IPPS South Africa – A Young Propagator's Journey

By Lara Osborne

How it all began

- Nature lover since birth
- Murdoch University – Honours in Conservation and Wildlife Biology
- Education Volunteer at Kanyana Wildlife Rehabilitation Centre
- Work experience at Natural Area

- My love for nature and wildlife started from the moment I opened my eyes. I originally wanted to be a veterinary doctor but as I grew up I realised that surgery really wasn't something that I could handle and chose to focus on a less medical direction for my studies of biology. I enrolled in Murdoch University in 2011 and studied Conservation and Wildlife Biology for 3 years before undertaking Honours in the same field. My passion for Australian plants began at this university with a very caring professor who let me discover the true beauty of these very strange looking plants – who for some are quite ugly and uninteresting! Following the end of my university studies, I wanted to be more involved with Australian wildlife and began volunteering at a wildlife hospital centre in Lesmurdie, where we conduct education tours and visit fairs and schools to teach the public about our unique animals. I have been volunteering there for 3 years and it was due to this organisation that I came across Natural Area. On my way to a wildlife volunteering event in Whiteman Park I drove past Natural Area which is located in close proximity to the entrance of Whiteman Park. I applied for work experience in order to gain practical knowledge and experience in my field of study and have been an employee for over 2 years in this company since then.


Natural Area
CONSULTING MANAGEMENT SERVICES
Directors
Environmental Programs Business Unit (BU)
Operations BU
Consulting BU
Nursery BU
North Operations BU
South Operations BU
Bunbury Operations BU

- Natural Area is an environmental restoration, management and consulting contracting company in Perth, Western Australia. It delivers various environmental services for government and private clients in Western Australia. Our company currently comprises 4 business units: the programs team, operations, consulting and nursery team. Our programs team discusses, organises and maintains working dialogue with our clients regarding all our field, consulting and nursery operations. Through them, contracts are established and services required are forwarded and undertaken by one or more of our business units. We currently have 3 operations depots or field bases around the Perth Metropolitan area: north base in Whiteman, south base in Beeliar and our greater south west base in Bunbury.


2012


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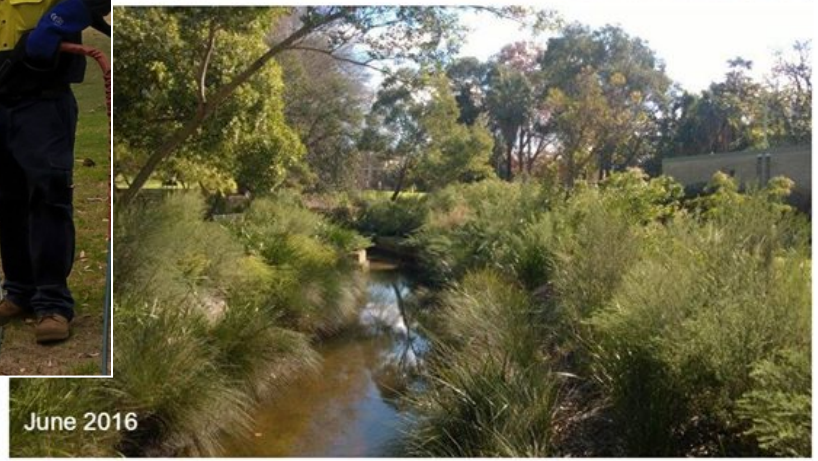
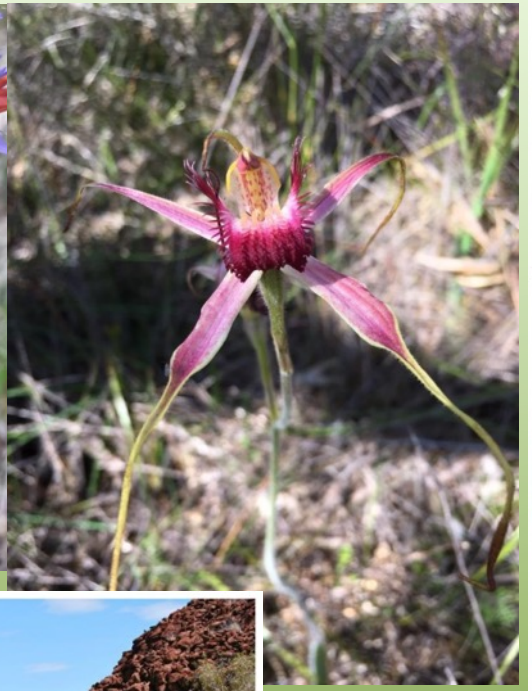

