

A Transcript of a gallery floor discussion between Victor Bulmer, Head Ecologist for the Djunbunji Mandingalbay Yidinji Land and Sea Ranger Program and Matthew Stanton, Photographer and Visual Artist. The Transcript encompasses the conversation between Bulmer and Stanton as well as a closing address to the audience delivered by Dale Mundraby, Executive Director at Djunbunji Ltd. The discussion occurred in conjunction with the opening of Stanton's 'Deep North' Exhibition at Northside Contemporary Arts in Cairns, Queensland on the 18th of February 2022.

MS: We're going to have a bit of a chat, firstly about the images that I produced with Vic and the rest of the Djunbunji Mandingalbay Yidinji Rangers south of Yarrabah at this very special area, a part of the world called Bloodwood Plains (jalja). We'll shoot the breeze and let Vic lead the dialogue and talk about country and perhaps give us some insights and have a bit of a back and forth

MS: Vic do you want to take the mic and have a little bit of a chat about this landscape and cultural burning?

VB: Thank you Matt. These photos behind us pretty much capture some of the traditional burning that we actually do on country. The reason why we do the traditional burning is that we have pockets of dense rainforest that can actually take over sclerophyll woodland and that's the reason why we conduct these burns. Not only that but within this picture itself you see things like Cycads and these are Cocky Apples which are called Porritjal in our language. The Cycads are called Mayi Badil and we actually process those nuts to make bread. These are fire retardant trees or plants that grow in that landscape. You can also see the Kangaroo grasses, the reason that the Kangaroo grasses grow there is that it creates a corridor for small marsupials to travel and not only that the burns help to crack open the seeds that need fire to germinate. Matt you want to add something in there?

MS: (to audience) It's a shame that I don't have some of the other images to show you, there were about 12 or 13, maybe more sheets of 8 x 10 inch film I exposed during that day whilst I was dancing around the flames with 30 Kilos of camera equipment, trying not to singe my dark cloth (or parts of my body). A number of the images in the series actually feature a the cycad groves in the area and some of them are extremely tall. At a guess could you say how old some of them might be? They look like they'd be many hundreds of years old.

VB: They'd be very old

MS: And they're littered throughout this coastal sand plain and as far as my understanding goes they were deliberately cultivated as a food source along that area?

VB: Yes, the process is pretty simple and straightforward, what they do is use water to leach the toxins out of the nuts. First they roast the nuts until they crack open, then they take the nuts, the edible part of them then they put them in the running water for about a week to remove the toxins. Once the toxins are leached out they are dried out and crushed up into a powder. Then we use Macaranga (Macaranga tanarius), Dukal Dukal in our language, we soak the leaves in water to create a raising agent similar to yeast. We mix it up into a paste and bake some cakes... we also use native honey and put it in a saucepan and make dumplings and it's really good.

MS: Do you often get an opportunity to partake in that custom?

VB: We practice this most times. We actually have other resources down there with which we can make bread as well. We have the black bean which has the same process of leaching the toxins out as the Mayi Badil. If you look in the background of this image we also have the Porritjal. The Porritjal is a very significant plant to us as it has a lot of medicinal purposes. Pretty much everything within the plant itself is medicinal. We have a leaf which has numbing agents in it and when a baby's teething we put it on the baby's gums and it will stop the ache, similar to Bonjela. We actually use the leaf as well to sterilize water as we have a lot of fish traps along our coast lines and when the tide comes in we shut the fish traps off and crush up Porritjal leaves to sterilize the water and the fish just float to the surface.

MS: So it just stuns them?

VB: Yes it just stuns them. It doesn't kill them it just knocks them about for a few minutes and they float to the top and we go around with the kids who can just come and grab the fish.

MS: It sounds like something they'd be pretty happy about.

VB: Yes, it's a good method

VB: You all see that image behind the lady here, you'd all think that's lush green rainforest but it's essentially unhealthy rainforest with all of the vines coming down from the canopy creating no room for sunlight to get down onto the forest floor. So a lot of work we have done with Peter Stanton and Dave we went down and cut down a lot of those vines that actually kill off a lot of the rarer species and they can actually start shooting up through from the forest floor.

