



Queensland Science Network

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<https://scienceqld.org/>
newsletter@scienceqld.org.au

Periodical Newsletter

This Newsletter has been compiled on behalf of member groups of the Queensland Science Network (QSN), partly to showcase their work; and partly to bring new initiatives in science and natural history to public attention. Participating groups include:



Editor: Col Lynam

Newsletter Subscription: <https://scienceqld.org/> . You can also get in touch via our Facebook site (<https://www.facebook.com/QLDScienceNetwork/>) or by email to the Editor. newsletter@scienceqld.org.au.

Table of Contents

Editorial	3
HOT NEWS – Pandemic impacts	4
Qld funds world first biosecurity ‘virtual lab’	4
Insect decline in the Anthropocene: Death by a thousand cuts’	5
Members Awards, Newsletters and Media	5
Table of Recent Newsletters received from Networking Societies	5
Happenings at Wildlife Preservation Society	6
LIZ DOWNES: QUEENSLAND VOLUNTEER OF THE YEAR 2020	6
CSIRO science champions in 2020	8
Physicist Cathy Foley appointed Australia's next Chief Scientist	9
Happenings at RGSQ	10
Happenings at Australian Citizen Science Association	11
Happenings at Brisbane Shell Club Inc	12
Happenings at Butterfly & other Invertebrates Club inc. and Cubberla-Witton Catchment and Brisbane Catchment Networks	12
Happenings at Entomological Society of Queensland	13
Healthy Land and Water partners - QLD Farmers’ Federation preparing for floods	13
Queensland Fire and Biodiversity E-News (Publications- See Appendix)	14
Happenings at National Parks Association of Queensland	14
Allied Communities activity	15
Community Data Collection Projects and Digital Apps	15
Citizen Scientists Completed Australia’s Longest Weather Record by Caitlin Howlett	15
Collections & Archives - Sneaking into the Royal Society of Queensland (RSQ) meeting from October 1890... by Colin Lynam	
18	
Noteworthy Publications and Databases	19
The Royal Society of Queensland	19
Proceedings of The Royal Society of Queensland 2020	19
Scholarly Articles Proceedings, Articles, Dissertations,	21
SEED CITIZEN SCIENCE HUB LAUNCH	21
Research Funds – Applications	21
2021 QCF 2021 grant applications are open!	21
Entomological Society of Queensland Awards	22
National Parks Assn Queensland Cuthbertson Grant	23
Teaching Resource Review	24
Clicks, bonks and dripping taps: listen to the calls of 6 frogs out and about this summer	24
Have you ever wondered what the inside of planet Earth is like?	25
The Editor’s excerpts from exceptional articles	26
2000-Year-old Bogong moth (Agrotis infusa) Aboriginal food remains, Australia	26
The Development and Decay of National Parks in Queensland (a historical perspective)	28
Stop Gympie Regional Council from repealing the region's environment laws	30
Contact: QSN Newsletter	31
Appendix	

Editorial

The Queensland Science Network (QSN) was officially launched by His Excellency the Governor of Queensland at a reception on Thursday 13 June 2019. The Queensland Science Network fosters collaboration between organisations involved in science and natural history. 'Science' is the application of scientific method to observations about the biophysical world.

At the time of compiling this QSN Newsletter, we are witnessing great challenges to planetary lifeforms through pandemics and climate change, which in turn cause complex upheaval in our decision and research systems. Science and factual assessment are under attack from competing popularist beliefs. I have introduced a section "HOT NEWS" to reflect those atmospherics.

I have introduced a "Table of Contents" to help you navigate the Newsletter's format of sections. What a mystical art that is.

Dear Network secretaries, please forward this Newsletter on to your members and send me any information that will interest our wider science community.

Colin Lynam, Editor, Queensland Science Network Newsletter (newsletter@scienceqld.org.au)

***I keep six honest serving-men:
(They taught me all I knew)
Their names are What and Where and When,
and How and Why and Who.***

-- Rudyard Kipling, "The Elephant's Child" (poem), Just So Stories, 1902

HOT NEWS – Pandemic impacts

Queensland funds world first biosecurity 'virtual lab'

7 January, 2021 in [Queensland](#) by [Rebecca Dakin](#) <https://www.mygc.com.au/qld-funds-world-first-biosecurity-virtual-lab/>

The Queensland Government has announced funding for the world's first biosecurity virtual laboratory which could change the way emergency responses are managed. Minister for Agricultural Industry Development and Fisheries Mark Furner said the state will co-fund the international-first lab.

"COVID-19 has shown how vital biosecurity data management and modelling is to our economy and way of life. The new biosecurity informatics platform will operationalise data use for research and decision making to model biosecurity risk using best practices." Mr Furner said.

Mr Furner said citizen science, geospatial and other data sets will be integrated to enable rapid, complex analysis of things like risk maps, surveillance intelligence, resource allocation and proof of freedom models. The National Biosecurity Committee has identified a biosecurity virtual laboratory as the most strategic priority for development.

AGRICULTURE ALERT

8 January 2021

Unite & Recover

Urgent steps to keep Queensland safe

Today the Premier announced that [greater Brisbane will enter a three-day lockdown](#) to stop the spread of the highly contagious UK strain of COVID-19.

The **lockdown is effective from 6pm tonight, Friday 8 January through to 6pm Monday 11 January 2021**. Greater Brisbane includes Brisbane, Moreton Bay, Ipswich, Redlands and Logan.

All essential businesses can remain open, but Queensland Health requires greater Brisbane residents and visitors to stay home and avoid gatherings that aren't essential during the lockdown.

If you need to leave greater Brisbane for an essential purpose, such as to work, to return home or to access healthcare, you should limit your movements during those three days.

Some states and territories are applying restrictions to people travelling from the greater Brisbane lockdown to their region. WA is closing its border to Queensland.

Essential agriculture work and freight movements will continue as usual with workers required to wear face masks.

Workers outside Brisbane that have visited greater Brisbane since 2 January 2021 should either remain in Brisbane until the end of the lockdown, or if they have moved to another location, they should observe the same restrictions as if they were in Brisbane.

Workers should only leave their accommodation or home for the purpose of work, exercise, obtaining essential provisions/medication or seeking medical attention. They will need to wear mask when outside their accommodation/home, including when working.

Transiting through Brisbane, at the airport, or directly in your own vehicle, will not require those workers to isolate.

Please follow the Chief Health Officer's advice for being [tested](#). If you have been in any of the identified areas or have any [symptoms](#), get tested as soon as possible.

Agribusinesses and industry seeking clarification should contact DAF at dafcovid19enquiries@daf.qld.gov.au or on 13 25 23.

“Until now, Australia’s biosecurity models have mostly been developed for a single purpose, with the use of modelling tools limited to only a handful of people Mr Furner said “The new platform aims to move away from bespoke licensed modelling systems to secure cloud-based environments.

The Queensland Government will provide funding of \$500,000 over two years under the \$5.5 million ‘Digital Transformation in Agribusiness Initiative’ which is part of the Unite and Recover Economic Recovery Plan.

Australian Research Data Commons and the Australian Department of Agriculture and Water are co-funding the \$1.27 million project.

Queensland’s Griffith University will deliver the Biosecurity Commons informatics platform, building on an existing EcoCommons portal which is used to analyse, model and find solutions to ecological and environmental problems.

Insect decline in the Anthropocene: Death by a thousand cuts

David L. Wagner, Eliza M. Grames, Matthew L. Forister, May R. Berenbaum, and David Stopak

PNAS 12 January, 2021 118 (2) e2023989118; <https://doi.org/10.1073/pnas.2023989118>

[Insects face ‘death by a thousand cuts’](#)

In the introduction to [a special issue of PNAS that throws light on insect decline](#), ecologists do not mince words: “Nature is under siege,” they write. “Most biologists agree that the world has entered its sixth mass extinction event.” In a bid to provide a scientifically grounded assessment of insect population trends, the journal offers 11 papers that delve into many aspects of the issue.

One of the challenges is going beyond “the overwhelming sense that something sinister is afoot” and [gathering clear, comprehensive data on insect abundances over time](#). There are only a handful of long-term monitoring studies of insect populations. So entomologists have turned to plumbing other historical data for signals of change.

[PNAS special issue introduction | 30 min read](#) & [PNAS feature | 15 min read](#)

Members Awards, Newsletters and Media

Table of recent Newsletters received from Network societies and associates

DATE	Society/Title	Edition	Web site
Aug 2020	North Stradbroke Island Museum on Minjerrabah	PDF issue 29(1)	https://stradbroke.com.au/wp-content/uploads/2020/09/Winter-Newsletter-2020-5.pdf
10/2020	A Brighter Future for Moreton Bay.	PDF	https://moretonbayfoundation.org/newsletters/
10/2020	INSPIRING Australia Queensland	PDF	https://www.inspiringqld.com.au/
4/11/2020	Butterfly & Other Invertebrates Club News BOIC 2020	PDF Issue 11	https://www.facebook.com/groups/187619097411/
4/11/2020	Queensland Conservation Council - Environment Agenda for the next Queensland Government	PDF	https://www.queenslandconservation.org.au/environment_agenda?utm_campaign=after_2020_election&utm_medium=email&utm_source=queenslandconservation
5/11/2020	Q'ld Conservation Council	PDF	https://www.queenslandconservation.org.au/?utm_campaign=after_2020_election&utm_medium=email&utm_source=queenslandconservation
5/11/2020	Healthy Land and Water Report card 2020	Video	https://us2.campaign-archive.com/?u=14ea1399ad0ff0154a462752b&id=89509767f7
19/11/2020	Wildlife Preservation Q'ld my.Wildlife eBulletin	PDF Issue 155	https://us8.campaign-archive.com/?u=221e0b25ea405feaa6800dab3&id=c8ab51
30/11/2020	TERN - ecosystem research	email	https://www.tern.org.au/news/
2/12/2020	Co-operative farming	email	https://coopfarming.coop/news/
10/12/2020	Royal Society of Queensland Newsletter	PDF Issue 18	Members only
12/12/2020	Qld Fire and Biodiversity ENEWS	PDF	https://us9.campaign-archive.com/?u=30cb83a0c5dcf81f8b84fc9b3&id=558182c576
15/12/2020	Australian Wildlife Society	email	https://www.aws.org.au/e-news-bulletin/
4/01/2021	Healthy Land and Water Latest news and updates	PDF	https://mailchi.mp/hlw/healthy-land-and-water-latest-news-and-updates-2173065?e=7b45715f5b



Happenings at Wildlife Preservation Society

LIZ DOWNES: QUEENSLAND VOLUNTEER OF THE YEAR 2020

By Paul Sutton, 3 December, 2020 (Member of Wildlife Queensland Council)

Liz in the Mabo Library at James Cook University (Photo © Bronwyn McBurnie.)

