

Newsletter

No. 192

December 2016

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South Gippsland
CONSERVATION SOCIETY Inc.



Foreign Orchid is Spreading

The weed-orchid *Disa bracteata* was found in January 2005 on regenerating heathland abutting the coastal reserve at the Wonthaggi Heathland.

Originally from South Africa, this nasty invader was first found in Australia at Albany, WA in 1944, thought to be brought in sacking covering goods at the port. It spread northwards to Geraldton, eastwards to Esperance and to the edge of the wheat belt. It is now naturalised in WA, SA and Victoria (first recorded 1994) and has been found in Tasmania.

This garden thug is spread on clothing, shoes, camping gear, vehicles and machinery. Each plant, self-pollinated, can produce up to 2.5 million dust-like seeds which, wind-borne for many kilometres (seed being viable for six years), is a real threat to heathland. Seeds continue to mature even if the flower head is picked. The plant also survives cutting as it has tubers underground. It out-competes native plants.



Disa bracteata as you'll see it locally.
Photo:- Alison Brewster

The orchid is a perennial up to 75 centimetres tall, rising on a fleshy stem from a rosette of many narrow leaves which are rich purple-red underneath. The rosettes appear in spring and the asparagus-like spikes bear from 10-50 flowers from September to November. These small green flowers have an elongated spur at

the base of the dorsal sepal. They grow singly or in loose colonies, are generally found in open country and will grow in open competition with introduced grasses.

Disa bracteata has been seen in the Grampians and Latrobe Valley, on French Island, on private land near the Wonthaggi heathland, and in the new Screw Creek reserve. Our infestation may have begun with wind-borne seed from French Island or from seeds in fodder transported during the drought. Perhaps kangaroos carried the seed from private to public land.

Local conservationists have been working to control it for 11 years with hand-removal, digging up the plant, ensuring the tubers are removed. Plants can be difficult to locate in heathy areas and among bracken. Two SGCS working bees at Screw Creek have removed hundreds of plants, but there are more coming up.

Introduced orchids rarely become pests in Australia, but this one has adapted too successfully, because it has the standard tactics for all good weeds - that is, it grows almost anywhere, especially on disturbed ground, and reproduces in large numbers.

If you find this invasive plant, dig it up, double bag it and put it in the bin.

For more information, see: <http://www.viridans.com/INTRO/waitingweed.htm>

Terri Allen, adapted by **Alison Brewster**



Disa bracteata flower spike close-up.

Photo:- Leonie Smith

Newsletter

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Foray into South Gippsland's Understories

In late March this year, a group of three Monash University researchers—Christopher Johnstone, the ecologist and all round biology statistics man, Natarsha Babic, the biology honours student, and myself, the paleobotanist—piled up their cars with equipment and travelled south to Inverloch.

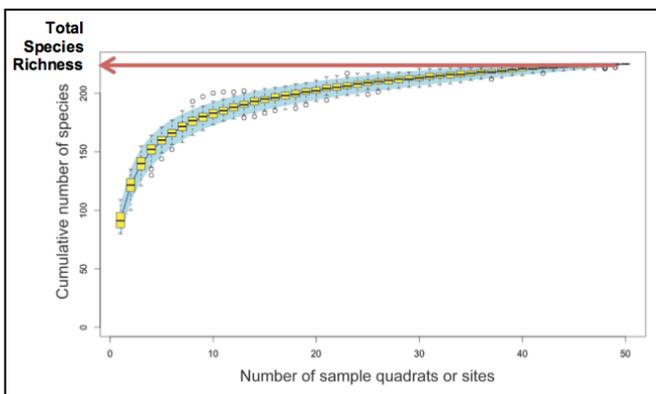
Christopher Johnstone would be returning to the site of his PhD research on *Antechinus* to attempt some further work on how trapping might affect these native mammals in terms of possible stress effects.

