



# Promoting Excellence in Horticulture

## Transcript for Parallel Session 2: 'Curation in the 21<sup>st</sup> century'

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### Speaker 1: Rob Brett

Good afternoon, everyone. And thanks, Don, I think you probably have just given me an introduction. And although I'm not too sure, assume as we're recording this into PowerPoint, something that I've first time in doing, and probably the first time for lots of people as well. It seems to be lots of firsts this year. And I think probably, obviously, on the back of the whole pandemic thing, you know, we're going to be doing lots more firsts going forward. Anyway, I'm here to talk to you about some my perspective, I suppose, associated with curation. You know, curating to me is a really interesting term perhaps. And as I am a curator for the RHS Garden Hyde Hall, I did wonder to myself, well, you know, quite interesting, what does, obviously the term curator mean? And what do we mean perhaps by curation? curation being a funny sort of term, I suppose, are often associated with either a curator of a church or obviously, museums and stuff like that. And so I did the little bit of browsing, as you do in order to find out that sort of things. And, you know, the first thing that I sort of came up with, with some, you know, the curator, yeah, what is the curator? quite interesting. I always remember when I first started the job here, somebody quite interesting here, turned around, and basically emailed me and said, Congratulations on becoming the Creator. Perhaps not quite as powerful as that in any way, shape, or form. But I suppose to a degree, what we're about is, is managing our collections and being appropriate managers, and managing and curating our collections as best as we possibly can. And interesting, I suppose, is also the fact that you look at these sort of things, and what pops up on, you know, when you Google something, etc, is, you know, very interesting things. And I think to myself, well, how could I curate my life better? We're probably all wondering that in in lots of ways. But I think it's also the fact that, you know, being a curator and being as part of managing our collections and all of that, what we need to do is be very conscious, I suppose, as making sure that we're not going to be completely mindless and mundane with how we actually look at these sort of collections that we perhaps actually house within our gardens. And I suppose probably what I'm talking about is, is the fact that, you know, lots of gardens associated across the country, are probably more than likely public gardens. And therefore, you know, we've got to perhaps actually provide as part and parcel of that sort of curation, sort of an experience, I suppose, associated with it. And therefore, I do wonder whether something along these lines is perhaps a bit more appropriate sort of how to curate content for learning because what we should be doing is is probably looking at our collections in a in a perhaps a different way.

So what what we do is we immediately get all excited, I suppose when we talk about curation and we write a curation policy. This is the RHS one sort of statement associated with how we're looking at curation and curation policies moving forward, and I think it's really quite Yeah, thoughtful, I suppose in its in its style and approach in that we hold diverse documented collections of cultivated plants for reference conservation and garden use. And I do think that, you know, this is often the case when we talk about curation, we're talking about curation as sort of managing collections that are associated with either conservation value, educational value, amenity value, and obviously,

an aspect I suppose also associated with scientific value. Yeah. And that's probably you know, how we sort of thread in the feed things. But I think it's, you know, as part and parcel of that, you know, and I've done exactly the same thing is, is that you look at your collections, and you just think to yourself, okay, so how can we improve our collections, and we always seemingly sort of talk about numbers. This particular one just shows us how we've looked at our sort of taxa across the garden over the last few years. More importantly, is about the fact that as with loads of economics and all of this sort of thing, it's all about getting bigger if we can. And certainly, you know, we've strived and tried to do that as much as we possibly can with our taxa, and making sure that our taxa improves.





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But always remember, you know, the, if we're actually looking at this sort of thing, and I always remember way back, yeah, one of the things I got sort of taught early on in Botanic Gardens was the fact that what is actually more important, what's more important - the plant and label? And which of those is the important one? I suppose that was the question. And I always find it quite interesting one, because it's, of course, you know, both important as another. But the label is obviously a clarification associated with that particular plant. And it's obviously holds all of the valuable records, whether it be associated with the database associated with the accession numbers. But also, more importantly, from my perspective, is also the fact that is the first point of call in which anybody that comes into our gardens, okay, and sees a plant and wants to know more about it actually goes to: I do it myself, when I go around gardens, I will find something perhaps not know what it is, and therefore try and look for the label associated with it. Because I want to know more. And I think that's the first premise that I have associated with about curation and curation as a visitor attraction, we've actually got to look at how we actually do that first step, first of all, because I will, I will say that the plant becomes more powerful and more valuable with that particular plant label. And everybody has a responsibility, I think, within the team, to see the importance of our collections and our curation of those collections. And therefore associated with that he's not just looking after the plants, but looking after labels, just as well. Sorry, engage with it as being a label.