On Tuesday, 1 December, the Pied Imperial Pigeon Count at North Brook Island, begun 55 years ago by Margaret and Arthur Thorsborne, was again counting the thousands of pigeons flying back to their nests on the island. For the back story of this wonderful experience see [The Coming of the White Birds](#) in the Wildlife Queensland online shop.



One of many special people on that trip was Liz Downes, our **2020 Queensland Volunteer of the Year** who was about to be presented with her award the next day. In her [acceptance speech](#), Liz nominated Margaret as one of several people who inspired her. One does not get awards for such friendships, but it highlights the many contributions Liz has made beyond her consistent and thoughtful contribution to conservation, her beloved Mabo Library at James Cook University and many other projects.

Liz's humility about her contribution is such that I doubt anyone really knows the full extent of her volunteering and wide-ranging efforts. The

[Townsville Branch of Wildlife Queensland](#) has been especially fortunate to have had Liz as a long-term active member, current Vice President and custodian of much of the history of the branch. It is our pleasure to congratulate and salute Liz on this welcome recognition of your lifelong contribution to volunteering and thank you especially for your long and continuing support for Wildlife Queensland.



The moment Liz Downes (top right) is announced the winner of the Volunteer of the Year Award (Photo © Bronwyn McBurnie.)

The Queensland Volunteering Awards acknowledge the value and vital contribution of volunteering to the well-being of Queensland and its people. The Volunteer of the Year Award is the premier award for volunteers in Queensland, and Liz Downes was chosen from among 147 other nominations.

The 2020 Queensland Volunteering Awards Ceremony was held on **Wednesday 2 December 2020**. [Watch the online awards ceremony](#) (watch from 45:00 for the Volunteer of the Year Award presentation).

Editor's note: In 2020, Volunteering North Queensland honoured Liz Downes by awarding her the 'Heart of Volunteering Award'. Liz also collected the [Margaret Thorsborne Award](#) for an outstanding contribution during the year July 2019 to June 2020 by a member of Wildlife Queensland.



CSIRO science champions in 2020

By [Louise Jeckells](#) 21 Dec, 2020 (<https://blog.csiro.au/science-champions-2020/>).

In addition to [CSIRO Award winners](#), many of our scientists have received wider recognition for their work this past year. We're shining the spotlight on a few of our science champions in 2020.

Australia Day honours for three scientists

The Australia Day honours recognise Australians who have excelled in their fields.

CSIRO Fellow and ecologist, **Dr Brian Walker**, received an Order of Australia for his service to science, notably in ecosystem ecology and research. [Watch him talk about how nature can teach us about resilience and the importance of adapting on The Drum.](#)

CSIRO Board member and molecular biology scientist, **Dr Peter Riddles**, received an Order of Australia for his significant service to science, biotechnology and innovation.

Materials scientist, **Dr Matthew Hill**, received a Public Service Medal for his work in materials development. He is an expert in nanomaterials (really small chemical substances). For example, his nanomaterials work [protects Australian soldiers](#). [Find out more about the three recipients.](#)

Climate scientist acknowledged on national stage

Climate scientist, Dr Jess Melbourne-Thomas, was named Tasmanian Australian of the Year. Jess is a pioneer in science and a champion for women in STEM. Her focus is to understand and predict the effects of climate change on marine ecosystems. And she wants to connect the science with policy for better decision-making. Her win put the things she stands for – women in science, marine ecosystems and climate change research – in the spotlight. [Find out more about Jess and her job day-to-day.](#)



Amazing science, amazing researcher: Jess taking a sea ice core to measure phytoplankton abundance in East Antarctica. (© CSIRO Australia)

A leading voice in her field

Our astrophysicist, **Dr Sarah Pearce**, is an astronomer and renowned expert in space science. She has played a leading role in our [involvement in the international Square Kilometre Array project](#) to build the world's largest radio telescope.

Lithium battery research power

[Dr Marzi Barghamadi](#) received the [L'Oreal-UNESCO For Women in Science 2020 Fellowship](#) for her lithium battery research. She is developing the next generation of lithium batteries that offer higher energy and longer life. Her research will help with the commercialisation of lithium metal batteries.

Fellows elected by their peers

In May, three CSIRO scientists became Fellows to the Australian Academy of Science.

Climatologist **Dr Wenju Cai**, is a world authority on climate variability, ocean dynamics, and ocean-atmosphere interactions. His work has led to major improvements in climate simulations and climate projections.

Eco toxicologist **Dr Jenny Stauber**, is an international leader in ecotoxicology which is the study of metal contaminants in aquatic environments. She developed a range of assessment protocols including the national water and sediment quality guidelines for environmental regulation in Australasia.

And our Chief Scientist, **Dr Cathy Foley**, also became a Fellow. Her scientific achievements are huge but her dedication to the STEM community is even bigger. Cathy has been [appointed Australia's next Chief Scientist](#).

Newsletter 16 December, 2020 By **Erin Roger**, ACSA Chair How do you sum up 2020? Marked by a natural disaster, social upheaval and a global pandemic, 2020 has challenged many of us in unexpected ways. It has also shown us the power of collective individuals - whether that's contributing efforts towards bushfire monitoring and recovery, or taking the time to follow up with our neighbours and make sure they are okay. Citizen science is really at this nexus between science and society.

ACSA has continued to deliver throughout this challenging year. We collaborated on the [Bushfire Project Finder](#) (new projects are continuing to be added), provided advice on how you can undertake [citizen science at home](#), rolled out the [citizen science stamps](#), refreshed our website, formed [two new partnerships](#), had two babies, and delivered [CitSciOnline!](#) To hear more about what ACSA achieved during the 2019-2020 financial year, please have a read of [ACSA's Annual Report](#).

Thanks again to everyone who joined us for CitSciOnline during October. All talks are now available on [ACSA's YouTube channel](#) and we encourage you to check them out. Stay tuned for what we are planning for 2021.

We are proud to end the year with [24 organisational partners](#). We need your ongoing support and enthusiasm to keep advocating and building capacity for citizen science in Australia and globally.

Queensland Fire and Biodiversity E-News Publications and Journals (See Appendix)



SE Queensland Fire and Biodiversity Consortium Publications list compiled by Colin Lynam

Editor; - I have tabularised a valuable database of news articles about the effect of bushfires on our environment. See appendix

Happenings at RGSQ



RGSQ Lecture Series

Why city policy to 'protect the Brisbane backyard' is failing

Wednesday 10 February 2021, 7:30 PM - 9:00 pm online via zoom

This will be a virtual lecture delivered via Zoom. The lecture link will be emailed to all registrants closer to the lecture date.



Ms. Rachel Gallagher



**PhD candidate,
UQ School of Earth and Environmental Sciences**

Please register for the event

<https://rgsq.org.au/event-4133932>

- Member
- Non-member – \$5.00

Abstract:

Urban consolidation policies to contain development within existing urban areas are creating poor development outcomes in Australian cities. In Brisbane, our research shows that the low-density housing character of the city is being retained at the expense of backyards. Our results indicate that current consolidation policies run counter to their intended aims of protecting green space. Current land development regimes place urban planning outcomes in the hands of property owners and developers whose motives are tied to their financial interests rather than good planning. In doing so, the system works counter to its intended aims, in that it favours "bad density" over meaningful place-making characterised by well-designed medium-density townhouses or low-rise apartments. The market-based approach to urban consolidation leaves individuals seeking financial gain to determine the most important decision about our cities – their urban form. If this continues, the lack of focus on high-quality infill will be a significant missed opportunity for our cities.

GSQ Lecture Series

Mapping Pest Animals – Identifying and Managing impacts

Tuesday, 2 Mar 2021, 7:30 PM - 9:00 PM

Mathew Ryan (Photo supplied RGSQ)



Principal Biosecurity Officer with the Invasive Plants and Animals Program of the Queensland Department of Agriculture and Fisheries.

Please register for the event <https://rgsq.org.au/event-3669844> to receive further information about the lecture. (Should COVID guidelines of the day prohibit holding the lecture on premises, the presentation will be delivered online only via Zoom).

Abstract:

Pest animals (invasive animals) have a significant impact on the environment, the economy, human health or social amenity. The diversity of Queensland's climate and environment provide favourable conditions for the establishment of many invasive species whether accidentally or through deliberate introduction. Invasive animals can compound issues with control as they can be transient, cryptic in nature and move across multiple land tenures. Although eradication of invasive animals is desirable it is unachievable in most cases. It is therefore more strategic to prevent entry and establishment of new pests and focus management of established pests to reduce their impacts in a cost-effective manner. Mapping provides a useful tool to process information about invasive animals and assist land managers and property owners through better application of resources and determining appropriate control methods.