Natarsha Barbic and I would be chasing a research question about how to estimate biodiversity; a scientific journey that started for us almost two years prior in the lowland tropical forests of northern Borneo. Our work was concerned with the ways that ecologists and conservation biologists go about estimating the biodiversity of an area, especially where this can affect recommendations to policy-makers and other interested parties.

This is an extremely important scientific question, as conservation projects are often substantially resource-limited. These resource limitations force the conservation community and governing bodies to prioritise the conservation of some geographic regions over others, deciding which projects will receive funding. One major factor in this decision-making process is often how much biodiversity a given patch of land or ocean contains.

Traditionally, scientists attempting to answer this question have undertaken exhaustive sampling of the flora or fauna in question. However, in the last twenty years, scientists have been attempting to find more efficient ways of ascertaining this important biodiversity number. One of the main approaches has been to try estimating biodiversity using mathematical models based on more limited sampling.

One such approach to modeling biodiversity is called the 'Species Accumulation' method. The mathematical model produced looks like this:-



Species accumulation curves are based on the notion that the more sampling we do, the more we explore an

area, the more species we will find, but eventually we will run out of species—and the curve will level off. While this may sound intuitive, and even a little underwhelming, in practice this allows us to estimate biodiversity long before we have counted every last plant and animal in an area. We do this

by counting up a set of species at a site, then predicting the shape of the curve mathematically, and using the asymptote (where the curve flattens out) as our estimate of biodiversity.

The trouble with species accumulation curves was that—from our work in Borneo—we discovered that this method was sensitive to very small-scale ecological gradients such as the low level of disturbance introduced by walkways through the forest. These small-scale ecological gradients can wildly affected the estimate of biodiversity produced by our models... 'hmm', we thought.

And so, to Inverloch we travelled, aiming to replicate our study in a temperate Australian setting and investigate whether the troublesome patterns observed in the high-diversity Bornean rainforests were also observable in this temperate Australian setting (where biodiversity is typically lower).

We surveyed small herbaceous plants in the bog marsh at Screw Creek, as well as in the understory of track-side stands in Norton's Bush. While the results of our work are still unfolding, I am certain that the research we conducted during our forays into South Gippsland would not have been feasible without the great kindness and local knowledge offered by the Conservation Society and its friends.

In particular, our appreciation goes to David Sutton, Ed Sexton, Brian Martin, Bronwyn Teasdale, Daryl Hook, Debbie Williams (I have to say that as a budding young botanist, there is very little more satisfying than a quality cup of tea around a kitchen bench covered in chunky plant-identification books), Zak Chalmers and the Norton family. It was a distinct pleasure to meet the scientifically active and engaged community of which you are all a part. Thank you for everything!



Hannah sampling salt marsh bog vegetation near the mouth of Screw Creek

Fish Count Soldiers On

Every year for more than a decade volunteer divers and snorkelers have taken to Victoria's coastal waters to count reef fish. The GVFC is part of the Victorian National Parks Association's VNPA Reefwatch program. This year SGCS hosted its fourth consecutive event at Shack Bay, in the Bunurong Marine National Park, Saturday 10th December.

The conditions this year, a moderate swell following strong winds, guaranteed poor visibility but we still managed seven in the water and a couple of land based observers.

"Divemaster" Ash Belsar of Outhere Outdoor Activities supervised for the 4th consecutive year and we were able to enjoy the snorkelling but only 7 of the 23 species sought were observed due to poor visibility.

The data collected makes an invaluable contribution to marine science in Victoria and is why the fish count is one of the state's most successful citizen science events.

Special thanks to those who braved the elements and



Happy divers after the 4th consecutive annual Fish Count at Shack Bay.

in some cases long drives to participate. The day was rounded off with a BBQ, chat, dreams of crystal clear water next year dressed in our Blue Groper tee-shirts!

Rod Webster

Bunurong Coast Education

BCE, a sub-committee of SGCS, is extremely busy at present and looking forward to an even busier period over the coming holiday period. **Education Officer Mike and his growing team of supportive educators** have been guiding many school children through the ancient pathways of dinosaurs on our rock platforms and introducing them to the life, landforms, and excitement of our coast.