MS: Now that the light can get down through the canopy down to the forest floor?

VB: Yeah.

MS: It's interesting, for years I was really fascinated this, I think it's sometimes called cyclone scrub (VB Nods) or Vine Country as my brother Dave calls it. Do you have another name for it?

VB: (Laughing) no idea

MS: I was often fascinated because it seemed to have a really strong psychological draw. There was something about it, a kind of wounded aspect to it but I didn't really understand what it was, what processes were at play that led to that particular landscape being so common all along the coastal ranges south of Cairns. Eventually around the same time I was working with the Djunbunji crew I was chatting to Dave about ecology, my brother Dave who works with this mob and was picking his brain pretty consistently along with my Father's and the Djubunji crew as well and Dave pointed out to me that the successional process that's going on here is essentially ultimately the coalescence of logging that occurred throughout those ranges in the mid 20th century. Of course the lowlands were really heavily felled and cleared and drained and turned into agricultural landscapes in many areas but a lot of the mountain slopes were really intensively logged and that opened up the canopy in a big way and that created a significant vulnerability of the rainforest to damage by cyclonic winds.

So when a cyclone eventually came through it didn't have the buffering protection of the dense canopy, the wind was able to get in and clear a lot of the remaining trees and let a lot of light in and the vines were able to just come up and drape over the remaining canopy and pull and drag it down.

MS: So it's interesting because there's lots of people in Victoria who see this and I always have to tell this story to people who are buying the work, you know, in some cases where I've sold it.. are you sure you want to buy this? Because it's not the lush, healthy, beautiful landscape that you might think it is, and are assuming to be spending this money on but they don't really care, it represents something to them, an idea of verdant lushness, an ideal tropical landscape... so yeah there's a strange sort of, you know, a kind of dissonance when sharing this work with an audience who assume it to be one thing but really it's something very different.

MS: So speaking of rainforest, this idea that Vic was talking about, the Sclerophyll woodlands that are transitioning to rainforest in many areas, many important cultural landscapes and ecological zones that a lot of animals will use at different times of the year. I guess I'm really interested to hear your perspective on how that has played out on parts of your country and what you're seeing around that area.

VB: We definitely have a lot of melaleuca trees and melaleuca shrubs and they are pretty much being taken over by rainforest as well and we have to go back and deal with it in a way to make sure that doesn't happen.

MS: Are they in swamp lands?

VB: No they are pretty much in dry lands adjacent to riparian areas. And the work that gets put in is long and hard and takes a lot of patience.

MS: Are you fire managing the Melaleuca's as well?

VB: Yeah we use fire management to stop the rainforest overtaking

MS: They are much more fire sensitive aren't they?

VB: Yes much more fire sensitive, if you get the wrong sort of fire in there then they pretty much all die.

MS: The soil has to have plenty of moisture in it?

VB: Yeah that's right

MS: There's a number of other invasive species that fire is used to manage within Melaleuca habitats as well. Are there a few of those you could share with us?

Audience member: Pond Apple?

VB: Well there's Pond Apple, I think it's *Annona glabra*, well we actually got one of the school for field studies brothers, Shaun Ryder who got a Fulbright Scholarship to research the Pond Apple over in East Trinity. He pretty much wrote a 150 page manuscript about it. It's

an invasive species and it uses the riparian edge to disperse the seeds, they have a seed bank of about 25 years. To get a high heat rate to burn out those seedlings you wouldn't be able to do it you've just got to put on the tank.

MS: They shade out the understory and ground fuels of those areas don't they which makes it harder to burn?

VB: Yeah. You often have them right on the riparian edge there.

MS: Do you notice any invasive species making incursions on the edge of Bloodwood Plains? It seems pretty pristine?

VB: It's Pretty much pristine, only because of horses who sometime come in from the other side (of the range) and they're pretty much eating grasses and dispersing the seeds through their manure.

MS: Invasive grasses?