Happenings at Brisbane Shell Club Inc

The shells of the South East Queensland area.

This can be accessed via <https://www.seqshells.com>



The Brisbane Shell Club is a club for people

who are interested in shells, shell collecting and all things molluscan. The Club:

- promotes interest in and appreciation of all aspects of molluscs, shells and their habitats;
- promotes responsible mollusc and shell collecting; and
- stimulates an exchange of knowledge, information and specimens.

The range of activities and interests of the Club includes:

- photography;
- field trips;
- scientific and general interest;
- study of living and fossil molluscs and shells;
- shell art and craft; and
- shells on stamps, and the collection of shell buttons and badges.

The Club's newsletter, *The Radula*, contains news and reports on club activities as well as shell related articles written by members.

The Club's meetings, field trips and other activities provide opportunities to discuss molluscs and shells, and to display specimens to members, visitors, guests and the general public. Members of the Club have knowledge on a broad range of mollusc and shell groups and topics, and can provide guidelines for naming, storing and displaying specimens.

Next Meeting; The Brisbane Shell Club Inc. holds meetings on the last Tuesday of the month. A full list of all meetings is on the meetings page.

The next club meeting is scheduled for:

Topic; There is no formal meeting in January however there will be a member only social event.

Time; TBA

Location; Details of the social event will be released closer to the date. Parking TBA

Happenings at the Queensland Frog Society



The Queensland Frog Society aims to foster and encourage an interest in frogs, and it provides expert assistance and education on identification, biology, intrinsic beauty and environmental value of our amphibious friends.

Throughout the year the Queensland Frog Society runs displays at fetes and fairs to spread the word about frogs, holds workshops on topics such as *frog identification* and *how to make your garden frog friendly*, and delivers talks for members of the public.

Events in 2021 - <http://www.qldfrogs.asn.au/events/>

We'll be running a display at the **Queensland Garden Expo** in Nambour on **9–11th July**, and would love to see you there!

We also have several other events in the works for 2021, including a talk on *Wallum frogs* run by the Native Plants Sunshine Coast organisation – **check our website for details on upcoming events**.

You'll also find us at Bowman Park, Bardon on the first Sunday of every other month (Feb, April, May, etc) at 8–10:30 am, where we participate in the Habitat Brisbane Bushcare program.

Kroombit Frog Search - <http://www.qldfrogs.asn.au/kroombit-frogsearch/>

Back in 2019 the Queensland Frog Society was awarded a grant to fund three years of monitoring several threatened frog species in Kroombit Tops National Park (~2 hrs from Gladstone).



<http://www.qldfrogs.asn.au/>

The Queensland Frog Society goes on regular field trips to Kroombit Tops to survey and monitor these unique creatures. We are always looking for keen volunteers to help us with this crucial work!

If you are interested in volunteering with this project or any other activities throughout the year, get in touch by emailing events_initiatives@qldfrogs.asn.au

Queensland Frog Society members can keep up to date with all upcoming events and activities via our regular newsletter, **Frogsheet**.



Happenings at Entomological Society of Queensland

The Entomological Society of Queensland continues to go from strength to strength.

In 2020, despite the challenges, membership increased by 31 and breached the 400-mark to 416 by year's end, demonstrating the ongoing fascination by our community for insects and the value seen in becoming a part of the ever-growing ESQ family.

Membership is open to all and means you can be involved in the promotion and celebration of the study of insects in all their wondrous forms. Membership brings a bumper issue of the monthly *ESQ News Bulletin* which has something for everyone, access to the ESQ's collection permit system, the opportunity to apply for annual grants, and the Society's quarterly journal, *The Australian Entomologist!* We also arrange for field trips (ESQ Bug-Catches) which we hope to ramp up again in the coming year, after they were impacted in 2020 due to Covid restrictions.

We have meetings at the EcoSciences Centre in Brisbane on the second Tuesday of most months of the year, at which a range of seminars are delivered by leaders in the field of entomology. Two are Notes and Exhibits Meetings where members give a variety of short presentations.

2020 meetings included such fascinating topics as native bees and new hive designs, recent pest insect detections and responses, strange behaviours of native cockroaches, forensic entomology, evolution and systematics of fruit flies, the wonderful world of mites, to name but a few. Speakers vary from professional entomologists to young and upcoming students and their talks are reproduced in the News Bulletin. Coming topics for 2021 include biocontrol of leaf beetles in New Zealand, the remarkable world of flower beetles, the Australian harlequin ladybeetle, and – tentatively at this stage – fire ants for later in the year, plus more!

While presentations had previously been physical only, we have now moved to hybrid meetings where we deliver both in person as before and via Zoom, so Members the world over can enjoy the presentation be they in the seminar room itself (held at EcoSciences Precinct, Dutton Park) or from the comfort of their own homes. While imperative in 2020 due to Covid-19 restrictions, these have been a great success and we plan to continue the format into 2021.

Further, 2021 is the year of our Perkins Memorial Lecture which will be delivered in October by Professor Nigel Andrew of University of New England (NSW). This is a major biennial event, followed by a gala Perkins Dinner where entomologists and friends from far and wide gather to enjoy an evening of festivities and displays. Always a great success.

And we have much more to look forward to.

In 2023 the ESQ will be celebrating its 100th Anniversary and plans for this are already underway. We anticipate this will be a major event. It's early days, and we can't give too much away just yet, but stay tuned as more announcements are made over the coming months.

Announcements and news will be broadcast through a range of channels, such as here with QSN, our Facebook Page, the ESQ members' News Bulletin, and our website (<http://www.esq.org.au>). Our website

has an archive section of biographies and portraits of early Queensland entomologists, a valuable open resource for those interested in early days of Queensland science.

Our membership rates are among the lowest in the country for such a Society, with annual single adult (\$40), joint (\$50), and student (\$20) memberships available. Indeed, students get their first year with us for FREE, so no reason not to join! So, if you have a keen interest in any aspect of the insect world and want to be part of ESQ during this most exciting of times, head over to our website and fill out an application form now!

Dr Mark Schutze
President, Entomological Society of Queensland

It's Time to Focus on Our Waterways

Healthy Land and Water partners with QLD Farmers' Federation to prepare for floods



2020 S.E QLD Catchments results released – NEW

Healthy Land and Water has advised “We are pleased to announce the release of the results of *Report Card 2020*. This is a milestone year, marking 20 years of reporting for South East Queensland. Watch the launch video below to see what’s new this year. If you would prefer to read what was said on the launch video, [please click here](#).

Latest Results: To view annual results since 2001, please visit our Report Card portal: <https://reportcard.hlw.org.au/> To read what our partners are saying, visit <https://reportcard.hlw.org.au/>

Next year we will be celebrating 21 years of the report card. We are looking forward to celebrating with you all in late 2021



Over 500 tyres, litter and debris removed in Moreton Bay clean up

Over the next five years, some 150 hectares of Moreton Bay will be cleared of marine debris as part of a large-scale debris removal program.

Ocean Crusaders and Healthy Land and Water are teaming up to tackle the build-up of debris and litter threatening water quality and marine life. Marine debris has many long-term impacts including upon populations of turtles, dugongs, shorebirds, and other marine animals which often results in fatalities.

Last year, Healthy Land and Water funded the clean up across 71 hectares at Luggage Point, St Helena Island, and Northern Moreton

Bay Islands. This included the removal of approximately 500 truck tyres used to reinforce the banks of St Helena Island that had broken free and instead of protecting the island, were contaminating it.



National Parks Association
of Queensland Inc.

Happenings at National Parks Association of Queensland

Our new President, Susanne Cooper, hit the ground running meeting senior departmental staff and key conservation group representatives. With a Council full of enthusiastic and very capable volunteers, we are well placed to make progress in 2021. A priority will be influencing Government to allocate sufficient budget for successful implementation of the Queensland Protected Areas Strategy.



A meeting with the government provided progress on NPAQ's community-led proposal for 20,000 ha of new national park in the Sunshine Coast Hinterland. NPAQ's inaugural Cuthbertson Grant of \$2000, awarded in Nov 2018, leveraged 162 days of survey work by volunteers equating to more than \$80,000. This information builds on the cultural values work coordinated by NPAQ in 2017 to demonstrate the multiple benefits for the transition of these state forests to national park.

NPAQ also made a joint submission with QCC, WPSQ and WWF Australia in opposition to extending beekeeping in 49 national parks (transferred from state forest under the SEQ Forest Agreement) for 20 years, a recent government commitment.

In early December, NPAQ reps will virtually attend part of the 2020 Global Eco Asia-Pacific Tourism Conference to keep up to date on topics such as recovery following the Black Summer wildfires, opportunities for Indigenous ecotourism and adaptation of the ecotourism industry to COVID-19 limitations.

Allied Communities activity

Please save the date in your calendar.



JOINTLY PRESENTED BY



DATE: Thursday 4 March 2020

TIME: 7 - 9 am AEDT

HOSTS: Trust for Nature and Bush Heritage Australia

SPEAKERS: We are pleased to announce Melia Benn, Indigenous Australian Barrister is guest speaking. The second guest speaker is to be confirmed.

Looking forward to having you join us.

www.trustfornature.org.au

Community Data Collection Projects and Digital Apps

Citizen scientists completed Australia's longest weather record

What we've learnt about Australia's climate history

[23 December, 2020](#) by [Caitlin Howlett](#), posted in [News <https://climatehistory.com.au/>](#)

This year the Climate History team completed a pilot citizen science project with more than 1,000 volunteers, developed Australia's longest daily weather record, analysed previously unknown weather extremes from the 19th century, and reached at least 1.6 million people through media coverage.

Here's an outline of our achievements this year and a summary of what we've learnt so far about Australia's climate history.