Visits to the environment centre / shell museum enrich the experience. Other activities, also presented to home schooled children and their parents have included Astronomy, Volcanics, Alternative Energy and sustainability as well as propagation of native vegetation and removal of coastal weeds.

Over the holiday period we are offering activities for visiting families as well as running the Summer by the Sea activities for Coastcare across Gippsland. Lookout for a new presentation on Climate Change and the very popular Wildlife Display will be free at the Environment Centre on the 10th and 11th of January (no bookings required).

BCE and Coastcare activities should be pre-booked over the internet. **Visit our SGCS website for BCE activities and google "Summer by the Sea"** to find a booking site for Coastcare activities. (not available until late December).

SGCS / BCE is looking for people who feel they could contribute to its operation by serving on this sub-committee and /or helping with activities. Formal expertise in education is not a prerequisite! A passionate interest in our local environment and promoting it to children and adults would be anticipated but there are many potential roles. Give us a call! **Rod Webster** 0434 145 816.



Home Education students busy making solar cookers as part of their Alternative Energy activity recently
Photo:- Mike Cleeland

Fire Ant Failure Will Cost Economy Millions

A secret government report into Australia's fire ant menace has warned the nation's agricultural ministers that unless the eradication program is quickly scaled up the nation will suffer billions of dollars in damages to people, business and the environment.

Fire ants will be a massive hit to our economy, our environment, our healthcare system and our outdoor lifestyle if we do not act now.

Until now Australia's fire ant eradication program has been compromised by underfunding, repeated reviews and lack of certainty.

If agricultural ministers treated fire ants with the same importance as foot and mouth disease we would have wiped out these dangerous ant infestations by now.

A special senate motion was needed to force the federal government into releasing the independent review of Australia's \$330 million fire ant eradication program.

This secret government report shows eradication is still possible and in our nation's interest but the time to act is rapidly diminishing.

We cannot afford to be idle – federal, state and territory governments must immediately commit to fully fund a 10-year eradication program.



Imported red fire ants could cost us billions of dollars, a change to our easy-going outdoor lifestyle and even people's lives if our governments don't commit to more funding now.

The report reveals that many areas treated for fire ants have been reinfested because of a lack of funds for on-going treatment.

Fire ants are a pest accidentally introduced into Australia. They were first found in Brisbane in 2001. Since then incursions have been found or prevented in every Australian capital city.

Fire ants found in Gladstone, Port Botany and the Port of Brisbane have been eradicated. However, in south east Queensland fire ants have been found across about 450,000 hectares including most of greater Bris-

bane and areas to within 50km of the NSW border. They now threaten inland Queensland and northern New South Wales.

The report is to be considered by the next Agricultural Ministers' Forum in May next year, a full year after it was completed.

Many of our major trading partners including China and the US waited too long before mounting an eradication of their fire ant infestations.

Fire ants cost the US economy \$7 billion every year and have caused 80 human deaths. It's too late for the US to eradicate fire ants but we have a world-leading eradication program – we just need the resources to finish the job!-

The Invasive Species Council calls on all state and federal governments to get behind the eradication program before it is too late.

Note: The Senate supported a motion from Greens Senator Janet Rice last week to force the federal government to release the report it was hoping to keep secret. Andrew Cox

KEY FACTS FROM THE REPORT

- If not eradicated, fire ants will become Australia's worst pest, worse than the combined impacts from rabbits, cane toads, foxes, camels, wild dogs and feral cats, which cost Australia an estimated \$964 million each year.
- The total impact of fire ants to southeast Australia alone is estimated at up to \$43 billion over the next 30 years.
- All state and federal governments have spent a total of \$329 million since 2001 eradicating fire ants from Australia.
- If the eradication program had not been mounted from 2001, fire ants in Brisbane would now have spread south to Sydney and north to Mackay and Rockhampton.
- If not eradicated, by 2030 fire ants will cost our healthcare system about 140,000 medical consultations and 3000 anaphylactic reactions each year and possible deaths.
- There is a 95% probability that eradication will be achieved in 10 years, given a treatment, surveillance and program budget of \$38 million each year.
- There is 'only a small window of opportunity left' to eradicate red fire ants.
- Recent funding shortfalls have meant fire ants have reinfested treated areas. (continued opposite)

