



Toodyay Naturalists' Club Inc.

THE TNC NEWSLETTER

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PRESIDENT'S REPORT

by Desraé Clarke

THE cover image of the newsletter features the Boobook Owl resulting from use of a sensor camera. The small bird of prey gave a brief call once only but was captured on the sensor camera eight times in as many nights. It is wonderful to photograph nocturnal fauna that would otherwise not be known in the area. The bird in the foreground is watching another bathe in a bigger bird bath at the rear.

Late November 2018 a proposal was made by the Shire Museum/Curator, Margie Eberle, to hold an exhibition at the Newcastle Gaol (1865) Museum featuring the travels of the first Western Australian government botanist, James Drummond (1797-1863); it was planned to be launched 16th February by Dr Neville Marchant, Botanist and Patron of the Toodyay Naturalists' Club (TNC).

Botanist/farmer Drummond travelled extensively from his Toodyay property of Hawthornden. The exhibition features the trek from his home, through New Norcia and north to Mount Lesueur. This trek was retraced in the 1940s by botanist, C. A. Gardner (1896-1970).

TNC and Toodyay Historical Society (THS) members assisted in providing some of the exhibits and also a deliciously lavish spread to follow the launch.

In the evening Dr Marchant gave an extremely interesting presentation to the Naturalists' Club members on the progress of research on the Drummond letters to newspapers, *The Guardian*, *Perth Gazette* and *The Enquirer* (1834-1848). This research is to culminate in a publication of the letters.

An important motion was presented at the evening meeting that read: "That Shire Managed Conservation Reserve number R33802, Forrest Road, Nunile, is named and sign-posted 'Ray Paynter Reserve' in honour of Mrs Ray Paynter, naturalist, conservationist and a founding member of the Toodyay Naturalists' Club". The Motion was moved by Greg Warburton and seconded by Wayne Clarke; it was passed unanimously by the Club members.

Early Saturday 2nd March members collected litter on several kilometres of Julimar Road, as well as along the fire access track on the Dawn Atwell Reserve, contributing to the Clean-up Australia Day. 12 bags of trash were collected demonstrating that the three annual litter collections in the area help to keep the area relatively clean. The main items collected were drink cartons.

Following the early visit to the Dawn Atwell Reserve area members then met at Pelham Reserve, a beautiful area high above the town. This get-together was to brainstorm ideas to formulate an achievable plan of restoration of this important site.

Many and varied suggestions came forth and, with the view to establishing a small sub-committee to lead the project, funding will be sought to redevelop the area; the plan would be expected to take a period of up to five or more years.

Former club member, Max Howard, has gifted the TNC library with a large number of the RAOU publication, 'Emu', dating from a 1903 edition. The extensive natural history library held at Drummond House is available to the general community.

It is pleasing to note the progress of sales of the 2018 Nat's publication, 'The guide to exploring Toodyay.....naturally', is progressing extremely well. What is even more pleasing is that many purchases have been made by community members who don't necessarily belong to environmental groups but are interested in protecting and conserving our precious environment.

Drummond House, leased in conjunction with the THS and the Toodyay Friends of the River (TFOR), is working well as a group arrangement. The building is open to the public on Saturday mornings from 10am till 12 noon and also on festival weekends with TNC and THS members in attendance.

Visitors to Drummond House vary. They may be locals, visitors from the suburban Perth, interstate and overseas. Our interesting signage at the front of the building is a great drawcard.

Two lovely people from Texas popped in recently with their visit culminating in an invitation to a member's property to see rehabilitated wildlife. They were thrilled to see Brushtail Possums, Kangaroos, Chuditch, Woylies, Euros and a cheeky Red-tailed Black Cockatoo. Talking with this couple the next day I am sure the visit will be one of the highlights in their Australian diary.

