

Australian Tropical Research Foundation

Annual Report – 2018

Well, as ever, it has been an eventful year. One thing you can be sure of here – boredom is never an issue!



My colleague, Talia has developed an image that I have wanted for this place for over 20 years, as the reality of living here, and the need for continual maintenance struck home.

I'd love to have a real grotto with this Madonna in it. (Plus the bat - obviously!)

Speaking of bats, since commencing regeneration work when we arrived in 1988, the property has slowly become completely reforested (OK – there are still lots of immature trees and short-lived pioneer species) thanks to the work of hundreds of interns and volunteers.,

There always has been a flying fox presence in the area, with scattered “feeding colonies” along the Camelot Close forest remnant. However in the past couple of years, the ‘speccies’ have moved into this property – and we currently have an estimated 4,000 animals (December 2018) . We have also, thanks to efforts by Kelvin Davies and Queensland Trust for Nature, now become a Nature Refuge (this status is a legally binding conservation covenant on the property).



This year – we have had a major influx of spectacled flying foxes from outside the property and we have had to rescue over 70 juveniles – 60 of which we have sent off to other carers (and this was **before** the major heat event that is estimated to have killed 20,000 speccies in Cairns and areas to the south). Luckily we did not experience this desiccating weather here – probably because of our location close to the sea, with the coastal range behind us.

We now have 11 babies in care (as the carers elsewhere have been overloaded by the heat events).

They are such amazing animals!



By around 5 a.m., the Station dawn chorus begins. Yes, there are birds, but their voices are mostly drowned out by the cries of returning flying foxes as they greet each other, pick up their babies from their creching areas, jockey for choice spots on branches, and rather noisily engage in courtship and mating. It quiets down after a few hours – for a few hours. After that, the sound level tends to pick up as the flying foxes get on with their daytime socialising, and finally, toward evening, as they prepare for their night flyout for feeding. The bats now occupy almost ALL of the station property!

Bat House

Still crawling out of the swamp. Peter, a Station resident and occasional volunteer and Mandi, a regular volunteer with a keen interest in flying foxes and maintenance have upgraded the outside, as we have had a lot of rotted timber structure which needed to be replaced (this place is sooo unfriendly to human structures). We still expect to have continuing issues with the “lyssavirus paranoia” of Queensland Health and WPH&S. However, irony of ironies, the local spectacled flying fox colony now resides in trees over and around the Bat House, and there isn't a thing Queensland Health can do about it!

Unfortunately, because of Queensland Health's lyssavirus phobia, being allowed to exhibit a member of our captive colony in the Bat House (a live flying fox has always been a major drawing card for the Bat House) may be problematical. So far, they have refused to engage in any rational discussion on the subject.

A couple of other comments: The Bat House trail is in good condition – well-cleared and provided with new markers. The displays, long in need of renovation, are currently being worked on.

“It is difficult to get a man to understand something, when his salary depends on his not understanding it.” Upton Sinclair



Species take over the trees above the Bat House !

Volunteers, Interns and groups.

We have had 12 volunteers and interns – (we have not been overactive in promoting our facility overseas - there has been so much going on here). The reality is that this place requires at least 3 additional permanent folk here ..

It's been a bit of a mixed bag – with some incredibly great visitors and volunteers, and some, sadly, serious duds... an interesting issue, given the increasing degree of urban-centered-ness that we are experiencing.

We were hosts to a student group from Connecticut – led by Jim Serach (who has been here several times before (his first group helped build the ablution building!) –



They had great fun looking at soil organisms – with our nice new collection of Leitz microscopes!

Web developments

Talia has incredible skills as a web developer (as she makes the transition from being a total urbanite to the rural mindset!) – so the Station website is now much cleaner and more-accessible. <http://www.austrop.com.au> - it even works on cell/mobile phones.

We have also created a website <http://www.livingindaintree.org.au> to assist people with an interest in living in the area to understand the realities. Sadly, local politics and general disinterest seems to prevail – and it is seriously underused.

“Power” politics

The issue of development and the provision of “modern” facilities in the coastal region north of the Daintree River – continues to be a highly divisive issue. We responded to a proposal (ostensibly put forward by ARENA (Australian Renewable ENergy Agency – as a result of pressures from our local LNP member Warren Entsch and an old (and intense) Pro-Power lobby here on the Daintree Coast.

We have had to spend a considerable amount of time responding to this – it is a techno dream by a company (USA) who hopes to get the contract to carry one or other of their scenarios out!

We are pushing for option 5 – the only one that makes sense.

http://www.dssg.org.au/fileadmin/content/new/Austrop_Response_to_Powering_Daintree.pdf

original proposal: <http://www.arena.gov.au/knowledge-bank/powering-daintree/>

But, sadly, power politics is only one of the many divisive issues that exist in this region.

Teeth (trigeminal neuralgia).

As some of you are aware I (Hugh) was seriously smitten with trigeminal neuralgia 18 years ago, and finally, after all sorts of other, unsuccessful medical interventions, am now completely free of this debilitating disorder after topical treatment with capsaicin (the HOT ingredient in chillies) applied orally. I have remained completely symptom-free since about 2007. I have been assisting others with treatment for this common but extremely distressing condition since around 2013. We’ve had over 300 requests for help, and I’ve sent out over 100 treatment kits, consisting of capsaicin extract and a custom-made mouthguard to which the capsaicin is applied, at no cost to the recipient. Success rate (that is, the number of people who have experienced an improvement in their trigeminal neuralgia symptoms) is about 50% (not bad).