June 2016

- Our fieldwork team regularly undertakes work in natural bushland reserves, including revegetation, erosion control, weed and feral animal control, dieback services, waste management, fencing, fire fuel load reduction and steam or herbicide weed control. I worked with the north base field crew for approximately one year and was able to complete a variety of projects to our clients. As well as delivering quality projects to a large number of local government clients, our field crew regularly works for landscape clients, mining companies and private companies. These pictures are a few examples of the variety of work we provide at Natural Area.











- Natural area also provides consulting, as previously mentioned. Our consulting team provides an array of services for areas all over Western Australia. This includes weed mapping, fauna and flora surveys, site assessments and plans for environmental management, environmental impact assessments and bushfire management plans. It regularly comes across many of our beautiful fauna and flora! Projects have gone as far north as the Kimberley region of Western Australia. I was fortunate enough to join the consulting team down at Rockingham, surveying the natural coastline vegetation for the City of Rockingham; and undertaking flora surveys in Lightning Swamp wetland.

NURSERY A – coastal species nursery

NURSERY B – bushland species nursery

NURSERY C – wetland species nursery

- Lastly, Natural Area also offers native plant services. We have our own in-house native plant nurseries at our north base: a wetland, coastal and bushland nursery. We grow over 300 native Western Australian species for our clients, both as part of our contracts for revegetation works and production for private and public clients. In our nursery, we continuously trial new species and recalcitrant species to improve our knowledge. Some of our species require a 2 year growing period before being ready for dispatch, due to their slow growth habits! Believe it or not, some species that we grow are so rare that we are happy after having just one of 2 plants succesfully grow in an entire year!

Seed collection at a local Perth beach

Processing of *Patersonia* seeds using air separator to remove chaff

Separating Patersonia occidentalis seed from chaff

Clean seeds ready to be sown into trays

- We also undertake germination trials for clients, when requested. It all begins when our field crew collects the seed required by contracts; and processes them to remove unwanted chaff and any damaged seed from the collection process. We have several different methods for processing seed, including sieves of different sizes, air separator, seed thrasher and air drying domes. The clean seed can then be sown into seed trays for germination, or if contracts only require seed collection, the seed is then placed in air tight sealed bags, labelled and supplied to the client.

Sowing seed trays of *Acacia cyclops*

Seed dome – awaiting germination

Potting up seedlings with dibblers

Shadehouse – first 10 days of production

- Following on, our seed propagator exposes the seeds to their required needs to allow germination. Most of the plants we produce are sown into seed trays and later transplanted into larger forestry tubes using dibblers. Some of the plant species we produce are winter germinating, such as gompholobium marginatum; whilst the majority of our plants will be sown in late spring or summer and germinate typically within a month. Once potted up, plants are placed in a shadehouse for the first ten days of production before being transported into one of our 3 nurseries to harden off.

Checking for roots on *Hibbertia* cuttings

Potting up *Dampiera* spp

Salvage of *Dasypogon* spp

- Many of our plant species are also produced through cuttings material, as they do not germinate well from seed or seed is not available. Our cuttings propagator will place them into peat plugs in a humid environment before transporting them into forestry tubes when roots strike.

- We also grow plants through division and salvage of rhizatomous plants, many of our sedges and rushes respond well to this method and we have had great success with dielsia spp and Baumea juncea.