A major accomplishment this year was the completion of a citizen science project covering historical daily weather records from Adelaide between 1848 and 1856. The aim was to fill a gap in Australia's historical weather records. The record is now one of the longest daily weather records in the Southern Hemisphere! There's more detail on our work and the objectives of our volunteer project in the video below.

As this was our pilot project testing the [Zooniverse citizen science platform](#), a lot of planning went into the development and execution of the project. For example, there were over 500 comments submitted on our Discussion Forum between volunteers and our researchers between the project's launch on 8 September 2020 and its completion on 24 November 2020. You can [read more about the completion of the Adelaide project here](#).

ANALYSING ADELAIDE'S CLIMATE HISTORY

We are pleased to report that there was a high level of agreement in the transcriptions entered through the Zooniverse portal. On average, around 90% of the observations showed that six out of eight transcriptions agreed with each other. Even among the remaining 10%, we still saw a consensus emerge, giving us strong confidence in the results

You can see [some preliminary results here](#), more detail on [the Adelaide floods in 1848](#), and learn about [previously unknown extreme weather events from 1847 here](#). Of particular interest was an intense heatwave uncovered in 1847, with temperatures of above 40°C observed throughout an entire week, which caused "[forty-five deaths in two days... and funeral processions are to be met in almost every street](#)". We also found that the period 1843 to 1851 was fairly dry, with wet winters in 1846 and 1847.

Our project reached a total potential audience of around 1.6 million people. We also had national coverage from an additional five media stories that were broadcast mid-project, which helped reinvigorate interest and gave a final push to complete the Zooniverse project this year.

In addition, our Director Dr Joelle Gergis and researcher Dr Linden Ashcroft published [a research paper](#) on the development of the Adelaide temperature record in June 2020. The release gained national media coverage, including an article in *The Conversation*; [We dug up Australian weather records back to 1838 and found snow is falling less often](#).

Some media highlights for our Adelaide citizen science pilot included:

- [Renewed interest in weathered records](#), COSMOS magazine, December 2020.
- [Unearthing Australia's climate history](#), *Australian Geographic* magazine, November/December 2020.

- [Want to help fill in the blanks of our weather history?](#), ABC Radio National (Life Matters), 9 September 2020.
- [Citizen scientists called on to fill the gap in Australia's longest daily weather record](#), ABC News, 8 September 2020.
- [Cloudy with a chance of mystery? Relic completes our weather history](#), *The Advertiser*, 8 July 2020.

LEARNING FROM THE PAST, AND LOOKING TO THE FUTURE

The historical newspapers show us how extreme weather events have caused intense adversity for people over time. For many, 2020 has also been a year of adversity. By looking back through our past, we can reflect on our similarities with people throughout history, with sympathy for what they would have endured.

Our work this year has proved that historical climate research has a very broad appeal across society both in Australia, and internationally. We have shown how Australian weather rescue projects have the ability to generate cross-generational discussion on history, science, weather, and climate.

In early 2021, we will launch another citizen science project to transcribe recently discovered historical weather journals from the [Perth Botanic Gardens from 1880 to 1900](#).

[Sign up to our e-newsletter](#) so you'll be notified when we launch the new project! In the meantime, stay up-to-date with our research on social media via our [Facebook](#) and [Twitter](#) pages.

Collections & Archives - Sneaking into the Royal Society of Queensland (RSQ) meeting from October 1890... written by Colin Lynam

Have you collected a great deal of field specimen data notes or photos and hope to get back to "organising" them some time? Get to it before your surviving relatives consign it to a skip!



For any kind of resolution, it is necessary to adopt a GEOP theory. GEOP stands for "Get, Evaluate, Organize, and Plan." Whether you are in a rush or not, these are the unavoidable steps; it is a fact of life.

Having PRESERVED records that have been digitally scanned and organised in a searchable location (e.g., Queensland Science Network (<http://scienceqld.org/category/member-groups/>)). Similarly, I was able to use the Australian National Library **Trove Newspaper and photo library** to allow me to eavesdrop on this interesting meeting.

It is interesting to ponder that this RSQ meeting (via a press reporter) is today's equivalent of Facebook or YouTube! It shows us how science was done, back then.

Does Gold Grow?

By Anon (*Toowoomba Chronicle and Darling Downs General Advertiser (Qld. : 1875-1902)*, Thursday 30 October 1890, page 3 <https://trove.nla.gov.au/newspaper/rendition/nla.news-article218320470.txt>)

At last Friday's meeting of the Royal Society of Queensland, a philosophical body holding regular meetings in Brisbane, the following short paper was read, the author's name not being stated in the published report:

Does Gold Grow? My reason for asking this question is the following. About twenty years ago, in 1870, I became possessed of a mineral specimen from the Wide Bay district. It looked, on the one side, like a piece of lead of lead that had been melted and stained by being dropped into fine quartz and gravel; on the other side it showed a cleaner appearance, like corroded, lead, and when cut with a knife it was soft, and showed a smooth bright surface like what a section of lead-pipe when similarly cut would do.

For twelve years, up till 1882, this specimen lay alone and un-noticed in a drawer, at the end of that time a speck of gold showed itself on one corner of the cleaner surface of the specimen and in eight years this speck of gold has traveled nearly half way across the face of the specimen, increasing in size as it went, and is now a patch in place of a speck of gold, and it has cut a groove for itself as it traveled across the face of the specimen, which groove spreads latterly and in front of, as well as behind the travelling patch of gold, not unlike the track of a caterpillar or a silkworm on the cabbage and the mulberry leaf respectively. But this is not all. On the adjoining corner of the specimen another speck of gold showed out for the first time two years ago, but it is too young yet either to expand or to travel as its eight-year-old brother has done.

I produce the specimen, and offer no opinion as to the cause of the evolution of the gold - from its matrix, and hope the said specimen will be carefully handled so as to avoid abrasion; and leave nature to work out her operation on the - face of it, so that all may see how she does it. I may here mention another curious fact about a gold specimen. I got it in 1874. It was from the Etheridge River, and was very rich, for it was picked out of a bucketful of quartz which yielded 450 oz. of gold. This specimen laid for some time in a drawer near to a bright lump of chalco-pyrite from Wallaroo, South Australia (yellow copper ore).

In course of time the gold on the specimen became coated with a bright amber and orange-coloured efflorescence, and it looked like a piece of sulphide of copper with no sign of gold about it. A dip in nitric acid restored its former golden purity of appearance, and it was kept away from the bad company of the gentleman from Wallaroo; but contamination had done its work, and in a few months out bloomed the "peacock copper" hues again, only one more to be slain in the aqua Fortis; but to no purpose, for the copper "seed" seemed to have been sown in the gold, and each period of rest after the acid bath brought out the sulphurous eruption - again all over the nobler metal, hiding its real nature.

I do not know how the matter would have ended, for I was taken ill after one of these gold "baths" which revealed the value of the specimen, and it was "annexed", by one of the numerous lower class womenkind who on various pretexts find the entrée into sick rooms on these occasions — "scrubbers" they call them. I saw it no more, and regret that I cannot produce it, also for your inspection but, I might ask (apropos of the above), "does copper grow" as well as gold?

A curious vesicular rock specimen which I got from the Island of New Caledonia in 1872, has of late years "broken out" into gold in various places where gold was not visible at all when I first got it. I produce this for your inspection. It is quite unlike any Australian rock; that I ever saw, auriferous or otherwise; but a ton of it gave 64oz. of gold to a mere barrel-organ so to speak, of a crushing machine, whose blow was delivered by means of springs, in place of by falling weight.

I hope those specimens will help to clear up some of the mysteries which surround "El Ora", the unobtrusive little sister, as it were, the Cinderella of the metals, the least gorgeous in its ore, but the most indestructible of them all.

Noteworthy Publications and Databases

The Royal Society of Queensland

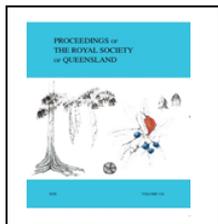


The Royal Society of Queensland is the senior learned society in the State, founded in 1884. In an era when leaders are prone to creating 'alternative facts' it is ever more important to emphasise how vital honest enquiry is to our society's well-being. People who share a concern to maintain the free flow of independent knowledge are warmly invited to join the like-minded citizens – experts and laypersons – who make up the Society's membership. The Society aims:

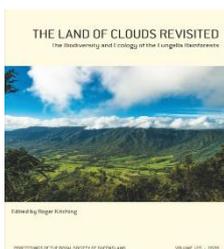
- to increase awareness of and respect for evidence-based enquiry in Queensland
- to serve as a custodian of scholarly tradition
- to encourage original research and the application of scientific knowledge and method to policy-making and decision making
- to provide a forum for scientists and lay people to involve themselves in the progress of science in society – with science defined broadly.

The Society operates a Research Fund to sponsor small scale research projects and convenes the Queensland Science Network, a collaboration of some 25 knowledge-based natural history societies. Membership is open to laypersons. It is not necessary to be credentialled in science or any other discipline. A membership form can be obtained by emailing rsocqld@gmail.com.

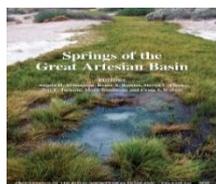
Proceedings of The Royal Society of Queensland 2020



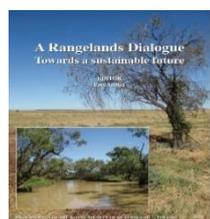
Volume 124 – the regular annual *Proceedings of The Royal Society of Queensland* – 2020. All papers have been posted open access on the Society's website at <http://www.royalsocietyqld.org/proceedings-124/> This volume includes eight scholarly articles, obituaries for Life Members Trevor Clifford and Ben Lawson and the Society's annual report.