VB: Yeah, invasive grasses but high heat rate burns actually kill out the seed banks of those grasses. The main one is Pond Apple again, and Singapore Daisy is one.

MS: That's one that's down Freshwater Creek as well...

VB: I think Singapore Daisy is classified as a weed of national significance at the moment.

MS: I mentioned in my speech earlier that there is a property adjoining the block we grew up on at Crystals (Crystal Cascades) and they planted Singapore Daisy as a ground cover, perhaps because they thought it would go nicely with the rest of the exotic Palms et cetera I guess and over a period of 20 years a line of Singapore Daisy travelled down drainage lines from their property on the side of the hill, under drains, drain pipes down all the way to Freshwater Creek. And now in the 12 or so years since I've been shooting I've seen it all the way from where the drain enters near Zanzoo waterhole near Crystal Cascades, a little bit upstream now but all the way downstream, probably down to where it enters the Barron River I'd imagine. And it seems to smother all of the other riparian species doesn't it?

VB: Yeah, that's right. Even Leucaena as well.

MS: Which one?

VB: Leucaena

MS: I don't know that one

VB: It's pretty much a 25 year seed bank as well. Whatever method you use it just keeps coppicing.

MS: And that's on creek banks?

VB: Yep, it's similar to the Pond Apple as well.

MS: What can you do?

VB: It's just containing it.

MS: Spraying it?

VB: Yeah mostly just spraying it.

MS: Keeping the areas that really are in good condition and working really hard to protect them from being overrun?

VB: Yeah, you see a lot of invasive species taking over native species and you get enough of them in a year, over the period of a year where it's actually infested, to keep that a bay takes a lot of work.

MS: Hmm. And with the crews that get out on country often what are the things you are finding are the biggest problem that you need to target at the moment? Is it things like Pond Apple?

VB: Pond apple is one of the main species because it obviously chokes up the riverway. They use the riparian edge to disperse and can get into areas that are really inaccessible that makes it really hard to get the job done, but yeah that's one of the main ones.

MS: I remember when I first came down to work with you guys you had all been out for a few days working on Pond Apple and it seemed like it had been gut wrenching work.

VB: Yeah it takes a lot of money from the budget mate. It's pretty much cut and applications of Vigilant but you've got to do it within a 10 second radius otherwise there's no hope of it working, it's all about timing.

MS: So you haven't been able to find any places in which you have been able to manage Pond Apple with fire?

VB: Nah..

MS: It's too far gone?

VB: It's cut and pasting and it's stem injecting or just cut and pasting. That's the only method we use.

MS: Vic, I'd love for you to be able to talk a bit more about the relationship (pointing to a pair of images depicting Cultural Burning conducted by the Djunbunji rangers in May 2018) between the diversity of these grasses and what keeps them healthy and also why the fire supports a healthy ground cover opposed to a dense shrub cover for instance and why that's important?

VB: Well like I said earlier on about the Kangaroo Grass where marsupials are coming through and once the burns go through it creates a corridor, new grass shoots through. It's pretty much creating a food source for other animals.

MS: So it's fresher and more nutritious?

VB: That's right. We also have Vandasia it's a native vine and that needs to be burnt as well for the new shoots to come through.

MS: And that's not one that competes too much with the grasses?

VB: No it has its own ecosystem in itself, and we use it for medicinal purposes as well, so when you get Irukandji stings you can use that to actually chew up and put against it. It pretty much gives you five minutes of life until you can get to the hospital or something (laughs)

MS: Good to know!

VB: Yeah this particular area, this is one of our traditional areas, it got logged in the early 70's late 70's early 80's. A lot of the bloodwoods in the area they pretty much drifted around to Cairns because they were too big to use the timber line and lorry it around on the roads. Because you had the forestry which actually had roads through at Pine Creek and state forestry used to hold pretty much all of the heritage up there and that had a lot of species like Bloodwood and Bluegum and other species as well. And now all that's stopped and all of the younger shoots are coming through it's pretty much restoring stuff in a sense.

MS: So it's stabilizing it?

VB: Yeah

MS: And do you see many small native specialized marsupials grazing in these forests?