Unloading trolleys in NURSERY B – bushland species

Placing new *Acacia saligna* seedlings on bench

Grading an order during dispatch season

- Most of the plants we produce in the nurseries are dispatched during the winter season, between April and August. We have several contracts with local governments to grow the necessary plants for their planting season. My role within the nursery is dispatch and plant movement coordinator. Once seedlings are ready to be moved from our shadehouse into our larger outside nurseries, I coordinate and supervise the team as to where each species goes. Each species has their own requirement for water and sunlight and these must be taken into account. I am responsible for keeping an eye on every species and must know where all species are located for dispatch season.

- Come dispatch, myself and my team members grade and inspect each individual plant for quality, quantity and consistency. I organise delivery dispatch documents for clients and organise the loading of plants when our own field crew delivers orders to clients. Sometimes I also deliver the plants myself to clients, which is very rewarding as I have now gone full circle from the beginning of producing plants all the way to the final step and handover.

- I have joined the nursery team full time from October last year but have gone into the nursery during peak production period in summer since the start of my employment. The nursery team contains 7 core staff members and during production season, up to 10 field crew members will join us. Together we have produced over 800 000 plants for our clients each year. Many of our plants are dispatched for revegetation projects that our own field crew undertake for our clients.

Heathcote Point

- One of our large plant orders went into this particular site- Point Heathcote. It involved serious erosion control due to storm and foot traffic from the river to the footpath, as visitors take a shortcut through the cliff. Rock revetments, timber palisades, geofabric matting and revegetation was required to stabilise the dunes. Silt curtains were placed in the surrounding water to prevent pollution from dispersing into the Swan River.

- These pictures show the newly finished area and the same area 1 year later, following a recent storm. You can see in the later picture the initial brush logs used in front of the rocks have been completely buried by sand. These pictures depict the importance of erosion control and revegation not only for practical solutions, but enhancing the aesthetics of natural areas.

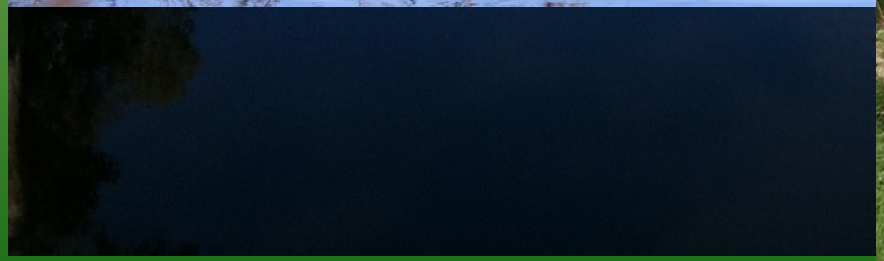
- This site is called Latitute 32 and was once widespread with the invasive kikuyu grass, preventing native plants to establish and grow. Our field team undertook constant herbicide weed control and revegetation with natives grown in our Whiteman base nursery. You can clearly see the huge effect and need for constant management of natural areas here. Note the towers in the background in the before and after shots!


2014

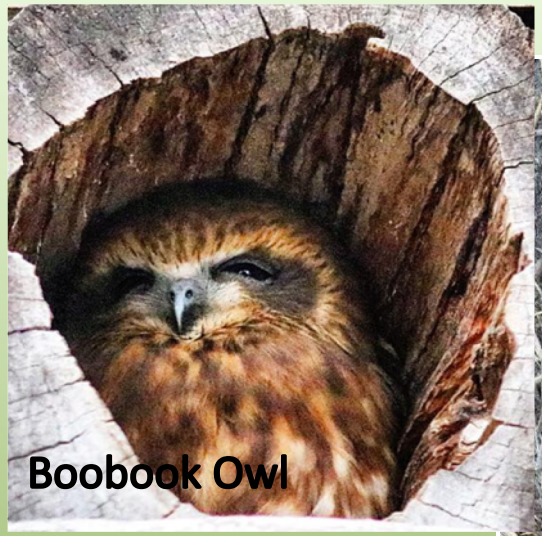

2017

- Walters' Brook was a project undertaken for the City of Vincent local council which required restoration due to erosion, degradation and sediment run off. With poor alignment of the drainage channel, it required several engineering techniques such as gabion mattressing and walls, bank erosion matting and soft recontouring of the bank, whilst native plant species were planted along the bank to establish a long term solution to erosion.