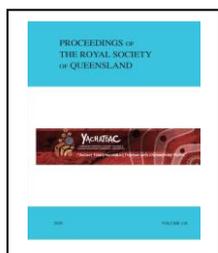
Volume 125 – *THE LAND OF CLOUDS REVISITED: The Biodiversity and Ecology of the Eungella Rainforests*. This volume has been [published online](#) and in print. We acknowledge the generous sponsorship of the Environmental Futures Institute – Griffith University, Reef Catchments NRM Group and an anonymous philanthropist who have made print publication possible. We thank Guest Editor Prof Roger Kitching for bringing this project to maturity.



Volume 126 – *The Springs of the Great Artesian Basin*. This publication presents some 20 articles ranging from historic and contemporary narratives, Indigenous perspectives, scientific papers (geohydrology, ecology, management and conservation), and opinion pieces). This volume has been [published online](#) and in print. Print copies available for \$50 plus \$15 postage.



Volume 127 – *A Rangelands Dialogue: Towards a Sustainable Future* The 26 papers presented in this [Special Issue](#), available online, derive from submissions to a Rangelands Policy Dialogue held in July 2019. These short papers represent the views of a cross-section of stakeholders, from pastoralists to scientists to public officers.



Volume 128 the regular annual *Proceedings of The Royal Society of Queensland – 2020*. This volume has been published online and in print. This volume includes eleven scholarly articles, together with seven RoySocQld Annual and Research Reports and Presidential Address, including an Obituary for Dr Jim Galletly.

Orders for print copies of any of these volumes to admin@royalsocietyqld.org.au .

Scholarly Articles - Conference Proceedings, Articles, Dissertations, Books & Chapters

SEED CITIZEN SCIENCE HUB LAUNCH



Creating a Citizen Science network that connects people, projects and data.

The NSW Department of Planning Industry and Environment has launched the [SEED Citizen Science Hub](#) to support and grow citizen science in NSW. The hub sits on the [SEED \(Sharing and Enabling Environmental Data\)](#) platform, which is an openly accessible and trusted platform for environmental data. The hub provides many benefits for scientists and data users, project organisers and participants alike, including project registration and promotion, networking and data access, interest from volunteers curious about projects in their local area or finding online projects they can contribute to from home. The hub increases the impact your contributions can have by being openly available to communities, scientists and decision makers. The hub harnesses the enthusiasm, interest and efforts of citizen scientists to enrich the range and depth of data available, to be used as part of the rigorous evidence base for scientific and government decision making.

Hosting a citizen science project based in NSW? Contact the SEED team [here](#).

Research Funds – Applications

2021 Queensland Community Foundation grant applications are open!



QCF (Queensland Community Foundation) has advised: “We are pleased to advise you that our 2021 grant applications are now open for both our General Fund grants and our Regional grants. This year we are inviting mid-tier charities working to support those affected by Covid-19, particularly within the area of domestic violence and mental health, to apply for our general fund capacity building grants. The purpose of these grants is to develop charities' systems, strategies or people and skills to deliver improved outcomes for our community. Typically, capacity building focuses on education and training, recruiting, maintaining or recognising volunteers, information technology support systems, staff training, planning and governance which may include strategic plans, constitution reviews or board appraisals.

The regional grants are intended to support local, grass roots community-based charities who seek to improve the quality of life for all people within their region.

Applications are open to **only** charitable organisations that have Deductible Gift Recipient Item 1 (DGR1) status from the Australian Taxation Office and are mid-tier organisations (annual revenue less than \$10m).

For full criteria and to apply please click [here](#) to visit our website. If you have any questions please call on 07 33603854. We'd love you to forward this email to any Queensland charities that may benefit from our funding!

Applications close Friday 12 March 2021 <https://qcf.org.au/grants/general-fund-grant-making/>

Entomological Society of Queensland Awards

The ESQ Student Award (\$500) – Deadline 9 April 2021



The Student Award was established by the Society to encourage entomological research. It is open to any student who completed an Honours Degree, Postgraduate Diploma or 4-year Undergraduate Degree at a Queensland tertiary institution in the previous calendar year. Entrants need not be Society members. Entries are judged by a panel of entomologists appointed by the President of the Society.

Award submissions open in late November and close 9 April. The winner will be announced at the May General Meeting and is then invited to present a summary of their research at the June Notes and Exhibits meeting of the Society.

[Application form-](#)

[Past Student Awards](#)

The ESQ Small Grants Scheme (\$2000) - Deadline 30 April 2021

[Small Grant Application form](#)

ESQ Council initiated the Small Grants Scheme in 2017 to further encourage entomological research and study. Projects can be anything related to entomology, including targeted collecting trips, visits to museums or other institutions, ecological, physiological or behavioural studies, or even work that's more applied and in the agricultural or medical fields.

The maximum budget for the project is \$2000, with the successful applicant announced by the end of June 2020. Funds will be available from July 2020 and the project is to be undertaken between July 2020 and June 2021.

- Applicants must be members.
- Projects are to be undertaken in Australia.
- Preference is given to stand-alone projects rather than as top-ups to existing projects.

National Parks Assn Queensland Cuthbertson Grant

- Proposals must be submitted to the secretary by March 31st.
- Recipients are required to provide a one-page report at the project mid-point.

NPAQ's inaugural Cuthbertson Grant of \$2000 for on-ground work or research that leads to better protection of high conservation areas is now complete. This grant was made possible thanks to a much-appreciated bequest from Jim Cuthbertson.

Protect the Bush Alliance used the grant to fund travel, accommodation and supplies for flora and fauna surveys at Yabba State Forest and surrounds (March 2019), Eungella National Park (October and November 2019) and Presho State Forest/ Bellington Hut State Forest (October 2020). 35 volunteers conducted a total of 162 survey days to better understand the conservation value of these areas and identified vulnerable

species such as the Black-breasted Button quail, Eungella Honeyeater, Vulnerable Glossy Black Cockatoos, and Brush Sophora as well as cycads and orchids. The funding therefore attracted more than \$80,000 of in-kind flora and fauna survey work. NPAQ wishes to thank Protect the Bush Alliance for their great work. The information will be used to support submissions for future national park and are very timely given the newly released Queensland Protected Area Strategy and associated \$28 million allocated for expanding national parks (and other public protected areas).

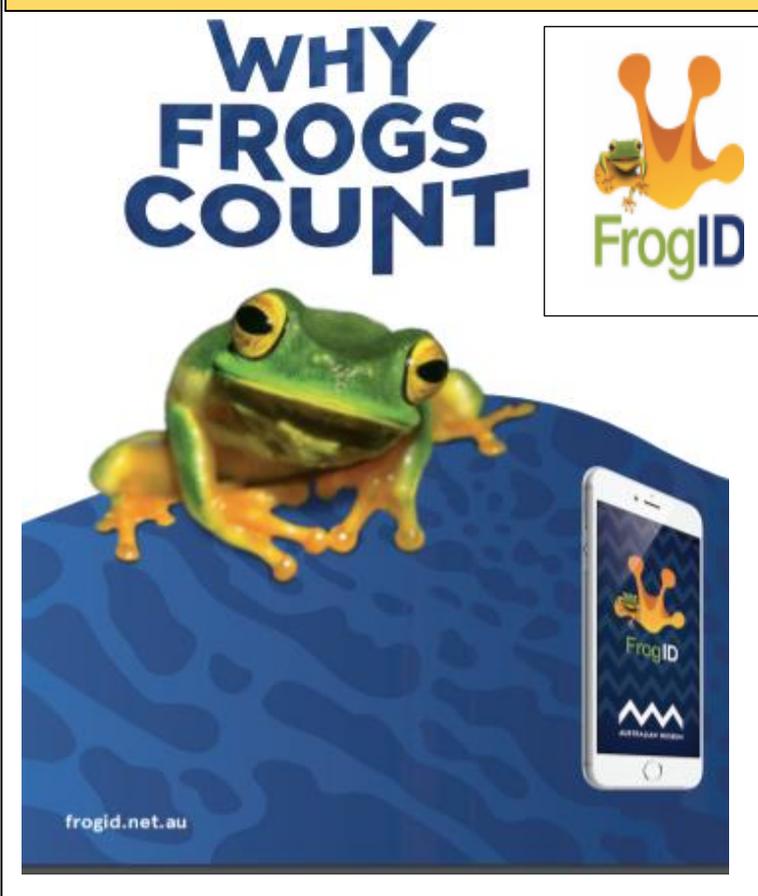
Grant applications will be sought in early 2021 for the next round. Proposed projects will need to address at least one of the following:

- improve the conservation value/resilience of one or a number of parks;
- strengthen the science and evidence base of one or a number of parks or park proposals; or
- advance community knowledge of, or connection to, Queensland's national parks.

Teaching Resource Review

Empowering students to be citizen scientists

Clicks, bonks and dripping taps: listen to the calls of 6 frogs out and about this summer.



By [Jodi Rowley](#), Curator, Amphibian & Reptile Conservation Biology, Australian Museum

Australia has 240 known species of frog, almost all of which are found nowhere else in the world. Some species are flourishing, like the Striped Marsh Frog. But others have declined dramatically since the 1980s, and four have become extinct.

Croaks, whistles, bleats and barks – every frog species makes a different sound. By recording a frog call with the FrogID app, students will discover which frogs live around them and help us count Australia's frogs, empowering your students to be citizen scientists.

FrogID is a national citizen science project that is helping us learn more about what is happening to Australia's frogs. All around the country, people are recording frog calls with nothing more than a smartphone.

