering plant the angiosperms and but it was in the about 60 to 65 million years ago that they have aged fossilized pollen. That near, that was, is macadamia-like pollen, not necessarily macadamias. But there's no doubt that the macadamia, as we know it today, existed about 20 million years ago in the rainforest. It was a, it was originally widespread up the east coast of Australia. It almost certainly grew in, in New Zealand but there were massive climatic changes over that period, there were volcanic eruptions, there were numerous ice ages, they were one in 1000 year floods, sea levels rise. So the last ice age was about 10,000 years ago where temperatures fell about 8 degrees centigrade or Celsius. And so the mechanism used retreated in the rain forest and almost became extinct. They only existed in little niches that were favorable to them. So it, yes, we're lucky that we're able to enjoy the macadamias because they came very close to being lost.

Tony Vega 30:56

Well, yeah, I didn't know that, that's very interesting, huh. So it basically got wiped out of New Zealand?

Ian McConachie 31:03

Wiped out in New Zealand, they are related species to the macadamia in New Zealand. But yes, no, no absolute evidence that they existed there or lower. They found fossilized leaves that are very like macadamias in, in New Zealand.

Tony Vega 31:24

Because of the macadamia's European sounding name, many people might assume that it was first discovered by Europeans. However, that's not true. It wasn't until the 18th century when the British began arriving in Australia in order to colonize it. By that point, though, Australia's indigenous population had already been in Australia for tens of 1000s of years, and many of them were fully aware of the macadamia.

Ian McConachie 31:49

The Aboriginal people, they arrived in what I call macadamia country, at least 2000 sorry, 20,000 years ago. There's no doubt they would have found the macadamia in the rainforest. But within the rainforests, they very seldom

produce nuts, they within the rain forest, the trees didn't dominate, so they didn't receive, normally didn't receive light, as they had to compete with all the other rainforest trees for not only light but for moisture and nutrients. The night- night of rats and other animals ate the nuts, the night of insects attacked the flowers and the maturing not so they, they were very rare to the Aboriginal people, but there's no doubt they were very treasured. As soon as, as soon as the European settlers arrived, macadamia nuts for one of, the very first items that the Aboriginal people brought in to trade, and they traded them for rum and tobacco, they also traded them for access, and they they there's a lot of, a lot of information and photographs over an Aboriginal man called Bilen Bilen, and he was the leader of his group, and he organized his people to collect macadamias to bring them into the settlers and he mainly, he exchanged them for access, and he used the access to cut roofing shingles, to cut the bark off mainly eucalyptus trees so that they that, that formed the roof of the of the early huts or shelters that the, for the European settlers.

Tony Vega 33:52

And for the record, Indigenous Australians were consuming macadamias long before we figured out that we could dip them in chocolate and sell them to tourists.

Ian McConachie 34:01

There are reports that iCal provided the macadamias by, by pushing nuts into the, into the ground, but the, the Aboriginal people were essentially hunter gatherers and so there is no evidence that they tolerated the macadamias. What, what they did do they use fire extensively, so at the, at the age of the rainforest, any macadamias that were exposed, they were very aware of, so those trees got more light. And main-, main-, mainly mainly the women who would would be would collect the macadamia nuts. I would draw, draw them in the sun they would sometimes roast them in the ashes of their fires, right?! They had a number of ways they would crack the macadamia, crack the very hard shell, but one of the very successful ways was they, they would find a large rock that had a depression in it, and that would hold the macadamia and they would, they would put a flat rock over the macadamia and use what I call a "hammer stone" to hit the flat rock, and that, that would distribute the force so that it would crack the shell and do very little damage to the kernel.

Tony Vega 35:29

But what about the name, what did Indigenous Australians called the macadamia? Well, the short answer to that question is, it depends on who exactly you're talking about. Indigenous Australians can't be classified into just one group. There was an incredible amount of diversity across Australia, many different nations, an estimated 200 to 300 different languages, as well as dialects within those languages in existence before European contact. Unfortunately, and this is a story that is not all that dissimilar from what happened in Hawaii as well as many other places around the world, with European colonization came the loss of culture and many of the languages I mentioned earlier. Because of this, it is not at all out of the question that we have lost some of the terms used to refer to macadamias before Europeans arrived. That being said, many have survived and Ian explains that one of the most common ones is gyndl, that's g-y-n-d-l.

Ian McConachie 36:36

There were other names, there was behind the Australia's Gold Coast area they were known as boombara, at the very Northern Limit, so were known as bauple nuts; the name that has been adopted by marketers here is jindilli,

jindilli or plural was indilli, but that probably referred to not only macadamia but other plants; there was dollabi was a name, the very first time macadamias were, were definitely collected by a botanist, it was you know, 1843 and he, he wrote dullabi. Another name was, was, was barren. So yes, we've, we've got a sound record of different Aboriginal names from, from the different people.