A Spring Excursion to the Stirlings

by Charmian St John

LAST spring the Toodyay Naturalist's club weekend away was at the Stirling Ranges Retreat, Chester Pass Road in the Stirling Ranges on September 14th – 16th. Everyone arrived Friday but as there were no planned activities until Saturday afternoon, the thirteen of us, including 4year old Finn, were free to make our own arrangements for meals, tours and walks. As the Retreat is within the Flinders Ranges National Park, walking around within the Retreat easily led to wandering into the park itself.

Professor Stephen Hopper AC, accompanied by his wife, Chris, arrived on Saturday afternoon. After introductions all round and a cup of tea and cakes kindly provided by Robyn, we were led on a rambling tour of the surrounds overlooked by the magnificent Bluff Knoll. There were many orchids and wildflowers to be found along the way and many birds to be heard and sighted in the trees, bushes, at the bird bath in the Retreat and within the park. Of special interest within the park itself was the Dwarf Spider Orchid carefully protected from the path by strategically placed logs. Plants providing food or medicinal properties used by the Aboriginal peoples were highlighted and named both botanically and with their Noongar name.

Back in the grounds of the Retreat, Stephen pointed out *Purple-crowned Lorikeets* busily foraging for nectar among the eucalypts. Others showed off their discoveries of a dark Red Spider Orchid, White Spider Orchids and the yellow blossoms of the bushy yate (*Eucalyptus lehmannii*). At all of these finds we lined up hoping to capture reasonable photographs.

Stephen, who is currently Professor of Biodiversity, Centre of Excellence in Natural Resource Management, UWA Albany, gave his presentation in the Orchid Room titled "Walking together with Noongar peoples in search for living sustainably with biodiversity". He talked of the 35 areas of global biodiversity hotspots representing 16% of the earth's surface with only 2.5% of this land protected. Latitude is one of the determinants of biodiversity with this being greatest at the equator then diminishing toward the poles. However, there are five areas that confound this rule: the Mediterranean, California, Chile, South Africa and South Western Australia.

Here, biodiversity is under threat from both agricultural and infrastructural clearing. So far 8378 plant species have been identified and of these 1100 are exotics in south west WA. Since 1970 there has been an explosion in identification of new species due to better access to isolated areas provided by 4WD vehicles, development of DNA technologies and better classification standards. This biodiversity needs protecting and the best way toward conservation is to be working with, and for, the local indigenous peoples.

As an archaeology student he went on a trip to Hyden where he saw the Noongar motifs / hands on the walls and learnt that this site is "the St Paul's Cathedral" of Noongar land but was not recognised, nor protected, at the time.

In the 1980's Prof Hopper collaborated with Stephen van Leeuwen, biologist and also Noongar, and went into the country to identify Noongar culture as they travelled along their song lines. Later, collaboration with Perth elder Dr Noel Nannup enabled him to compare western scientific views with the knowledge of the Noongar people. This work is ongoing. He recommends Indigenous culture courses to us all.

Stephen feels it is important to generate indigenous community led research as science needs to catch up with and be guided by Noongar Elders' knowledge. One, Ron (Doc) Reynolds, described lizard traps at the top of granite outcrops although at the time he didn't know how these were used. These were ignored and never recorded by the early European settlers and were often decimated; the long narrow granite stones were pilfered to be used for steps or lintels but the fact that they were laid over dolomite stones was not recognised as artefact.

Prof Hopper referred often to the knowledge of elder Lynette Knapp, an oral historian; she was able to describe how she saw these traps were used to catch the larger lizards as a child. Her accounts have been invaluable and also, from her, Stephen has learnt the Noongar names and uses of our plants.

cont. Page 4

A Spring Excursion to the Stirlings... (cont from Page 3)

One such plant Youck, *Platysace deflexa*, and in Toodyay, Kanna, *Platysace cirrosa*, is a bush potato with a ginger and carrot taste.