A wonderful French volunteer made a video – but it needs updating.

(<http://youtu.be/Z8nDVja636g>) -

Trigeminal neuralgia takes a lot of forms – I was lucky, mine was the simplest. Other people with different, more complex forms of the condition have been less fortunate, and helping them has proved challenging. The results of these trigeminal neuralgia studies will be written up for publication if/when I find the time to do the writing!

Community Development

Sadly, this area is a “settlement” rather than a community, which makes developing community-oriented activities almost impossible. Last year the Foundation invested \$15,000 in a local woman, trained in sociology, to carry out a detailed sense of community survey on the local area. The survey was completed, but unfortunately, the woman responsible for carrying it out left the area unexpectedly, taking much of the survey’s findings with her; other than an initial analysis of community attitudes (done using an international protocol), we have no data from the 105 survey responses. We don’t even have the original paper data .

This is terribly frustrating – as we know that there are folk “out there” who are interested in maintaining the environment, but they are hiding, as being “seen to be green” – appears to be a serious negative in this culture. We were hoping that we might be able to at least assess the level of environmental interest from the study (as well as understand the spectrum of attitudes that seems to characterise this place).

Weeds

Weed control (can you believe) has become another contentious issue. Especially on the littoral (coastal) forest. Needless to say, the issue is overarchingly **coconuts**. Sadly the local Douglas Shire Council, who has created good coconut management plans in the past years, has walked away from it, as the Council appears very afraid of community backlash, especially from up here. Sadly, the current mayor appears to be fixated on “people” issues, rather than environmental ones, so it all has to be done quietly. On the positive side – we have almost completely cleared our four major beaches of Singapore daisy (they were grossly infested), but we cannot expect any thanks from Council (or anyone else).

Also – local attitudes have changed rather markedly over the past 10 years – now there an almost obsessive concern with “my property” – and a total lack of interest in weed control or environmental issues.

We were hoping that the weeds ID section of <http://www.livingindaintree.org.au>, would spur interest. It hasn't.

Station Facilities

The Station facilities are weathering well.

We are, if anything, oversupplied with research equipment. We bought a pallet load of really nice Leitz binocular dissecting microscopes at auction (USA) early this year (and these were used by the Connecticut group) – and with that was a Markes VOC analyser system (brand-new, unpacked - \$A90,000 !!) – which would be fantastic for analysing the attractant compounds emitted by cluster figs as they become receptive to the pollinating wasps ... **but we need someone interested to use it!** In fact that **is** the problem – there are so many possible projects, we have lots of gear – and so few interested.

Power supply remains a problem – we installed 6 new 250 watt panels – which has assisted – plus a new MPPT controller. We have replaced our 11-year-old battery bank – (it probably didn't need replacing) – but the old batteries have gone to a good home, and should give many more years of service.

But to operate the energy-intensive aspects of the lab (gas chromatograph, etc) – as well as the dehumidifiers we'd probably have to run the generator – unless it was really sunny.

These are the realities of our modern energy intensive culture!

Internet, and all that

We have had NBN for a bit over a year, but it really has been less than satisfactory – as the satellite “pipeline” to the area clogs during the day and early evening (streaming videos etc being viewed by the local populace). This really puts a crimp in doing anything that uses GPS (Google Earth etc).

A big problem is that the wireless router NBN supplied is too powerful – and has a 200 m range (even with it being inside the metal walled main lab!). This causes issues, so we have to figure out how to “strangle” it in order to keep visitors and volunteers from sucking up all our data allocation!

We have been incredibly lucky, as colleagues in Cooper Creek, Neil and Prue Hewitt, have given us a very recent Mac (27" iMac) as they were upgrading. (Our systems were getting a bit behind the tech "8-ball".) Thanks so much, Neil and Prue!

Biodigester (biogas supply)

Well, we invested in the Israeli-made "HomeBiogas" unit – which looks like a beached green and black whale when filled. However, despite lots of feeding as we collect restaurant scraps from PK's backpackers' hostel, no methane is being produced - just lots of CO2. Seems the dry cow dung we collected (as per instructions) to start the culture has to be sloppy fresh. Sadly, there is a paucity of cows here. The HomeBiogas people should have just supplied starter culture! Now we are in the position of having to empty the whole thing and reload it with an appropriate starter culture, a smelly and unenviable task. Grrrr...

Finances

We are well "in the black" – but need to become active in grant seeking again. Currently both Hugh and Talia are providing running Station financial support (as we are both getting pensions), and the Foundation has a significant "war chest" for some projects and for emergencies such as cyclones. The cost of insurance premiums is now excessive, and the construction and layout of the Station is such that it would have to be a Category 5 cyclone to cause significant damage.

So we are awaiting the next rain instalment...

Cheers and have a great holiday season

Hugh

(Dr) Hugh Spencer

Australian Tropical Research Foundation

Cape Tribulation Tropical Research Station

PMB 5 Cape Tribulation

Qld 4873

07 4098 0063

www.facebook.com/austrop (see what we are doing - it's a public page - you DON'T have to be a Facebook member!)

www.austrop.org.au