And it all starts to me from that label, making sure that we're actually getting that label, right. Yeah, of course, I think there's a need for perhaps actually making it more relevant to then our visitor, perhaps moving not away from, obviously, the Latin etc. Because we know all the importance of that with making sure that we're talking about the same thing. But I do see, and we are certainly engaging with the potential for sort of common names associated with plants and plant labelling. But I think also the other aspects associated with this is the fact that it ultimately is could be relevant, an educational piece, an educational learning tool, okay for our visitors, because you can go from plants labels to then interpretation associated with, this just highlights the fact that we've done this particular interpretive piece on one of our particular plants associated within the global growth vegetable garden that we have the Chilean guava, and it tells you something about the Chilean guava, but then also really actively and goes on to sort of how you grow it, okay. And then actually, what you can do, how you can cook with it, and all of this sort of thing, and it starts to actually help illustrate that particular plant so much more. So I am actually a firm believer of obviously sort of looking at progression as we go forward. And I know that there's going to be probably a lot of talks associated with apps and all sorts of things associated with managing and getting educational aspects associated with our plants and learning about our plants through different sort of devices and tools, etc. And I'm going to leave that one, etc. But I think probably most important thing that I want to say is, it actually comes back to the label in the beginning, because if we haven't even got the label there, okay, I don't think we should be jumping towards any sort of apps or anything along those lines, because not everybody who is already engaged in this particular way.

And I think that really, where I'm sort of heading towards I suppose, is ultimately the curation of our collections has to be linked in engaging with our visitors and making an experience for them. And I just want to give you one illustration of my sort of past where, you know, we had this opportunity with the temperate house, or should I say the glass houses at Cambridge, okay. And it started with the temperate house and, you know, what does the temperate house mean to anybody, you know, temperate collections from the around the world. what does that mean to anybody and all of this sort of thing. And simply because we had this opportunity because of the glass houses, the teak glass houses being completely restored. And that is to actually relook at our collections and what we're doing with those particular collections, not necessarily changing those collections, but actually managing them in a better way going forward. And actually, looking at it from a perspective, I suppose, of what we ended up with is telling a story.

And that story became what we called the drama of diversity, and experience a visitor experience as they walk through the glass houses and with the temperate house having two continents Africa and Australia on either sides of continents apart, oceanic islands and life before flowers. And it's really just an engaging way with interpretation, art, and also use of the



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landscape and appropriate landscape materials to help highlight I suppose, the story that we were just trying to sort of tell with that collections that we actually have, and had and that sort of experience is still there to this day. And I firmly believe that we can deliver such a new garden developments going forward, which we look at just not as the plants it is going to house but we look at the landscape scene. So that marries the planting, we utilise the culture and arts, perhaps associated with those particular areas, and help project connectivity and the curation of delivery of that display inclusive is from the plants to the label to the story to the interpretation. And ultimately, obviously to the visitor who engages with it, receiving some sort of experience.

So I think in some respects to summarise, I've certainly feel like you know, curation as a visitor experiences, we have to actively engage with our staff and making sure they understand what we're talking about with curating our collections, and if we're going to do the job properly, but I would certainly sort of say that a typical view of a collection being held for scientific conservation and monetary value or in education has the potential to be like a stamp collection, and therefore the relevance of that collection is only seen internally within the garden. And we got to do more than that, that curation is more than that is not about that choice of material being housed in a collection, but how it is housed, and interpreted to our audience, it becomes ultimately the more the sum greater of its parts. And when properly thought through and stage well, begins becomes a visitor attraction in its entirety. Thank you.

