

SDFSFA Newsletter – August 2020



SCUBA DIVERS FEDERATION OF SA, Inc.

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OUR LEAD STORY: Election of the 2020-21 SDFSFA Committee

Members of the Federation met for the Annual General Meeting of the Federation July 22nd and elected the 2020-21 management Committee.

Executive Officers:

President - Andrew Hunter
Vice President - Tony Leggatt
Secretary - Brendan Toohey
Treasurer - Helena Wescombe-Down

Committee members:

Farzad Atefi
Merv Brash
Kerry Cook
Heather Creech (Communications)
Cathy Johnson (SDFSFA Historian)
Sara Leggatt (Membership)
Alex Suslin
Raquel Trejo

Highlights of the AGM

In addition to receiving the reports from the President, Treasurer, Communications officer and Historian, members approved the 2020-2025 Strategic Plan and its six strategies to advance the Federation's goal and objectives:

1. Build the membership.
2. Strengthen and expand our information, communications and engagement tools.
3. Increase promotion and marketing of SDFSFA and SA Diving.
4. Hold or participate in special events, advocacy campaigns and projects.
5. Strengthen the governance and management of the Federation.
6. Build the financial resources for the Federation.

Over the next five years, we hope in particular to achieve the following:

- Increase individual membership to 1,000 by 30 June 2025.
- Have 75% of SA shops and clubs as financial members by 30 June 2025.
- Publish 1 major report on the value of diving to the economy of SA.
- By 2025, have an established annual event that brings SA divers together and promotes diving to the general public.
- Undertake 3 significant initiatives -- advocacy interventions and special projects -- to promote and protect SA diving and the underwater habitat, involving and supporting SA divers.
- By 2025, sustain an annual operating budget of \$2500, with special events and initiatives to be fundraised for as needed.

The full plan can be downloaded from the SDFSFA website at <https://sdfsfa.net/wp-content/uploads/2020/08/SDFSFA-Strategic-Plan-2020-25-approved.pdf>.

The next meeting of the SDFSFA Committee will be Wednesday, 26 August, at the Arab Steed pub.

OUR SPECIAL THANKS TO STEVE REYNOLDS

After serving on the SDFSA Committee for 30 years, our most ardent champion, Steve Reynolds, is stepping down. Many, many thanks to Steve for his tireless support. We are delighted that Steve will continue to provide stories and updates for the SDFSA Newsletter, and send us tips for the SDFSA Facebook page.

UPDATE on the CUTTLEFISH ALLIANCE

The Cuttlefish Alliance Advisory Committee held its first meeting in July, outlining a number of critical issues to explore in developing a position on the 2020 reopening of the Giant cuttlefish fishery.

- The uncertainty of the science: The Giant cuttlefish can be seen to be unique and vulnerable. Cephalopod populations can recover quickly but can also disappear quickly.
- The need for robust monitoring: what monitoring has been put in place?
- The value of the educational experience: The importance of the aggregation for public education and experience of coastal marine life
- The economic tourism value: The high density is the draw card, even if a certain level of catch is sustainable. The aggregation brands South Australia; it brings tourism into the region in the winter.
- Questions on the economic value of the fishery (commercial and recreational). We must recognize that there are those who depend on fishing for their livelihoods; but the cuttlefish fishery is low value, not high value like abalone or lobster.

In addition to SDFSA, Experiencing Marine Sanctuaries, Whyalla Diving Services and Dr. Zoe Doubleday, University of South Australia, the Advisory Committee now includes representatives from Whyalla Council. At the July meeting of the Council, Councillors voted to "nominate Councillor Irene Adair and Mr R Moul; Economic Development Manager, as representatives on The Cuttlefish Alliance Advisory Committee, to formulate a position statement, in order to engage further on the matter with PIRSA and the broader community."