From these consultations and his own observations, Prof Hopper has developed and published in 2009 the OCTBIL (Old Climatically Buffered Infertile Landscape) and YODFEL (Young Often Disturbed Fertile Landscape) theory of what contributes to the biodiversity seen in these extra-equatorial regions. This aligns with the Noongar cultural idea for these landscapes: one, fertile used for settlement, camping and cultivation; the other, of high importance without camping or burning. This applies to all five 'Mediterranean' areas - the anomaly not explained by the latitude biodiversity theory.

As a final comment Prof Hopper reinforced that the Noongar peoples and all Australian indigenous peoples feel that their knowledge of country is ahead of science and this is important for future land use and alternative agriculture.

After this interesting and thought provoking talk we had a meal together in the communal eating area. As the weather for our weekend had been cold but fine and clear, the open camp fires were an irresistible attraction.

In the morning we were in for another delight. The owners of the Bluff Knoll Café let it be known that there was a family of Honey Possums living in their native garden - right by the front door and seen there for the first time in twenty years. We were rewarded with the thrill of seeing these tiny animals going about their frantic business of supping on nectar and pollen. Again, cameras were buzzing.

Later, a shared cooked breakfast was a wonderful finale to a delightful weekend in the Stirling Ranges.

References:

Francesca Robertson, Glen Stasiuk, Noel Nannup, Stephen D. Hopper. Nyoongar Boodja - Koomba Bardip Kooratan: A History of Ancient Nyoongar Land and People. Batchelor Books, 2017.

Stephen D. Hopper. OCBIL theory: towards an integrated understanding of the evolution, ecology and conservation of biodiversity on old, climatically buffered, infertile landscapes. *Plant & Soil* (2009) 322:49–86

Synergies: Walking Together - Belonging to Country, Featuring Noel Nannup and Stephen Hopper. Black Russian Productions. 2015. <https://www.youtube.com/watch?v=aeGqTpLDYjQ>. Accessed 22 September, 2018.

Birds observed around the park:

White winged trillers, white browed babblers or were they restless flycatchers? Western thornbills or western whistlers (female), elegant parrots, 28s, galahs, purple-crowned lorikeets.

Orchids seen:

Cowslips, donkey, zebra, spider, jug, green hoods and dwarf.

Wildflowers:

Hovea, gompholobiums, cone flowers, isopogons, hakeas, a tiny conostylis, blue squill, daviesia amongst others.



Left: There are large farming enterprises on the roads leading to the Stirling Ranges, particularly in the Kulin area..

So large that they need to employ all modes of farming equipment, like this 'horse-drawn' spray unit. These can really barrel along!

Wildflower Tour at Stirling Range Retreat

by Jacqueline Lucas

THIS tour leaves Stirling Retreat at 9am daily between mid-August and the end of October. It is a marvellous way to see things you may have trouble finding by yourself. The tour is led by local naturalist Brian, also known as Bully.

Depending on the time of the year the first stop varies. This year it was to just behind the Retreat's swimming pool where we were shown some delightfully tiny Zebra Orchids, a Fringe Mantis Orchid and a tiny Greenhood, *Pterostylis nana*. There also was a beautiful specimen of a White Spider Orchid, *Caladenia sp.*

The next stop saw the magnificent Dwarf Spider Orchid, *Caladenia bryceana subsp bryceana*, of only about 2cm high. It is green in colour with prominent black markings on its labellum. It is a threatened species with quite a limited range.

The night before the tour had been very cold; Bully said it was -4.40C at the Retreat. This rather severe frost had a detrimental effect on the White Spider Orchid, *Caladenia longicaudas*, that was open already, as well as on the Blood Spider Orchid, *Caladenia filifera*. Interestingly, the flowers were drooped at the base of the ovary and the flowers were quite wilted. I found a Cowslip Orchid, *Caladenia flava*, that when you look at it closely, it looked a bit translucent like a lettuce that had been in the freezer.