## Speaker 2: Candide with Helen Allsebrook, Waheed Arshad and Havard Ostgaard

In many ways, Candide are the new folk on the scene. But we're a talented team of botanists and entomologists, and very talented software engineers. Working on products and technology to be really useful to you. Candide started with the desire to make large amounts of plant information accessible and digestible to the general public. Today, two years on, we're a team of 60 developing advanced systems, which support public gardens. Sort of the most exciting things we want to tell you about our plant identification systems, ticketing solutions, our brand new marketplace and labelling plant records for enhanced visitation experiences. We're already collaborating with many of you. But today, we've got a couple of secrets up or sleeves, which we'd like to share with you. Here we are at the beautiful and historic Sherbourne castle and gardens, where they have an incredible ancient ginkgo, gorgeous autumn maple gades, vibrant borders and cascades of water.

Identifying, recording and monitoring plant species and biodiversity is so integral to being able to understand and conserve life on Earth. All of us know that plants form the backbone of all ecosystems on the planet. And part of what we want to do at Candide is to help people talk and learn about plants, be it in the confines of their own home, or when they're out and about visiting public gardens. More broadly, we want to use our technology to help people overcome the concept of plant blindness. Now, this term has been around for over 20 years actually. And it's essentially a term that epitomises people under appreciating the flora around us.

We know there are almost 60 million people in the UK that own or have access to a smartphone. And we truly believe they hold the most promise in helping people overcome plant blindness. One of the most exciting ways in which we're using technology is through augmented reality, also known as AR. Some of you may not have heard of this before. But it's a technology that uses your smartphones camera to get information about the surroundings. Using this information, it can place images, text, or even animations. On the top of the video that you see behind me in this bed, we've placed some augmented reality plant labels that are linked to our knowledge base. And that allows us to connect users with care and growing information about those plants. Of course, this is all without the use of plastic labels. So there's so much potential for this technology to be used for all sorts of innovative and engaging methods in Botanic Gardens. So essentially, we're using our technology to bring your plant records to life.



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We're always learning and helping find solutions for gardens using the right technology based on their needs. For example, we appreciate that the identification of plants can be really difficult. It can also be time consuming, and somewhat frustrating for novices, especially due to specific botanical terms. So one thing we developed was a machine learning model using our own plant records. And we combine that with image processing, and pattern recognition. It means that people can simply identify plants automatically by taking a photo of it on their smartphone. And in fact, our plant ID tool has been one of the most popular features. And it's been great for people of all ages to find out about plants in the home and when they're out and about. We're also using our plant records to enhance the experience people have when visiting public gardens through plant identification, combined with augmented reality. We're allowing garden visitors to learn about plants and appreciate their specialist plant collections all year round. So whether that's representing the size of your huge *Victoria amazonica* Lily leaves, to showing bats pollinating your Jade vine flowers, or even showcasing your blooming titan arum, even when it's not in flower. I mean, all of these things are possible using augmented reality and AR technology.

We're also working with gardens to explore new mapping technologies. We're combining spatial data sets to create full three dimensional visualisations of gardens with the potential of mapping their plant records, and providing real time data on how people are interacting with with plants in the garden. These types of visualisations can help in planning the growth and expansion of garden facilities, or even provide support when it comes to grant requests and development funding. We know and appreciate each garden has its own personal story and their collection of plants that are so important to the past and future heritage of gardens. And that's why we provide a digital medium for those plants in the form of an audio tool, allowing visitors to stop and appreciate many aspects of the garden and its history. Here's a preview of one we did with Bruce Langridge from the National Botanic Garden of Wales:

'I'm stood inside the world's biggest single span glass house and is the iconic building of the National Botanic Garden of Wales. Since we built the Great Glass House, Welsh birds are coming here and the nest here so we've got loads of sparrows and robins chirping away every day. We have the Welsh cotoneaster plants found nowhere else on earth apart from the Great Orme and a plant that we think might have survived the last ice age.'

One of our services is contactless digital ticketing solutions for gardens. This has helped them safely and securely reopen during the pandemic and it also provides them with visitor prediction using machine learning. This is really exciting for gardens because not only does it provide real time information on the numbers of visitors in the garden at any one time, but it also helps some of our most beautiful gardens across the country to become truly digital, and help them market themselves online.

The concept of digital ticketing for the garden visitors was something which we had no experience with. And Candide brought us together with bigger and smaller gardening institutions up and down the country and in Scotland.