- This is the finished product, the plants here are also from our nursery in Whiteman.

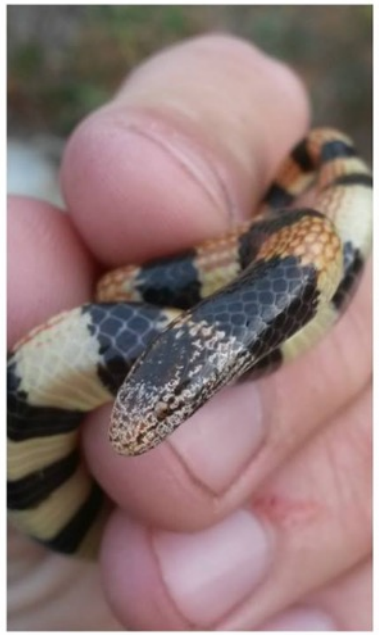


- Similarly, at Cygnia Cove our revegetation and restoration efforts along the brook has directly improved breeding success and nesting sites for the native Black Swan, which has been decreasing in numbers around Perth due to habitat loss and poor nesting sites resulting in predation of young. These Western Australian emblems require sedges and rushes such as Lepidosperma and Schoenoplectus species along water ways to build their large nests.



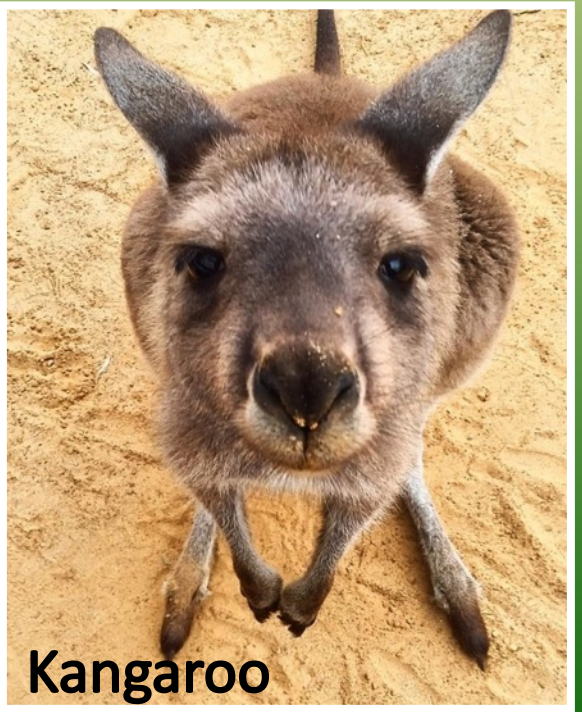
Boobook Owl

Bobtail



Tawny Frogmouths

Dunnart



Kangaroo

- There is no denying the huge effect revegetation has on our natural areas. With so much housing development, erosion, salination and road works in Western Australia it is imperative that we not only save what is left of our natural bushland but restore and manage depleted areas. Common native fauna like our boobook owls and kangaroos may soon become extinct if we do not recognise the importance of natural area management and restoration. The projects shown here today have given you a taste of what Natural Area accomplishes every year, and I take great pride in seeing how our small native seedlings establish and grow into beautiful habitat areas for our native fauna, even if it does take a minimum of 2 years to grow some species!

- It has been a pleasure to be a part of this conference and learn about the horticulture and life in South Africa. I am extremely grateful for the opportunity and look forward to learning more about the similarities and differences between native and introduced species in these 2 countries, and horticultural methods of propagation. Thank you to everyone involved in this exchange program and all the host nurseries in having me over! I hope you all enjoy the rest of the conference.

THANK YOU SOUTH AFRICA!!!