As well as orchids we also saw many other wild flowers, including Billy Buttons, *Craspedia variabilis*, grevilleas, sundews, isopogons, Drummond's wattle, Red Leschenaultia, *Leschenaultia formosa*, *Kingia australis*, Jarrahs, marris and unique eucalypts to the Stirling Ranges, *Stirlingia latifolia*, Mountain Bells and too many more to mention.

A lovely morning tea of Anzac biscuits and hot chocolate was had at a camping area in the direction of Albany where I was lucky enough to take a photo of a splendid blue wren; he was very friendly and I would say as curious about us as we were about him!

Then we headed towards Mt Trio to see if we could find the elusive Queen of Sheba orchid. Alas, she had been open two days in a row the previous week and was already pollinated; so, despite the glorious weather, she was not going to co-operate.

After a short climb up a path on Mt Trio we saw beautiful *Banksia formosa*, *Boronia sp* and, of course, the Mountain Bell with its glorious bracts hiding little flowers inside. By this time we had been up drains and ditches, and seen countless orchids including King Spider Orchids, *Caladenia pectinata*, and Donkey Orchids, *Diuris sp.*

We had been on the delegated length of the tour for an hour and it certainly was value for money. I would highly recommend this tour to anyone staying at the Retreat or nearby .

Below: Members looking through the park for flowering plants.



TAKING UP THE TRAIL

by Desraé Clarke

IN November 2018 Shire Museum/Curator, Margie Eberle, asked the Nat's members if they would like to be involved with the production of an exhibition featuring the travels of the first West Australian government botanist, James Drummond (1796-1863), as he trekked about the south of the state. It was planned to be featured at the Newcastle Gaol (1865) Museum (Toodyay) for a period of six months.

The proposed exhibition, 'Taking up the Trail', was to be a botanical journey from Toodyay, where Drummond's family farmed for many years on his property of 'Hawthornden', northwards through New Norcia to Mt Lesueur. Drummond collected native plants and seed for sale to buyers in England for their dispersal further afield such as Germany and Russia. Drummond recognised, and appreciated, the incredible knowledge the Aboriginal people had of endemic plants and their many and varied uses. His Aboriginal guide, Babbing, said of him, 'a man who walked with his eyes down'.

In the 1940s government botanist, Charles Gardner (1896-1970), walked Drummond's track searching for the locations of plants found by Drummond.

Included in the text of the exhibition are names of botanical artists and collectors of seeds such as Ferdinand Bauer (1760-1826), Georgiana Molloy (1805-1843), Lady Margaret Forrest (1844-1929), Emily Pelloe (1878-1941), Edgar Dell (1901-2008) and Rica Erickson (1908-2009).

Much exquisite botanical art work has been contributed in the past. This work has continued with seven ladies establishing the Botanical Artists Group WA (BAG WA), in 1991. Members are Philippa Nikulinsky, Patricia Dundas, Katrina Syme, Margaret Pieroni, Ellen Hickman, Rica Erickson (1908-2009) and Penny Leech (1947-2018).

Works by these talented members are found illustrating such books as '*Verticordia – the turner of hearts*' researched and written by Elizabeth George with paintings by Margaret Pieroni, Patricia Dundas illustrated Eleanor Bennett's '*Bushland Plants of King Park*'. Rica Erickson and Philippa Nikulinsky wrote books and illustrated them.

Although the BAG artists worked individually a magnificent publication, '*Brush with Gondwana – Botanical Artists Group WA*' was compiled in 2008 with beautiful works from each of the artists. ISBN 9781921361265 hbk \$165.29.

Well-known botanist and TNC patron, Dr Neville Marchant AM, launched the exhibition on Saturday 16th February to an attendance of over 50 community members and supporters in the ideal venue of the Newcastle Gaol Museum.



Left: TNC Patron. Dr. Neville Marchant AM opening the Exhibition.