So I think what's going to happen now is that we're going to be moving forward where to go to a garden, you're going to have to advance book as Candide is doing here, so that you know that when you get there, you're welcomed by name. And that you know that there are only going to be 80 other people there at the same time, but in different parts of the garden, because it will cope with you. So the whole experience of the garden will be it will be your garden. One of the other great assets of Candide has been the audio tool, which is our own audio tour - your voice and my voice talking about parts of the gardens. But in the past, we used to actually take people on a dazzling tour ourselves around the garden, talking about various aspects of it. But it was quite time consuming. And now of course, they can still have that, because they can hear our voices, they go around and see what we're talking about. The use of technology is going to be something which is going to boom in gardening. Information is a very important thing to be able to give people and they want it instantly and electronically, and electronically.



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I'm the sort of person who loves to know more about the plants. And if I can press a button and instantly find that information. That's brilliant. If Candide can help to provide more information about the plants and the way of gardening, then that's all to the good and brilliant future for horticulture.

Eden's an educational charity, it's a living theatre plants and people as you can see, we transformed this China clay it into a global garden. So from blue jeans, to coffee beans, everything we eat, drink taste, where everything we do is made of plants, even the air that we breathe. So it's vital. So it's a big educational charity and it's about having fun as well. We've been working with Candide for about a year now. And it's been great because it gives people a much deeper insight into the plants. They can meet the gardeners and hear their personal stories, they can have a tour all around the project. It's been fantastic. So climate change and biodiversity loss, interrelated, are the biggest challenges of our time. Really important and Eden's role within that is education. It's to communicate the importance of plants, it's to communicate, how plants keep us alive, how they take in carbon dioxide, for example, and how soil acts as a carbon store. Just more about education. Plant ID here is extraordinary. Lots of people say there's too many labels. Some people say there's not enough labels. So we've come up with a fantastic solution with Candide so you put your phone towards the plant, it tells you what it is. And if it doesn't know what it is, then we help it and it learns and every new plant it sees it it learned something else. So soon, no labels beautiful landscape. And you can use your phone to find what all plants.

We've got a great audio tour with Candide. We've got a bit about the history of the pit, stories from the rain forest crew, and we're doing some more stories in the med and outdoors. So there's a lot more recording to do yet. So what's next, maybe augmented reality to see how the plants actually eat and breathe and interact with pollinators Who knows? Eden projects 20 years old now and it wasn't set up as a botanical collection. It was set up in the first place as a visitor experience and an educational charity to engage people with plants so that people could learn about plants so people could get excited and interact with them and touch them. As for the future. I think digital is a really, really important part of that future with audio tours with the AI plant apps. Get the youngsters involved. Things like augmented reality virtual reality, extended reality augmented reality. You know, I'm a bit of a Luddite, but I love plants and I think all the youngsters who are teaching me about all this new technology, it is part of the future. It is part of gardening, both from helping the plants water themselves when they need watering, to explaining things to people about plants to creating a holograms. I don't know might be like Star Wars.

Hello. For those of you who don't know me, I'm Havard Ostgaard, founder of Botanical Software. Today, I'm happy to share with you that Botanical Software is now part of Candide. Since 2007 Botanical Software has been developing mobile plant record solutions for Botanic Gardens. It is estimated that more than 70% of gardens around the world only have paper based or very basic plant records. With all the expertise that Candide our first commitment together, is to help this large group of underserved gardens around the world. As you can see, we have a very exciting journey ahead. And we look forward to working with you in the years to come. Thank you.

Welcome aboard Havard.

So it's a very exciting, but important time to be involved in horticulture. At the moment. we're faced with threats from our changing climate, invasive plants, pests and diseases and over exploitation of our land. Yet, the strength of our Botanic Gardens and our community in horticulture ensures we can coordinate all our efforts and educate people about plants, particularly new and innovative ways. And we can help people to appreciate the flora around us and ultimately secure the future of horticulture and gardening.

So we really hope this has given you a little insight as to what we're doing at Candide and giving you some clues as to how you might be able to get involved. What we really want is for you to get in touch with us now and see how we can help you further.

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