With the data obtained through **FrogID** we are able to track the Cane Toad and identify where frogs are thriving and where they aren't. And by matching calls to weather and habitat, we are learning more about how different frog species are responding to a changing environment

Get your class and students involved in FrogID:

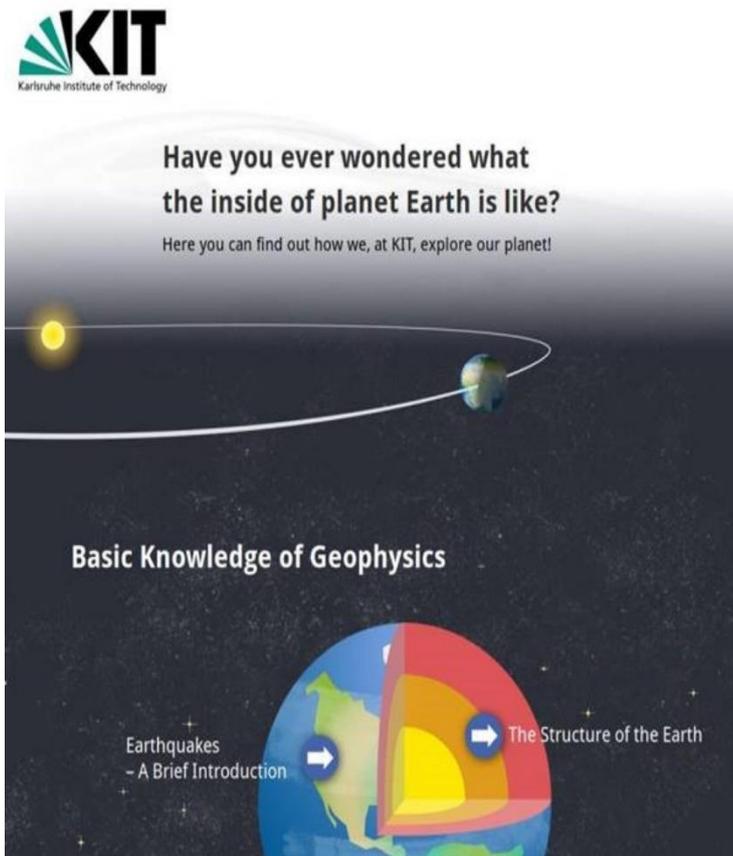
1. Create account & group at FrogID.net.au
2. Instruct Students to create account & join class
3. Download the FrogID App, Sign In & Record
4. Check Leaderboard for Results

<https://theconversation.com/clicks-bonks-and-dripping-taps-listen-to-the-calls-of-6-frogs-out-and-about-this-summer>



Have you ever wondered what the inside of planet Earth is like?

KIT video-course on basic geophysics reaches 100,000 views!



One year after finalising the so-call **iBRIDGE** course (Interactive BRIDging course for the Geophysics master's programme at Karlsruhe Institute of Technology - KIT) in June 2019, the videos presented on YouTube in German and English language have reached the mark of one hundred thousand clicks in total. Especially the videos on applied seismics and processing seismic waveform data are very popular, reaching up to 9,000 clicks each. Also, videos on basic knowledge in seismology enjoy great popularity. The videos were produced by a KIT-cooperation of the geophysical institute (GPI) and the Centre for Technology-Enhanced Learning (ZML) starting in 2016. They were financed by the Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg. Explore the videos:

<https://lnkd.in/e7cRyui>

(German versions at the bottom)

The Editor's excerpts from exceptional articles

2000-Year-old Bogong moth (*Agrotis infusa*) Aboriginal food remains, Australia

Nature Research December 2020 [Scientific Reports](#) 10(1):22151DOI: [10.1038/s41598-020-79307-w](https://doi.org/10.1038/s41598-020-79307-w)

Project: [ARC Centre of Excellence for Australian Biodiversity and Heritage \(CABAH\)](#)

By [Birgitta Stephenson](#) et al

Full-text available https://www.researchgate.net/publication/347441032_2000_Year-old_Bogong_moth_Agrotis_infusa_Aboriginal_food_remains_Australia

Insects form an important source of food for many people around the world, but little is known of the deep-time history of insect harvesting from the archaeological record. In Australia, early settler writings from the 1830s to mid-1800s reported congregations of Aboriginal groups from multiple clans and language groups taking advantage of the annual migration of Bogong moths (*Agrotis infusa*) in and near the Australian Alps, the continent's highest mountain range. The moths were targeted as a food item for their large numbers and high fat contents. Within 30 years of initial colonial contact, however, the Bogong moth festivals had ceased until their recent revival. No reliable archaeological evidence of Bogong moth exploitation or processing has ever been discovered, signalling a major gap in the archaeological history of Aboriginal groups. Here we report on microscopic remains of ground and cooked Bogong moths on a recently excavated grindstone from Cloggs Cave, in the southern foothills of the Australian Alps. These findings represent the first conclusive archaeological evidence of insect foods in Australia, and, as far as we know, of their remains on stone artefacts in the world. They provide insights into the antiquity of important Aboriginal dietary practices that have until now remained archaeologically invisible.



Figure 1. (A) Bogong moth, *Agrotis infusa* (photo: Ajay Narendra). (B) Thousands of moths per square metre aestivating on a rock surface (photo: Eric Warrant).



The Development and Decay of National Parks in Queensland (a historical perspective) (excerpt)

By Peter Ogilvie - President, Wildlife Preservation Society of Qld, Article originally printed in the [HOPE E-news Bulletin – Special Edition, 2020 #10 --- October 2020 \(https://wildlife.org.au/wp-content/uploads/2013/12/The-Development-and-Decay-of-National-Parks-in-Queensland-a-historical-perspective.pdf\)](#)

National parks in Queensland are presently experiencing an unprecedented attack by private developers and politicians. The outcomes and potential consequences of these threats are discussed later in the article.

Over a little more than a century, Queensland has developed a highly protected system of national parks. The following account provides a brief history of the evolution of such parks in the State, and also nationally and globally.

(Editor's recommendation – read full article to follow the paper's structure:

- **The first national parks**
- **Queensland's early national park legislation and administration**
- **Changing attitudes to nature conservation**
- **The national park philosophy and the cardinal principle**
- **The Newman Government and Palaszczuk Government attack on national parks**

Conclusion

This decay of national park principles and management is all happening in the context of what is now the worst record in Australia for the declaration of national parks and other protected areas. The Queensland Government has committed to 17% of the State being in declared protected areas as recommended by the Conference of Parties to the Convention of Biological Diversity. However, it is less than half way to achieving that goal, and has the poorest record of all Australian States. Whilst fully appreciating and acknowledging that the world is a different place as we combat a disabling Covid-19 pandemic, there is no reason to inflict a potentially destructive development-epidemic on our valuable and irreplaceable national parks. This trashing of 100 years of national park history in Queensland needs to stop. I can say that with knowledge and feeling because I was part of that proud history for 46 years.



Stop Gympie Regional Council from repealing the region's environment laws.



Concerned Resident started this petition to [Meaghan Scanlon \(Minister for the Environment\)](#) and 10 others <https://www.change.org/p/meaghan-scanlon-minister-for-the-environment-stop-gympie-regional-council-from-repealing-the-region-s-environment-laws>

Recently, Gympie Regional Council voted to repeal the Temporary Local Planning Instruments (TLPIs) that were adopted in February 2020 to protect wildlife and wildlife habitat in areas of conservation significance and environmental conservation on the Southside Local

Development Area and on rural residential land throughout the Gympie region.

The Southside area has been extensively drone surveyed by the Queensland University of Technology (QUT) and determined as core koala habitat. Public sightings on the publicly available Wildnet mapping system also confirm multiple sightings in the area. It was also recommended by the State Government Koala Expert Panel to be included in the new Koala Conservation Strategy, however, falls just outside of the SE Qld region. The TLPI was awarded a national environmental award for sustainability and comes off the back of 5 years of research, planning and consultation to ensure that critical habitat was protected. Now, just before Christmas,

Council snuck through an agenda item to repeal all of this planning, which we believe is in contravention of local, state and national planning regulations.

With the TLPIs repealed, there is now no protection for wildlife and wildlife habitat on private land in the Gympie region other than the small parcels of land covered by State Government vegetation management legislation. We also have reason to believe that the doors to developers will be opened immediately, which means that we need to act NOW!

Contact: QSN Newsletter

Colleagues and QSN Newsletter readers,

After this fourth edition, feel free to make contact, and signify your support by sending advices of diary-daters, photos, field project reports, student's resources and citizen projects, **with links**, to me as "Editor - Queensland Science Network Newsletter".

Do look up the other [QSN RESOURCES](#) information links and the [FORTHCOMING EVENTS](#) and appreciate the diversity of our projects. It is amazing! I hope you participated in some of the projects posted in today's Newsletter, or, resolve to send me some info on your own personal field work discoveries.

Find out more about other CitiSci activities and societies by looking at their websites, located on QSN at [Member Groups](#).

Any commentary on new topics to cover or graphics that enhance the comprehension of this great "co-operative" of scientific bodies, would be warmly received.