VB: Yeah, you get the white footed bandicoot, the white-nosed rat, so they're all native species that use that area. There's other stuff there (inaudible) like Gliders and Sugar Gliders that come through.

MS: They feed on the Bloodwoods as well?

VB: Yeah there's a lot of stuff. There are rock wallabies, you've got Pademelons that come through, because a lot of marsupials actually need those fresh shoots to survive.

MS: So then the understories of these Sclerophyllous, you know Eucalypt or the Melaleuca woodlands become overly choked with shrubs that shade the ground story they start to struggle to find food supplies?

VB: Especially when you have the rainforest coming in and the sunlight can't get to the understory and you need some way to actually open up the subcanopy for the sunlight to come in to open up those areas. That's what we were doing with your Dad and Dave around 2014 because we hadn't been doing traditional burns as much.

MS: So those areas were getting heavily invaded by rainforest species?

VB: Yeah

MS: You've only got a small window to tackle that don't you?

VB: Exactly, yeah. You've got to watch the heat rate of the burn to make sure that the trees on top of that ecosystem are safe as well so you've got to watch your timing and your heat rate. The heat rate has to be high down below but not so high that it begins to effect the trees on top so you've got to know how to pick the optimal timing.

MS: And it's got to be hot enough to open up the understory but the soil has to be moist enough to keep the trees alive?

VB: Yeah.

MS: So when the grasses are there it would burn relatively easily?

VB: Yeah. You just have to watch the heat rate or else you start effecting the trees, you can tell how high the heat rate is by looking at the fire socks on many of the trees. So that's how you tell if it's a high heat rate burn or a low heat rate burn.

MS: And do you feel like that's big problem in your country managing that?

VB: Very much yeah. Not only that you have animals such as horses and that transporting invasive weeds through here and the rainforest.

MS: Ok. And the invasive weeds in the rainforest are they the ones that tend to smother the understory of the rainforest and block out the biodiversity?

VB: Not so much, in the clearer areas (Sclerophyll woodlands) we mainly have problems with Lantana and Singapore Daisy and they can usually be managed by fire, even just pulling them out by hand.

MS: Yeah, Lantana comes out relatively easily if it's not too entrenched.

VB: Lantana changes the soil conditions, it's pretty much an invasive species but that's something else it's doing. (Laughs)

MS: Do you find there's other species, maybe even native species that do that? For instance Do you notice when Casuarina comes into an understory what sort of processes seem to be at play there?

VB: Well we've got the Mountain Casuarina or Sheoke and the Casuarinas can really shoot up for the sunlight and can smother a lot of other species.

MS: Yeah it's interesting, it's something we noticed out at Crystal Cascades as a kid, I remember running through these grassy Eucaypt forests, you know we had come from Victoria Point in South East Queensland which was also pretty similar in some ways as at the time we were on a pretty big bush block. But over time we began to notice Casuarinas becoming more prominent in the understory at Crystal Cascades... I remember well because we used to rip the needles off the trees, wrap them in paperbark and pretend to smoke them (laughs)... But something I noticed was that over a period of 10 years the Casuarinas seemed to be creeping in then after another 10 years even they started to be struggling and the Kangaroo Grass had gone by then and rainforest species were taking over. And _{now}, the area

behind our place and all around the side, while some areas are being actively regenerated as more complex rainforest but all the bush behind, you couldn't even walk through it anymore.

VB: It's pretty much the same at East Trinity as well, we've got Singapore Daisy actually taking over another native ground cover, it's one called a Wandering Jew (*Commelina diffusa*). And Wandering Jew is one of the native plants in the area and has Singapore Daisy pretty much all over it and you can't actually get a high heat rate there because the moisture's too strong. And if you go and start using chemicals to kill out a lot of invasive species then you can kill out the native ground covers too and if you use fire you also kill out the Wandering Jew because that one's fire sensitive (laughs / inaudible).

MS: Vic, you know this image of mine here, some people find it a bit shocking because this is probably the very edge of the ecotone where the grassland forest transitions to Acacia in particular and further back through the smoke you can sort of make out the rainforest areas in the background. Does that sound about right to you? I think that's what I was looking at because see there's some Acacias through here like *flavescens*?