IMPORTANT NOTICE

Code of Conduct For Diving with Dragons



An updated Code of Conduct is now available together with promotional materials at your local dive shops. The Code was prepared by the NRM in conjunction with divers, and describes what you can do around seadragons so as not to harm them or their habitat. By following these simple tips, divers can help protect seadragons and ensure they continue to thrive into the future. A copy of the Code

can be downloaded from the SDFSAs website, at <https://sdfsas.net/wp-content/uploads/2020/08/seadragon-code-of-conduct-fact-1-2.pdf>.

CONGRATULATIONS TO:

Congratulations go to Chelsea Haebich who was “almost rendered speechless” when it was announced that she had won the inaugural Guru Award in the recent [Underwater Tour Awards](#). Chelsea’s five spectacular photos have won her the top prize, which includes a week in Tonga with the Humpback Whales. All winners received a memento pro coffee table book and a Nautilus Lifeline. The gallery of winning photos can be seen at <http://underwatertour.com.au/2020-underwater-tour-awards-winners/>. Next year’s event will be held 13-20th May.

2020 - 2021 EVENTS

South Australia

SCIENCE ALIVE! IS ON!! 6-8 November 2020. This year’s Science Alive! Exhibition at the Adelaide Showgrounds will take place this November. SDFSAs and Experiencing Marine Sanctuaries will have booths next to each other so be sure to mark this date in your calendars and come say hello.

WORLD FISHERIES CONGRESS- Adelaide -- 20-24 September 2021 – <https://wfc2020.com.au/>.

Interstate/International

NATIONAL SCIENCE WEEK 2020: 15th–23rd August 2020

National Science Week 2020 will be conducted as an online science festival. The school theme for this year is “Deep Blue: innovation for the future of our oceans”. Visit www.scienceweek.net.au for more details.

MIDE 2020 - Malaysia International Dive Expo –4-6 December 2020 - www.mide.com.my .

6th International Eco Summit Conference - Gold Coast, Queensland – 14-18 June 2021.

The combined Australian Marine Sciences Association and New Zealand Marine Sciences Society conference is cancelled. The Australian Marine Sciences Association 2021 will be held in Sydney with the theme - 'Marine Science in the Anthropocene'. Dates TBC. <https://amsa2020.amsa.asn.au/>. The New Zealand Marine Sciences Society will be held separately, dates and venue TBD.

ICRS 2021 – International Coral Reef Symposium 18th to 23rd July 2021

The 14th ICRS is being held in Bremen, Northern Germany the primary international conference on coral reef science, conservation and management, bringing together leading scientists, early career researchers, conservationists, ocean experts, policy makers, managers and the public. Visit <https://icrs2021.de/> for more details.

OZTEK CONFERENCE & OZDIVE EXPO 21 11-12th September 2021

Next year’s OZTek, the Advanced Diving Conference & Exhibition, will now be combined with the OZDive Expo, Melbourne Conference & Exhibition Centre. Visit <https://OZTek.com.au> and <https://OZDive.net.au> for more details.

STEVE'S SCIENCE STORIES for the month

Ancient Aboriginal Archaeological Sites Discovered on the Seabed

by Steve Reynolds

Thousands of years ago, sea levels were lower than what they are today. Ancient Aboriginal sites have now been found submerged in the waters off Western Australia.

Researchers have uncovered the sites preserved on the seabed in what they describe as being a first discovery of their kind. According to [The Conversation](#), some 65,000 years ago, when people first arrived in Australia, the continent was, thanks to sea levels being 80 metres lower than today, even bigger than it is now. This means that some Aboriginal Australians would have lived in places that are now submerged beneath the waves. Only now has such a site been found.

Researchers comprising of archaeologists, traditional owners, rock art experts, geologists, and specialist divers and pilots, recently completed a four-year mission. According to a [Facebook post](#), "They found two sites in Western Australia's Dampier Archipelago, featuring stone tools and other evidence of human activity. Dating technology suggests these sites were claimed by the waves some 7,000 years ago, as seas rose after the last ice age."