Contact Col Lynam (lynam@uq.edu.au) or (newsletter@royalsocietyqld.org.au) or through "**RECEIVE OUR NEWSLETTERS**" on <https://scienceqld.org/> or by Facebook "MESSAGE" <https://www.facebook.com/QLDScienceNetwork/>

Colin Lynam

Q'ld Science Network Newsletter

Editor

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Queensland Science Network

Appendix

SE Queensland Fire and Biodiversity Consortium Publications list compiled Colin Lynam

TITLE	Snipped Abstract	Source
<u>In the News</u>		
Little pygmy possum discovered on Kangaroo Island after fears bushfires had wiped them out <u>Author/s:</u> Mahalia Carter	“Little pygmy possums live in Tasmania and small patches of SA and Victoria. There were fears the species had been wiped out from Kangaroo Island's bushfires. One has been discovered living on the island this week.”	<u>Source:</u> ABC News, 06 December 2020 https://www.abc.net.au/news/2020-12-06/little-pygmy-possum-found-on-kangaroo-island/12954912
World first tracking program to measure the success of 'rewilded' koalas, <u>Author/s:</u> Fran Kelly interview of Jenny Gray	“A colony of koalas rescued after last summer's devastating bushfires have been fitted with tracking devices, before being released into the Victorian bush.”	<u>Source:</u> ABC AM, 08 December 2020 <u>Listen:</u> https://www.abc.net.au/radionational/programs/breakfast/tracking-program-to-measure-success-of-rewilded-koalas/12959926
Expert review confirms climate change key driver in Black Summer fires <u>Author/s:</u> Sabra Lane, Linda Mottram	“In the months during and after the Black Summer bushfires, there was widespread debate about just how big a role climate change may have played in the event.”	<u>Source:</u> ABC AM, 10 December 2020 <u>Listen:</u> https://www.abc.net.au/radio/programs/am/bushfire-climate/12969432
Quokka population will take 13 years to recover following Northcliffe fire, study finds <u>Author/s:</u> Kate Stephens	“Just 39 quokkas were left in the Northcliffe region following fires in 2015. A five-year study has found it will take until 2028 for the species to recover.”	<u>Source:</u> ABC South West WA, 11 December 2020 https://www.abc.net.au/news/2020-12-11/northcliffe-quokka-will-take-13-years-to-recover-from-fire/12960898
Nest boxes give bushfire-affected birds, marsupials a safe, low-toxic place to call home <u>Author/s:</u> Elloise Farrow-Smith	“This year lots of people have been hammer-ready, knocking up makeshift homes for animals that lost their habitats in last summer's fires.”	<u>Source:</u> ABC News 12 December 2020 <u>Listen:</u> https://www.abc.net.au/news/2020-12-12/non-toxic-nest-boxes-give-homes-bushfire-affected-wildlife/12833618
Fighting bushfires with indigenous knowledge <u>Author/s:</u> Paul Barclay interview of Michael Shawn Fletcher	“No-one wants a repeat of last summer's devastating bushfires but the risks are increasing due to climate change. So, we need to use all the tools at our disposal to manage the size and scale of the fires. An indigenous geographer says we should tap into 60,000 years of indigenous knowledge	<u>Source:</u> ABC News – Big Ideas, 14 December 2020 <u>Listen:</u> https://www.abc.net.au/radionational/programs/bigideas/fighting-bushfires-with-indigenous-knowledge/12980720

<p>Off-grid dream becomes reality as bushfire threat creates new era for power networks <u>Author/s:</u> Amy Bainbridge, Lucy Kent</p>	<p>“Essential Energy says 3,200 poles were destroyed across New South Wales in bushfires last summer. Energy companies are increasingly looking to replace power lines with standalone solar systems.</p>	<p><u>Source:</u> ABC News, 15 December 2020 <u>Listen:</u> https://www.abc.net.au/news/2020-12-15/stand-alone-solar-systems-replacing-powerlines-after-bushfires/12905296</p>
<p>Lessons from the Black Summer fires <u>Author/s:</u> Kelly Fuller</p>	<p>“With less than two weeks until summer a new research project is underway to explore important issues from the devastating Black Summer bushfires. 24 million hectares of land was burnt, 3-thousand homes destroyed and three billion animals were killed or displaced in a disaster that made headlines around the world.</p>	<p><u>Source:</u> ABC NewsRadio, 20 November 2020 <u>Listen here:</u> https://www.abc.net.au/radio/newsradio/lessons-from-the-black-summer-fires/12904990</p>
<p>Aerial fire trail inspections take off</p>	<p>“The NSW Government is taking to the air using helicopters for aerial inspections of fire trails across the state in preparation for the summer bushfire season.”</p>	<p><u>Source:</u> NSW Government, 20 November 2020 <u>Author/s:</u> NSW Government <u>Read more:</u> https://www.industry.nsw.gov.au/media/releases/2020-media-releases/aerial-fire-trail-inspections-take-off?utm_source=miragenews&utm_medium=mirageneews&utm_campaign=news</p>
<p>Aboriginal leaders to be included in NSW's top bushfire planning committee <u>Author/s:</u> Kelly Fuller</p>	<p>“Aboriginal leaders will play a role in advising the NSW Government's main bushfire management committee.”</p>	<p><u>Source:</u> ABC News Illawarra, 21 November 2020 <u>Read more:</u> https://www.abc.net.au/news/2020-11-20/aboriginal-voices-added-to-top-nsw-bushfire-committee/12904318</p>
<p>Australia's extreme fire season</p>	<p>“2019 was Australia's hottest year on record, a major factor behind the continued bushfires.”</p>	<p><u>Source:</u> BBC, 13 Jan 2020 <u>Listen:</u> https://www.bbc.co.uk/programmes/w3csym2y</p>
<p>Central Queensland farmers bounce back from last year's fires for bumper harvest <u>Author/s:</u> Meg Bolton</p>	<p>“Ripe pineapples were destroyed by bushfires weeks before harvest this time last year.”</p>	<p><u>Source:</u> ABC Rural, 09 November 2020 <u>Read more:</u> https://www.abc.net.au/news/rural/2020-11-09/cobraball-fire-farmers-one-year-anniversary/12844772</p>
<p>Drones, detection dogs, poo spotting: what's the best way to conduct Australia's Great Koala Count? <u>Author/s:</u> Romane H. Cristescu, Celine Frere and Desley Whisson</p>	<p>“Federal environment minister Sussan Ley this week announced A\$2 million for a national audit of Australia's koalas, as part of an A\$18 million package to protect the vulnerable species. Koalas are notoriously difficult to detect, and counts so far have been fairly unreliable.”</p>	<p><u>Source:</u> The Conversation, 26 November 2020 <u>Read more:</u> https://theconversation.com/drones-detection-dogs-poo-spotting-whats-the-best-way-to-conduct-australias-great-koala-count-150634</p>

<p>Good news for the short-necked turtle <u>Author/s:</u> Jenny Marchant, Dan Cox and Phil Spark</p>	<p>“After a tough year of bushfires and drought, the short-necked turtle, which is native to the Hunter region, was thought to be facing quite a grim future.”</p>	<p><u>Source:</u> ABC Newcastle, 16 December 2020 <u>Listen:</u> https://www.abc.net.au/radio/newcastle/programs/breakfast/short-necked-turtle/12988578</p>
<p>Seven weeks of fires on Fraser Island. Will there be a long-term impact? <u>Author/s:</u> Julian Morrow interview of Rod Fensham</p>	<p>“The World heritage listed Fraser Island has just endured a seven-week bushfire. Some experts say the landscapes are ‘meant to burn’ and rejoice that rainforest in the island’s centre has been spared.”</p>	<p><u>Source:</u> ABC News – Sunday Extra, 14 December 2020 <u>Listen:</u> https://www.abc.net.au/radionational/programs/sundayextra/the-effect-of-seven-weeks-of-fire-on-fraser-island/12971604</p>
<p>Resilience and alternative stable states after desert wildfires <u>Author/s:</u> Scott R. Abella, Dominic M. Gentilcore, and Lindsay P. Chiquoine.</p>	<p>“Improving models of community change is a fundamental goal in ecology and has renewed importance during global change and increasing human disturbance of the biosphere. Using the Mojave Desert (southwestern United States) as a model system,”</p>	<p><u>Source:</u> ESA Journals, Ecological Monographs, 09 September 2020 <u>Read more:</u> https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/ecm.1432?campaign=wolarlyview</p>
<p>Climate change and 'atmospheric thirst' to increase fire danger and drought in NV and CA <u>Author/s:</u> Desert Research Institute.</p>	<p>“New study shows impacts of increased levels of evaporative demand as climate grows warmer and drier.”</p>	<p><u>Source:</u> Desert Research Institute, 19 November 2020 <u>Read more:</u> https://www.sciencedaily.com/releases/2020/11/201119165442.htm</p>
<p>Corrigendum to: Prioritising fuels reduction for water supply protection <u>Author/s:</u> Benjamin M. Gannon, Yu Wei, Lee H. MacDonald, Stephanie K. Kampf, Kelly W. Jones, Jeffery B. Cannon, Brett H. Wolk, Antony S. Cheng, Robert N. Addington and Matthew P. Thompson</p>	<p>“Concerns over wildfire impacts to water supplies have motivated efforts to mitigate risk by reducing forest fuels. Methods to assess fuel treatment effects and prioritise their placement are needed to guide risk mitigation efforts.”</p>	<p><u>Source:</u> CSIRO Publishing, International Journal of Wildland Fire, 16 November 2020 <u>Read more:</u> https://www.publish.csiro.au/WF/WF18182_CO</p>
<p>The influence of prescribed fire on site selection in snakes in the longleaf pine ecosystem <u>Author/s:</u> Jennifer M. Howze, Lora L. Smith</p>	<p>“Frequent fire benefits many snake species found within mesic longleaf pine forests. Most snake species occupied areas that had been burned within two years.”</p>	<p><u>Source:</u> Forest Ecology and Management, 01 February 2021 <u>Read more:</u> https://www.sciencedirect.com/science/article/abs/pii/S0378112720314729</p>