BirdLife Bass Coast Twitchathon

On Saturday the 12th of November thirteen people took part in a daylong Twitchathon. This Twitchathon aimed to find as many species of birds as possible in the areas that we had been allocated, between 8.00am and 5.00pm. We worked in three groups, covering three different areas. These were; Venus Bay to Cape Patterson, Wonthaggi to Kilcunda and Phillip island.

The group I was involved with started at the observation Tower at Venus Bay overlooking Anderson Inlet and then moved to the boat ramp. We saw twenty-six species of birds, the highlights being a Whistling Kite, Brown Falcons, Nankeen Kestrel and Australian Shelduck. The low swampy ground also had several large mobs of kangaroos and a very large and healthy fox lazing around in the morning sun.

At Bald Hills we were delighted to see the large amount of water through the swamp areas and in the lake. There were not as many waterbirds as we expected, probably due to the additional bodies of water across the region. We saw the expected Black Duck and Chestnut Teal, but the highlight was a solitary Blue-billed Duck. Surprisingly there were no Purple Swamp-hen, Coot or Moorhen.

The bush birds were many and varied; Honeyeaters, Rufous, Golden and Olive Whistlers, a Shining bronze-Cuckoo, a Fantail Cuckoo and a Rufous Fantail. In this area we were delighted to see a Sacred Kingfisher. It looked superb on its branch, in the sunlight, overlooking a small dam.

We moved on to Maher's Landing to look for wading birds and we were not disappointed. We saw Whimbrels and Bar-tailed Godwits, and counted fifteen Eastern Curlew.

Time was starting to defeat us so we made a quick visit to the bushland on the east side of Screw Creek off the Inverloch-Lower Tarwin Rd. Here we added two more birds to our list, a Brown Goshawk and a Mistletoe Bird. From here it was off to Pt. Norman to find some Hooded and Red-capped Plovers.

We finished our counting at Eagles Nest, which was surprisingly devoid of sea birds. About three quarters of a kilometre out to sea there was an albatross, which we thought might have been a Shy Albatross, but we could not get a positive identification, so it could not be put on our list.

The day ended up at the Dalyston Pub for a comparison of the three groups' bird lists and a well-earned drink.

The total number of different species counted by the three groups for the day was 101. It was a tiring but great day and we all thoroughly enjoyed ourselves.

If anyone is interested in bird watching and wants to get more involved, then have a look at the BirdLife Bass Coast Site at BirdLife Australia or just Google BirdLife Bass Coast. There is a list of all our planned outings up to May 2017. We are a fairly laid back group of people who are into birds and believe it should be fun going out and observing our feathered friends.

Gordon Barrett



The striking Blue-billed Duck, with its characteristic bill and tail was also seen by another group at Baxter's Wetland in Wonthaggi

Photo:- David Taylor, from the Internet

(from previous page)

- Fire ants are a risk to ground-dwelling animals and will cause the extinction of some species.
- Fire ant infestations in broad scale agricultural areas would result in a reduction in agricultural output of 10% for cropping, 20% for livestock and 40% for beef, immediately affecting Queensland's Lockyer Valley and scenic rim farming communities where fire ants are already present in low numbers.

MORE INFORMATION

[Independent Review of the National Red Imported Fire Ant Eradication Program \(49MB pdf\) >>](#)

[Fire ants: the silent invasion >>](#)

[Fire ant fact sheet >>](#)

[Red fire ants: Time running out – ABC News 8 Dec 2016 >>](#)

Andrew Cox

Invasive Species Council CEO 0438 588 040

Editor's Note:- *As many of you will know, I have a particular concern about biological threats in Australia and especially locally and am a member of Landcare's Community Weeds Taskforce. Invasive species are something of a theme for this Newsletter and I'd suggest that the Invasive Species Council is a very worthy recipient of your financial support.*

What is SGCS's Future?