Above: Denise and Neville Marchant with Dom Christopher Power

Potter or Mason Wasp & Banded Garden Spider

Photographs: Sharon Richards

Identification: Andras (Andy) Szito, Taxonomist/Curator, Biosecurity & Regulation - Diagnostics - Entomology, DPIRD

THIS wasp is a native Potter wasp or Mason wasp, *Abispa (Abispa) ephippium* (Fabricius, 1775), (Hymenoptera: Vespidae). It is a native solitary wasp widespread in Australia. Being a potter wasp females



build nests in sheltered positions using mud and supply their larvae with spiders and caterpillars. The larvae then feed upon these insects, before emerging.

Although the female can sting and can exhibit aggressive nest defence, they are not considered harmful. The nests can be above or below ground but are often well hidden. The adult wasps generally feed on plant nectar.

The spider is most likely the Banded Garden spider, *Argiope trifasciata* (Araneae: Araneidae). It is a cosmopolitan species that is thought to be widely introduced to new places via humans and commerce. It prefers open fields, and arid habitats.



The large, vertical, orb-shaped web is usually built close to the ground amid tangled grasses, weeds, and other vegetation. The main orb made by adult spiders can be two feet across or more and may be decorated with a loose, zigzag band of silk called a stabilimentum.

The spider occupies the central hub of the web hanging head down. These spiders are completely harmless.

An unexpected visitor to the Stirling Terrace Rectory

by Rev. Peggy Ludlow

VISITORS come in all sorts of guises to the Rectory in Stirling terrace! This week was no less startling. Popping to the toilet on Monday 4th February, there was a foot visible from under the rim of the toilet. At least, there was a foot I knew not to panic.

The brave Brian appeared gloves on to prise the visitor our slowly. Limb by limb and very reluctant to leave the toilet bowl rim. Maybe he was thirsty? He does live around the garden and I think in the roof. The pictures tell the tale- a relocated *Varanus tristus*- a black tailed monitor or race horse Goanna. An unexpected squatter! It made our week!

I will always look before I sit! Lots of water spots now in the garden - I hope this compensates *Varanus tristus* for a rest in the toilet.



Top left: The visitor, hesitant to leave the sanctuary of the toilet bowl, is slowly prised out.

Left: Safe in the brave gloved-hand of 'brave Brian'.

Above: "I really don't know what all the fuss was about. I quite liked the inside home, with running water and all. It was a good place to monitor from".

The monitor about to be set free in the garden.

White-fronted Honeyeater

Text Jennifer Donegan

Drawing: Desraé Clarke

OUR first visit to Bewmalling Reserve on Old Plains Road in March (10/3/2019) proved to provide sightings of uncommon White-fronted Honeyeaters. I had heard a bird calling but didn't recognise this and on further investigation, and confirmed sightings, it was identified as the White-fronted Honeyeater. It has an unusual look about it with a definite white 'front' divided down the centre of the forehead and a black throat and breast. Its flight and tail feathers are edged yellow. So it is named after its main feature being 'White-fronted Honeyeater'.

It is a large honeyeater in size with a surprisingly interesting call. Its size is similar to a Red Wattle Bird. White-fronted Honeyeaters nest very close to the ground in a cup shape nest not typical of honeyeaters as the majority of the species build a hanging cup shape nest. I have observed a nest last year out from the Murchison Settlement at Errabiddy Bluff and could not believe how close it was to the ground.

This species has been recorded in historical records before in the Shire of Toodyay but it is an uncommon sighting in recent years. Another sighting report of the White-fronted Honeyeater came from a local resident who had advised that he did not know what species of bird this was and he had never seen it on his property before.

These sightings were provided to the *Western Australian Unusual Bird Sightings* and included in the most unusual sightings for the South West (Murchison River to Esperance) section.

The Bewmalling Reserve is interesting having a varied habitat with a creek in the lower section and is well inhabited by kangaroos. There were 16 species of birds while having a walk in the woodland.

We continued to visit some of the Shire of Toodyay's lovely reserves and with a short drive we arrived at Drummond Reserve. 20 Species of birds were observed in a 20 minute survey which included more sightings of the White-fronted Honeyeaters. There were beautiful Red-capped Parrots, Western Wattle Birds and Bee-eaters flying overhead migrating north.