VB: Yep

MS: And further back towards the base of the mountain it becomes pretty dense Mesophyll Rainforest...

VB: Yeah that's pretty much where the rainforest has taken over where the Acacias are there

MS: So that's an example wof here the possibility of restoring the woodland has been lost now and you're seeing a marginal expansion of the rainforest occurring?

VB: Yep

MS: And this is Sarsaparilla vine?

VB: Yes

MS: And that's the vine that's covering a lot of that areas further back towards the range?

VB: Yes

MS: So fire helps to control all of those things and helps to stop them making further incursions?

VB: Yeah pretty much, and this is just trickle burning here. In this understory it's pretty much just dead Sarsaparilla vine here but we won't reclaim that area, it just opens up a corridor for Marsupials to come through.

MS: Yeah I remember following the little balls of fire carrying my 8 x 10" camera down along the ground and I had to try to get it in the right spot in advance and then click the shutter at the right time (laughing). Vic, the Mesophyll Rainforest, is that growing on Metamorphic or Granite soils?

VB: I think they're Granite, up there where that is there's nothing but just Granite

MS: So it's pretty rich rainforest that grows over on that side?

VB: Yeah, if you give it about a year and you're not looking after it it's really going to start overtaking. It grows real quick, real fast. In pretty much open areas where more sunlight gets through it makes it grow more quickly.

MS: So it's not just creeping in it kind of nucleates doesn't it and spreads out?

VB: Yeah

MS: So there's a lot of animals that are feasting on fruits of the rainforest, so there's this idea that the rainforest is just creeping in and will take a long time to occupy a lot of these landscapes but in reality it's a pretty rapid explosion of species in the understory and it just covers the whole area.

VB: Yep.

MS: (checking time) So Vic should we open up the floor to questions at this point?

DM: Hi everyone, If I could just add, my name's Dale, I work with Vic, Peter, David and Matthew. So for a long time the traditional burning practices weren't taking place. Our ranger program has just reached its 10 year anniversary and within that is the fire program.

DM: And with the Stanton's, to name all three of them now (laughs) we've identified key areas and ecosystems and they kind of look like this (points to image) on the east and have this picture on the west (points to another image). That's the landscape within metres of each each other. And the ones that are being burnt like this one we're looking at the differences between plants and animals so they set up 10 fire monitoring sites transects 100 metres by 50 metres. And we measured the changes - for so long our burn practices had been taking place and then particularly during the pause in the contact phase (inaudible), the establishment of Yarrabah. All our mob got taken away from country and put into missions, as happened everywhere around the whole of Australia. Since around 2014 we've been able to begin capturing this data now, Verbally, Images and this is probably the first time ever we've been able to share that with the wider community. Although we have done so in schools, new informal settings like this gives us more power to continue looking after country.

We've got 10 full time employees over at Yarrabah, that's the Gunggandji-Mandingalbay Yidinji ranger group run by Helen Tait the CEO. And John Wilson, where's John? I don't want to put him on the spot, he's the ranger co-ordinator for over there and John will be continuing to do all of that good work, and who's to say what country will look like in two years, five years and throughout the many generations. We've branched out into commercial activity, so indigenous tourism down at East Trinity and the experience involves taking you through exactly what these activities are, what the rangers do with their traditional knowledge and it's an opportunity to take others over and share the rehabilitation process that's taking place.

Now (pointing to Vine Country image) that's the exact example of what a rainforest should not look like but between the rainforest, open forest and closed forest everything plays a part. It plays a part in the different seasons, we have Cassowaries using these open areas and wandering down onto the beaches so we used to tell our kids that if you see a Cassowary that

you should run into the water but we soon found out that that Cassowaries could walk in the water also (Laughter)

We not only have weed infestations but we have animal infestations also, Pigs particularly. Also because the areas are now used we've got crocodiles coming back into places where you could once go and have a drink of water at any time of year but these days there's particular times and places when you can do so.

Thank you very much.

(Audience Applause)