Our managing Committee of which I am a member rejected the motion below proposing a comprehensive review of SGCS and decided to review the "Society's activities" only. I am concerned that this decision is not in the best interests of the organisation as no significant review has occurred for many years and SGCS operates in quite a different environment now. My conscience tells me to continue to promote the motion below and encourage the committee to re-assess its recent decision which I fear was hurried and perhaps opposed for reasons other than 'on merit'.

"This committee accepts the need for a comprehensive review of our current activities, processes, structures and resources with an aim to establishing a vision statement and short, medium and long term strategic plans."

I did suggest and strongly support surveying members, and would even go further by seeking the views of people and organisations outside our membership

An argument presented that we reject any comprehensive review because we are a small organisation, operated by volunteers, working on goodwill, makes no sense to me. Whether small, tiny, large or huge the principles of governance are the same, including the need to assess what you do, how you do it and what you do it with, along with looking to the future. **Having a shared vision for your organisation and strategic plans in place to move it forward is an accepted, indeed expected norm.**

We are a significant regional organisation with over 200 members, substantial human, physical and cash resources, reasonably complex structure compared to many others (branches, shop, employees, education

arm) and a range of relationships with sections of the community.

We also have identifiable challenges. An aged / aging membership, a decline in the number of branches, low attendance at branch meetings, a concentration of resources and activities within the Inverloch area, new ways to engage members across our full geographic range, planning in place to develop BEC (or elsewhere if Council rescinded our lease), developing a working governance / management framework to replace the old constitution (bi-laws /operating manual), addressing how we communicate to members, community and government. But even with no apparent challenges we should still have a Vision for what we can be and strategies to get there!

I have had great difficulty in reconciling a strong belief in maintaining solidarity with committee decisions with what I consider to be of critical importance to the long term effectiveness and even survival of our Society. However, I strongly believe putting off or declining to allow SGCS to develop an agreed vision and establish strategic plans for our society is a serious error of judgement by this committee. Failure to commit to a comprehensive review in this 40th year where structures, processes and resources are not included puts the future of our Society at risk and I hope the decision can be re-visited soon.

Feedback for /against welcomed. 0434 145 816
rod.webster@sgcs.org.au

Rod Webster

Chair of Education Committee and Committee Member

Yellow Crazy Ants Another reason you won't be moving to Queensland!



Yellow crazy ants have already created ecosystem collapse on Christmas Island, now the Queensland Wet Tropics World Heritage Area is at risk. Photo: David Wilson

Yellow crazy ants are a highly aggressive tramp ant from south-east Asia that made it into Australia through our ports. In a suitable climate, such as the Queensland Wet Tropics, they can form "super colonies" that cover vast areas and carry huge social, environmental and financial impacts. They do not bite, but spray formic acid to blind and kill their prey.

They are a danger to people, pets and households. Once the ants reach super colony levels they can become a severe threat to people, especially children and the elderly, as well as pets. They can damage household electrical appliances and wiring.

One man in Australia has already suffered serious injury from yellow crazy ants. While sleeping at his home in Edmonton, Queensland, the ants swarmed all over his face, burning his eyes badly with their acid. And he's not alone, people's pets have been sprayed by the ants' acid, injuring their eyes, mouth and paws. The ants can also kill small and



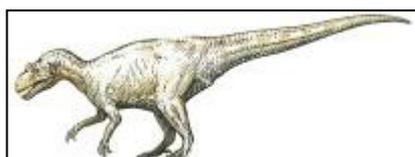
Bunurong Coast Education Summer School Holiday Program INVERLOCH 2016 - 17

Rock Pool Rambles with Rod Webster

Monday	19 Dec.	10.30 am	Wed	4 Jan	10.30 am
Thursday	22 Dec	12 noon	Sat	7 Jan	12 noon
Tuesday	27 Dec	3.30 pm	Wed	18 Jan	10.30 am
Thursday	29 Dec	6 pm			



What you need: Sturdy shoes for walking on the rocks and in rockpools, appropriate beach clothing for the weather. Transport from the Centre to rock platform (4 km).