Our third and last reserve visit was to Wattening Reserve. The weather was quite warm so a walk near the creek line to do a survey seemed a great idea. Only eight species of birds were observed but growing near the water were little leak orchids in quite a number.

This year has certainly provided rare sightings of vagrants, including a Red-throated Pipit in Meekatharra, a Bairds Sandpiper at Lake Walyungup and the first sighting in Australia of a Collard Pratincole at Herdsman Lake here in Western Australia!

Why not venture close to home and visit one of our great Reserves in the Shire of Toodyay this winter?



Right: White-fronted Honeyeater
Drawing by Desraé Clarke

White-fronted Honeyeater

GALAPAGOS SOJURN

Text and photos: Don and Eva Smith

GALÁPAGOS Islands are 925 km east of mainland Ecuador and there are 17 volcanic islands in the archipelago spread over 45,000 km²; the last volcanic eruption occurred there in May 1915. The total land size is 8,000 km² with the Equator running through the islands. The climate varies from dry tropical in the lowlands to humid subtropical in the highlands.

The Humboldt current (December to June) brings cold water and air up the western coast of South America from the cold Southern Ocean and a lot of drizzle. El Niño brings warmer sea temperatures, higher average sea levels and unsettled weather about twice per decade.

Ecuador is very strict with environmental regulation; animals are always given 'right of way' and general protection. Galápagos is well protected in all ways with all visiting ships being allowed to visit only designated islands on certain days so no area is unduly encumbered by tourists. 97% of the Galapagos Archipelago is designated as a National Park.

We thought we would travel some distance before we encountered the islands' natural inhabitants but on our arrival at Baltra Island ferry dock we had our introduction to Galápagos wildlife – several sea lions scattered around the seating were quite oblivious to humans. Signage warned us not to go within 2 metres of the sea lions. Clearly the reverse does not apply!

GALÁPAGOS SEA LION (*Zalophus worrebaeki*) - Their ancestors are believed to have reached the Archipelago a cool 1.2 million years ago and the species currently numbers about 20,000. It is commonly found on sandy and rocky beaches. Large harems include single males and bachelor groups are also encountered. Their diet consists of sardines and other small fish and their main predators are sharks and orca (killer whales).



Left: Galapagos sea lions have an easy life, with one on the seat drying itself

They differ from seals in being more terrestrial and social by swimming and walking, using their larger flippers. Their visible ears are also a distinguishing feature. Sea lions can dive to 580m but normally only to about 100m.

They are the smallest species of sea lion - males grow up to 2.5m and weigh up to 200kg and females grow to 2m and weigh up to 80kg. They have a lifespan of about 15-20 years.

GALÁPAGOS GIANT TORTOISES (*Chelonoidis nigra*). It was only a short time before we encountered these iconic animals. Some were sauntering all over roads. The bus taking us to our hotel had to veer around many slowly making their way along the road. In paddocks we passed some tortoises were grazing alongside cows - neither seemed concerned about the other!

GALAPAGOS SOJURN (cont from page 10)

Text and photos: Don and Eva Smith

This tortoise is called a *galápagos* in Spanish and the islands actually take their name from it. It is an old Spanish word meaning saddle referring to the shape of carapace.

There are just 10 types of giant tortoises left in the Galápagos down from 15 when Darwin arrived. Hunted as food by pirates, whalers, and merchantmen during the 17th, 18th, and 19th centuries, more than 100,000 tortoises are estimated to have been killed off. However, breeding programmes are helping and numbers are now about 20,000. They can weigh up to 250kgs. They are slow growers and they often live to over 100 years of age.

Unfortunately, feral cats, dogs and rats still pose a threat.

Their shells (carapaces) vary from island to island – and on Isabella Island - from volcano to volcano. Islands with a humid climate have a larger tortoise with domed shells and shorter necks. A dry climate leads to a smaller tortoise with a saddleback shell and along neck.