Tony Vega 37:38

Despite all the names that the macadamia has had throughout its history, ultimately, it would just be one that would spread around the world, and that is, of course, the macadamia. Ian explains that the macadamia was named after a Dr. John Macadam, who lived from 1827 until 1865.

Ian McConachie 37:55

Our John Macadam was a redhead Scotchman. He, he was a brilliant man: he was a member of parliament, he was a Doctor of Medicine, he was a forensic scientist, he was a Postmaster General, he was the Secretary of the Philosophic Institute of Victoria, which was the body, body of learning. He was also a lecturer at a boys' High School, and he was looking for something, he, the words he used, he was looking for something to temper the spirits of teenage boys.

Tony Vega 38:40

Interesting.

Ian McConachie 38:41

So he was one of the inventors of Australian rules football.

Tony Vega 38:46

Oh!

Ian McConachie 38:47

But he, he died as, largely through either work - he was going to, he was 38 and he was sailing to New Zealand to give evidence as a forensic scientist. He had a fall and he never recovered from it. And he, the macadamia was named in his honor, but he never saw a macadamia, he never tasted a macadamia.

Tony Vega 39:14

Hmm. And I think it was a friend of his who wanted to name it after him, right?! He's the one that proposed it.

Ian McConachie 39:20

Yes. Baron Ferdinand von Mueller. There is some suggestion that Ferdinand von Mueller who is a very strong willed, my man with a massive ego, they, there is some some belief that he looked for the most insignificant plant that he could find to name, to name it after John Macadam, so - I'm not not sure whether that's correct, because at the time it was named, there was the belief that it was poisonous and it had no significance at all. And it was 10 years after it was named, before the botanist and the majority of Australians realized that it was actually edible.

Tony Vega 40:11

Hmm. Okay, so the Australians of European ancestry, they didn't really catch on so to speak, they thought it was, you know, maybe not good to eat, but of course, the Aboriginal people by that point they knew full well that macadamia nuts were totally fine to eat.

Ian McConachie 40:27

They knew that and they obviously told settlers, but, but they there is no written evidence of that. The part of the problem is, and this occurred in Hawaii, there are now four species of macadamia, but the two of them are edible, but the botanist got it wrong and theory is a small macadamia looks identical, but is extremely bitter. And the botanists call them base assign and, and the first nuts that went to Hawaii, or some of the first nuts that went to a why included a small bit of that. So, in Hawaii, as the commercial industry developed, they found that some of the macadamia kernels were very bitter. So they, they had to serve all of the trees and, and cut out the trees that had this bitter component. And this was, this was, it was only 1956 before the botanists clearly distinguished between the, the, the bitter macadamia, which is not poisonous, but the Aboriginal people told it was not to eat it, and so it was the assumption was poisonous, it was just extremely bitter.

Tony Vega 42:01

To learn more about the macadamia and conservation efforts being undertaken right now in Australia to preserve wild varieties, please see the links in the show notes. Last question: how do you, I guess, do you, do you still eat macadamia nuts often?

Ian McConachie 42:23

I certainly do. I'm a great, I use as a joke and say that if you want to live forever, you eat more macadamia nuts. Macadamia nuts contain a specific fatty, fatty acid or mono unsaturated fatty acid that u- unique to macadamias, and it has been associated with longevity. The J-, the Japanese have done a lot of study on that, and one of the interesting things is that, the Japanese have done a study of people who've lived to be 100, and in every case, these people have, have had elevated blood serum levels of this fatty acid, linoleic fatty acid that, so yes, there's no, there's no doubt that macadamia is a part of a healthy diet.

Tony Vega 43:21

Transmissions From Hawaii is a production of Wasabi Magazine. It's produced in the beautiful city of Honolulu, Hawaii by me, Tony Vega. Thank you so much to everybody who helped make this episode possible. Aside from the help of the guests that you got to hear on the episode today, I also received help from various individuals including Michael Nayler of the Queensland Aboriginal and Torres Strait Islander Foundation, Christine Stuart of Bulu Yabun and the Macadamia Conservation Trust. I would like to acknowledge that the history of the macadamia intersects with the tragic history of indigenous Australians. I very much wanted to include someone from that community in order to further highlight that aspect of the story. Unfortunately, despite my best efforts I was unable to find anyone. For that I apologize. If you would like to learn more about indigenous Australians and the Gubbi Gubbi people who are the traditional custodians of southeast Queensland which is where Hawaii's macadamias have been shown to have originated then please see the links in the show notes.

Tony Vega 44:18

We are hard at work on episode four that should be coming in the not too distant future, but remember to subscribe so you don't miss it when it comes out. Also, don't forget to leave a rating and a review on your podcast app of choice. And please, tell a friend or family member about the show. We need your help to grow the show and make it a sustainable thing. We want to keep producing episodes, but we need your help to do that, so please help spread the word. Mahalo for listening and see you next time on Transmissions From Hawaii.