Dinosaur Discovery with Mike Cleland

Tuesday	20 Dec.	10.30 am	Friday	23 Dec	11 am
Monday	26 Dec	2pm	Wednesday	28 Dec	4 pm
Friday	30 Dec	5pm	Monday	2 Jan	9 am
Sat	7 Jan	10am & 1pm	Mon	9 Jan	12 noon
Friday	13 Jan	3.30 pm	Mon	16 Jan	10.30 am
			Sat	21 Jan	10.30 am

What you need: Sturdy shoes for walking on the rocks, hammer, appropriate beach clothing for the weather, transport from the Centre to Dinosaur site (5 km).

ASTRONOMY

Mondays Jan 2 & 9, and Tuesday Jan 17 8.30 pm (bring a torch)

WILDLIFE SPOTLIGHTING

Tues Dec 27 & Wed Jan 11 & 18 8.30 - 10.00 pm (bring a torch)

COASTS AND CLIMATE CHANGE SPECIAL PRESENTATION Wed Dec 28 & Thurs Jan 5 7.30pm

PLASTICS IN THE MARINE ENVIRONMENT Wednesday Jan 4th 7.00 - 9.00 pm

FOR ALL SESSIONS

Please Note: The meeting place for all activities is the Bunurong Environment Centre, (BEC) Cnr. Ramsay Blvd. & The Esplanade, Inverloch. **15 minutes before starting times.**

COST: For all activities \$15 adult, \$5 school aged child, or \$30 family, payable before each activity at BEC.

young animals including chickens and native animals.

They destroy entire ecosystems. Although the ants are tiny they can swarm in great numbers, killing much larger animals like lizards, frogs, small mammals, turtle hatchlings and bird chicks. When their numbers hit super colony levels they can have a devastating impact on native wildlife and plants, upsetting entire ecosystems.

On Christmas Island the ants have killed millions of the famous red land crabs and robber crabs, both of which play an important role in the island's forest floor ecology. Yellow crazy ants have created a huge increase in sapsucking bugs and sooty moulds that severely damage plants and trees, further degrading the island's forests.

Numbers of native insects and other small animals have also been dramatically reduced. Yellow crazy ant colonies that have formed near sea bird colonies over-

seas have killed and deformed large numbers of chicks by constantly spraying them with acid. While ant numbers and their impacts fluctuate depending on environmental conditions, Queensland's wet tropics make ideal habitat for yellow crazy ants and are especially vulnerable to invasion.

Yellow crazy ants are a huge threat to agriculture in Australia's warmer regions. By farming sugar-secreting scale insects and encouraging sooty moulds they can dramatically reduce the productivity of crops such as fruit trees and sugar cane. Yellow crazy ants would also destroy tourism values in Queensland's Wet Tropics World Heritage rainforests region. Wet tropics tourism is worth \$2 billion a year.

Read more about these little horrors and how you can help at:- <https://invasives.org.au/wp-content/uploads/2016/04/fs-yellow-crazy-ants.pdf>

I/We		
Of		
Email address (please print clearly)		
Wish to renew my/our membership		
Wish to apply for membership		
Wish to make a donation		
New members to be nominated and seconded by a member of the S.G.C.S.		
Membership Subscription	<ul style="list-style-type: none"> Send cheque or money order to: S.G.C.S. Membership Officer P O Box 60, Inverloch 3996 Pay with cash or EFTPOS at the BEC, Or pay on-line (current members) to:- BSB 633-000 A/c No141390898 (Note your name). 	
Family		\$27.00
Single		\$20.00
Concession - single		\$15.00

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