A famous Galápagos tortoise was named Lonesome George, so named as he was the last survivor of the **Galápagos Giant Tortoise** (*Chelonoidis nigra abingdoni*) subspecies. George died at the Charles Darwin Research Station in 1912 aged just over 100 years.

There are two main sub-species. The **Galápagos Giant Tortoise** (*Chelonoids hoodensis*) has a saddle type carapace, while the **Galápagos Giant Tortoise** (*Chelonoids porter*) has a dome type carapace.



MARINE IGUANA (*Amblyrhynchus cristatus*) that grows up to 120cm is another fascinating resident. The much-maligned marine iguanas of the Galápagos Islands are so famously “homely” [*Syn. ugly*] with Charles Darwin describing them as “hideous-looking” and “most disgusting, clumsy lizards.”

They are adept underwater but clumsy on land; there are no other marine reptiles.

It's true - they're not pretty with their wide-set eyes, smashed-in faces, spiky dorsal scales and knotty, salt-encrusted heads. But what these unusual creatures lack in looks they make up for with their amazing, unique and extremely complex ecological adaptations.

GALAPAGOS SOJURN (cont from page 11

Text and photos: Don and Eva Smith

Scientists figure that terrestrial iguanas from South America may have drifted out to sea millions of years ago on logs or other debris eventually landing on the Galápagos. From that species land and marine iguanas evolved as separate species.

Marine iguanas spread to nearly all the islands of the Archipelago. Each island hosts marine iguanas of unique size, shape and colour. There are 7 sub-species which are mostly a mixture of black and dark red tones with variable green especially when breeding.

They have a supraorbital gland which acts as a kidney to extract excess salt from their blood flow to be ejected via the nostrils. This snorting of salt sometimes causes their faces to appear white.

The critical adaptations include a reduced heartbeat and constriction of blood vessels near the skin to avoid temperature and oxygen loss when exposed to cold ocean currents.

A shortened snout with small tricuspid teeth allows them to forage at low tide on the algae on rocks and reefs.

They have no natural predators but introduced animals such as rats, feral cats, and dogs feed on their eggs and young. They are protected throughout the archipelago and are considered vulnerable to extinction.

LAND IGUANAS (*Conolophus*) – There are 3 sub-species – one is the **Galápagos Land Iguana** (*Conolophus subcristatus*). It is very common and fairly widespread sub-species throughout the islands. They are vegetarian eating cactus and prickly pear leaves. They will also eat arthropods and carrion and bask by day and sleep in burrows by night. They usually have yellow to white foreparts which give way to red-brown rear parts. They grow to 110cm.

The Galápagos Land Iguana and another sub-species, the **Santa Fe Land Iguana** (*Conolophus pallidus*), have a thick barnacled head and similar habits. The latter grows to 100cms and has heavy conical spines which are usually white. It is restricted to Santa Fe Island.

The **Pink Land Iguana** (*Conolophus marthae*) is overall pink with dark rear parts, often appearing as striped. It grows to 135cm and has a thick meaty spine. It is restricted to Volcano Wolf on Isabela Island. It is believed to go back further in time than almost all other iguanas on the Galápagos.



Left: Land Iguana

GALÁPAGOS PENGUINS (*Spheniscus mendiculus*) are locally common and endemic to the central and western islands. Being the only penguins to live on the Equator they are the only ones to moult twice a year and, of the 18 known species of penguins, they are the rarest. They prefer to fish in the cooler water of the west. They have small tight feathers and heavy bones and swim with their wings. Galapagos penguins are among the second smallest of all penguin species. They average about 48cm in length and weigh from 1.7 to 2.6 kg with the males being slightly larger than females.

GALAPAGOS SOJURN (cont from page 12)

Text and photos: Don and Eva Smith

Compared with other penguin species, the population is small, numbering no more than a few thousand individuals.