<p>Structural resistance and functional resilience of the Chaco forest to wildland fires: an approach with MODIS time series <u>Author/s:</u> Marcos A. Landi, Carlos M. Di Bella, Sandra J. Bravo, Laura M. Bellis</p>	<p>“Forests have resistance that allows them to resist fires without changing to another state, and resilience that allows them to recover after disturbance. These properties are determined by many structural and functional determinants that interact between them... Results suggest that changes in forest species composition and aboveground net primary production reduced forest structural resistance and functional resilience to fire.”</p>	<p><u>Source:</u> Austral Ecology, 02 December 2020 <u>Read more:</u> https://onlinelibrary.wiley.com/doi/10.1111/aec.12977</p>
<p>Operationalising homeowner wildfire risk mitigation in fire-prone areas <u>Author/s:</u> Hugh Walpole, Sarah McCaffrey, Claire Rapp and Robyn Wilson</p>	<p>“A significant amount of research has examined what motivates people living in fire-prone areas to mitigate their wildfire risk (i.e. engage in activities that reduce vulnerability and the effects of a wildfire on an individual’s property</p>	<p><u>Source:</u> CSIRO Publishing, International Journal of Wildland Fire, 12 November 2020 <u>Read more:</u> https://www.publish.csiro.au/WF/WF19095</p>
<p>‘Nobody checked on us’: what people with disability told us about their experiences of disasters and emergencies’ <u>Author/s:</u> Michelle Villeneuve</p>	<p>“Australians with disability are disproportionately affected by disasters such as fire, floods, cyclones and heatwaves. Yet we rarely hear their perspectives and insights on what’s needed to ensure they’re not left stranded when disaster strikes.”</p>	<p><u>Source:</u> The Conversation, 02 December 2020 <u>Read more:</u> https://theconversation.com/nobody-checked-on-us-what-people-with-disability-told-us-about-their-experiences-of-disasters-and-emergencies-151198</p>
<p>Black Summer recommendations add to knowledge <u>Author/s:</u> Nathan Maddock</p>	<p>All the recommendations from the reviews into the Black Summer bushfires have now been added to the Inquiries and Reviews Database ensuring an even richer source of data is now available to learn from.”</p>	<p><u>Source:</u> Bushfire & Natural Hazards CRC, 16 December 2020 <u>Read more:</u> https://www.bnhcrc.com.au/news/2020/black-summer-recommendations-add-knowledge</p>
<p>‘I felt immense grief’: one year on from the bushfires, scientists need mental health support <u>Author/s:</u> Daniella Teixeira</p>	<p>“One night in January 2020, I couldn’t sleep. I kept waking to check my phone for news from Kangaroo Island, off South Australia. Fires had already burned through several sites where I’d researched the island’s endangered glossy black cockatoos, and now it was tracking towards two critical habitat areas.</p>	<p><u>Source:</u> The Conversation, 15 December 2020 <u>Read more:</u> https://theconversation.com/i-felt-immense-grief-one-year-on-from-the-bushfires-scientists-need-mental-health-support-148251</p>
<p>The Blue Mountains World Heritage site has been downgraded, but it’s not too late to save it <u>Author/s:</u> Ian Wright, Anthony Capon and Leo Robba</p>	<p>“Twenty years ago, UNESCO inscribed the greater Blue Mountains area on the World Heritage List for having “outstanding universal value”. If you’ve travelled to the Blue Mountains, with its rugged</p>	<p><u>Source:</u> The Conversation, 10 December 2020 <u>Read more:</u> https://theconversation.com/the-blue-mountains-world-heritage-site-has-been-downgraded-but-its-not-too-late-to-save-it-150954</p>

	sandstone cliff faces, hidden waterfalls and rich diversity of life, this value is undeniable.”	
Bushfire education is too abstract. We need to get children into the real-world Author/s: Briony Towers, Annette Gough and Bianche Verlie	“Children and young people have been deeply impacted by the current bushfire crisis. Schools have been destroyed and thousands of houses have burnt down. Hazardous air pollution is causing major public health concerns and the devastating impacts on animals and wildlife is leading to emotional distress.”	<u>Source:</u> The Conversation, 22 January 2020 <u>Read more:</u> https://theconversation.com/bushfire-education-is-too-abstract-we-need-to-get-children-into-the-real-world-129789
Not all blackened landscapes are bad. We must learn to love the right kind Author/s: Claire Smith, Gary Jackson and Kellie Pollard	“The devastation wrought by last summer’s unprecedented bushfires created blackened landscapes across Australia. New life is sprouting, but with fires burning again in New South Wales and Queensland we have once more seen burnt land and smoke plumes. The findings of the Royal Commission into National Natural Disaster Arrangements.”	<u>Source:</u> The Conversation, 02 December 2020 <u>Read more:</u> https://theconversation.com/not-all-blackened-landscapes-are-bad-we-must-learn-to-love-the-right-kind-129547
90% of buildings in bushfire-prone areas aren’t built to survive fires. A national policy can start to fix this Author/s: Mark Maund, Kim Maund, Sue Anne Ware and Thayaparan Gajendran	“Last week, the Royal Commission into National Natural Disaster Arrangements (the “bushfire royal commission”) handed down its anticipated final report, with 80 recommendations on managing future emergencies.”	<u>Source:</u> The Conversation, 05 November 2020 <u>Read more:</u> https://theconversation.com/90-of-buildings-in-bushfire-prone-areas-arent-built-to-survive-fires-a-national-policy-can-start-to-fix-this-149154
3 billion animals were in the bushfires’ path. Here’s what the royal commission said (and should’ve said) about them Author/s: Ashleigh Best, Christine Parker and Lee Godden	“The Black Summer bushfires were devastating for wildlife, with an estimated three billion wild animals killed, injured or displaced. This staggering figure does not include the tens of thousands of farm animals who also perished.”	<u>Source:</u> The Conversation, 09 November 2020 <u>Read more:</u> https://theconversation.com/3-billion-animals-were-in-the-bushfires-path-heres-what-the-royal-commission-said-and-shouldve-said-about-them-149429
Frequent extreme bushfires are our new reality. We need to learn how to live with smoke-filled air Author/s: Gabriel da Silva	“As fires ravaged large sections of the Australian bush last summer, cities and towns all along the coast were blanketed in toxic smoke. Air pollutants were measured at unheard of levels across the country.”	<u>Source:</u> The Conversation, 06 November 2020 <u>Read more:</u> https://theconversation.com/frequent-extreme-bushfires-are-our-new-reality-we-need-to-learn-how-to-live-with-smoke-filled-air-149427

<p>Fire Country: How Indigenous Fire Management Could Help Save Australia (book review) <u>Author/s:</u> Victor Steffensen , Reviewed by Paulo M. Fernandes</p>	<p>“Cultural burning has been drastically restricted by western-influenced fire management around the world, and the role of Indigenous people in shaping healthy ecosystems and landscapes has been downplayed or even dismissed.</p>	<p><u>Source:</u> CSIRO Publishing, International Journal of Wildland Fire, 16 November 2020 <u>Read more:</u> https://www.publish.csiro.au/wf/Fulltext/WFv29n11_BR</p>
<p>State of the Climate 2020 <u>Author/s:</u> Bureau of Meteorology and CSIRO</p>	<p>“The Bureau of Meteorology and CSIRO play an important role in monitoring, analysing and communicating observed and future changes in Australia’s climate. The report is a synthesis of the science informing our understanding of climate in Australia and includes new information about Australia’s climate of the past, present and future”</p>	<p><u>Source:</u> The Australian Government, Bureau of Meteorology, October 2020 <u>Read more:</u> http://www.bom.gov.au/state-of-the-climate/?utm_source=facebook&utm_medium=social+media&utm_term=ee5fc682-b391-4d51-ba97-ff445977c02f&utm_campaign=sotc</p>
<p>Does intraspecific variation in demography have implications for fire management of an obligate-seeder shrub across its geographic range? <u>Author/s:</u> John W. Morgan, Michael A. McCarthy, Emily Willocks</p>	<p>“Predicting changes in the abundance of species over time is a central goal of conservation ecology. Typically, demographic data are used to parameterise models which describe population dynamics.”</p>	<p><u>Source:</u> Austral Ecology, 25 November 2020 <u>Read more:</u> https://onlinelibrary.wiley.com/doi/10.1111/aec.12981</p>
<p>Repeated fire shifts carbon and nitrogen cycling by changing plant inputs and soil decomposition across ecosystems <u>Author/s:</u> Adam F. A. Pellegrini, Sarah E. Hobbie, Peter B. Reich, Ari Jumpponen, E. N. Jack Brookshire, Anthony C. Caprio, Corli Coetsee, and Robert B. Jackson</p>	<p>“Fires shape the biogeochemistry and functioning of many ecosystems, and fire frequencies are changing across much of the globe. Frequent fires can change soil carbon (C) and nitrogen (N) storage by altering the quantity and chemistry of plant inputs through changes in plant biomass and composition as well as the decomposition of soil organic matter.”</p>	<p><u>Source:</u> ESA Journals, 07 March 2020 <u>Read more:</u> https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/ecm.1409?campaign=woletoc</p>
<p>Closing the gap between research and practice <u>Author/s:</u> Bushfire & Natural Hazards CRC</p>	<p>“One of the challenges facing the emergency management sector is the gap between research and practice. Despite the considerable investment in publicly funded and commissioned research, the application of research findings to operational practice often lags due to difficulty and complexity.”</p>	<p><u>Source:</u> Bushfire & Natural Hazards CRC, 05 November 2020 <u>Read more:</u> https://www.bnhcrc.com.au/hazardnotes/84</p>

Causes of the Widespread 2019–2020 Australian - Bushfire Season

Author/s: Deb P., Moradkhani H., Abbaszadeh P., Kiem, A. S. Engström, J., Keellings D. and Sharma A

“The recent bushfires (2019–2020) in New South Wales (NSW) Australia were catastrophic by claiming human and animal lives, affecting ecosystems, destroying infrastructure, and more. Recent studies have investigated relationships between hydroclimatic signals and past bushfires, and very recently, a few commentary papers claimed drought and fuel moisture content as the probable causes for the widespread 2019–2020 bushfires.”

Source: Earths Future, 03 November 2020 Read more: <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2020EF001671>