They are adept swimmers both on the surface and underwater. Predators include hawks, snakes, introduced carnivores, sea lions, sharks and fur seals.

FRIGATE BIRDS - **Great** (*Fregata minor*) and **Magnificent** (*Fregata magnificens*) are closely related and the two species coexist side by side - unusual as they require the same food, nesting sites, etc. The Magnificent is more pelagic foraging out to sea for long periods. Frigate birds never land in the sea. They skim the surface or steal food from other birds and thus known as pirates. Their wing span is 95 - 100 cms.

GREATER FLAMINGO (*Phoenicopterus ruber glyphorhynchus*) - We were really thrilled to see flamingos in Galápagos as we were not aware they were there. Experts have not yet determined if it is a native species or an endemic sub-species. They were first recorded there in 1684 by a English buccaneer, Captain Cowley.

Both parents build the nest where one egg is laid; the chick is hatched 50 days later. Flamingos spend 80% of their day feeding, 10% sleeping and 10% preening.

BLUE-FOOTED BOOBY (*Sula nebouxii*) was the bird that captivated us most and is the most common of the three booby species on the islands. Their blue feet fascinate observers. Males show off their feet in an up-down movement in a mating dance. The most attractive feet are a more turquoise blue - this shows females how good he is at feeding himself. Females are slightly larger than the males and grow up to 80cm.



Left: Blue-footed Booby

Other booby species in the Galapagos are the **NAZCA BOOBY** (*Sula granti*) and the **RED-FOOTED BOOBY** (*Sula sula*) with the latter species the most common on the Archipelago but is least-seen.

MINKE WHALE (*Balaenoptera acutorostrata*) - This was our most exciting sighting. We were out in a zodiac with our guide and he was very, very excited when it surfaced between 3 and 5m in front of us as it is very rarely sighted. It is the smallest baleen whale to frequent the Galápagos and second smallest globally. Minke whales grow to 10m and weigh up to 15 tonnes. It simply said “hello” and dived and moved away.

This is just a taste of our Galapagos adventure. There were many more wonderful animals and birds - sadly too many for this article.

Members photographs



Above: Baan-baan butterfly feeding on a grevillea.
Below: *Isopogon formosus* ssp. *formosa*

Photo: Ardina Van de Ven
Photo: Charmian St John



Members photographs



Above: A pair of Brown Honeyeaters (*Lichmera indistinct*).

Photo: Sandy Wesserly. Note the distinctive yellow triangle behind the eye.

Back page (Environment Matters):

DID YOU KNOW...

... that the dingo (*Canis familiaris*) is considered a wild dog (both the dingo and the domestic wild dogs are the same). Subsequently dingos, feral dogs and their hybrids are declared pests under Section 22 of the *Biosecurity and Agriculture Management Act 2007* because they prey on a variety of animals including mammals, birds and reptiles of all sizes. They prefer to eat small and medium-sized mammals when available, including native mice, dunnarts, bandicoots and wallabies.

They also prey on livestock and this places a heavy economic and emotional toll on livestock producers.

Strict local government laws are in place for the control of dogs, particularly in public places.

On the other hand the *Cat Act 2011* does **not** make it an offence for an animal to be at large in a public place. Many cat owners **choose not** to confine their pets to their property and this is a common cause of community discord. Wandering cats are allowed to **decimate our native wildlife**, particularly at night.

It seems that one section of the community are getting an unfair advantage over another... the emotional toll is being used as a stick to allow for the destruction of dingos but not for the control of cats.

The *Dog Act 1976* provides local government the ability to have strict controls over dogs but the *Cat Act 2011* fails to deliver the same protection to other cats and our native wildlife.

Hopefully the imminent review of the *Cat Act* will change that anomaly.

If you wish to be added as a stakeholder telephone Julie Knights at DLGSC on 9492 9870

ENVIRONMENT MATTERS



Above: A male Great Frigatebird displaying its red gular pouch

Photo: Don and Eva Smith

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