Details have been published in a [PLOS ONE](#) paper titled "Aboriginal artefacts on the continental shelf reveal ancient drowned cultural landscapes in northwest Australia" by Jonathan Benjamin, Michael O'Leary, Jo McDonald, Chelsea Wiseman, John McCarthy, Emma Beckett, Patrick Morrison, Francis Stankiewicz, Jerem Leach, Jorg Hacker, Paul Baggaley, Katarina Jerbić, (Dr) Madeline Fowler, John Fairweather, Peter Jeffries, Sean Ulm and Geoff Bailey.

According to the report's abstract, "This article reports Australia's first confirmed ancient underwater archaeological sites from the continental shelf, located off the Murujuga coastline in north-western Australia. Details on two underwater sites are reported: Cape Bruguieres, comprising > 260 recorded lithic artefacts at depths down to -2.4 m below sea level, and Flying Foam Passage where the find spot is associated with a submerged freshwater spring at -14 m. The sites were discovered through a purposeful research strategy designed to identify underwater targets, using an iterative process incorporating a variety of aerial and underwater remote sensing techniques and diver investigation within a predictive framework to map the submerged landscape within a depth range of 0-20 m."

The team studied navigation charts, geological maps and archaeological sites located on the land over the past four years to narrow down prospective areas before surveying the seabed. They surveyed the seabed using laser scanners mounted on small planes and high-resolution sonar towed behind boats. The team of scientific divers carried out underwater archaeological surveys in the final phase of the research to physically examine, record and sample the seabed. They discovered two underwater archaeological sites in the Dampier Archipelago - Cape Bruguieres and Flying Foam Passage. The site at Cape Bruguieres comprises hundreds of stone artefacts on the seabed at depths down to 2.4m. Traces of human activity associated with a submerged freshwater spring were

discovered 14m below sea level in Flying Foam Passage. This included at least one confirmed stone cutting tool made out of locally sourced material.

These sites were found to have been more than 7000 years old before they were submerged by rising seas. The study showed that “archaeological sites exist on the seabed in Australia with items belonging to ancient peoples undisturbed for thousands of years”.

New species of bobtail squid discovered

by Steve Reynolds

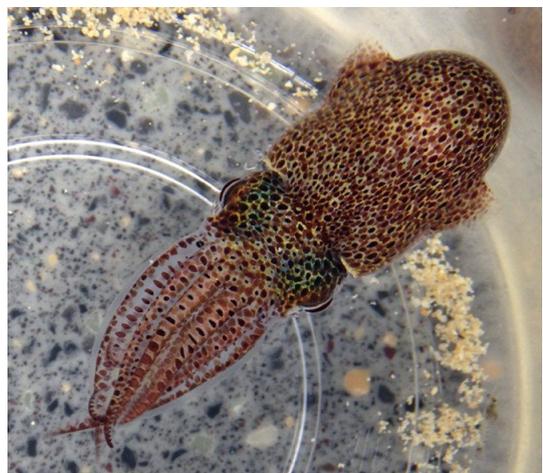
A new species of bobtail squid (genus *Euprymna*) was recently discovered in Japan. The discovery of was made when researchers at the Okinawa Institute of Science and Technology (OIST) “collected three different types of bobtail egg clutches and two types of adults in the shallow waters around the Ryukyu Islands (Okinawa and Yaeyama Islands of the Ryukyu archipelago) in the East China Sea. The eggs were hatched and reared in the laboratory and the DNA of two of the three types of hatchlings matched that of two of the adult animals that were collected at the same time.”

Radio transcript regarding the discovery can be heard at <https://www.abc.net.au/radio/sydney/programs/self-improvement-wednesday/squid/12413386>.

OIST researchers had enlisted the assistance of Dr Mandy Reid from the Australian Museum Research Institute (AMRI). Further details can be found on an Australian Museum blog at <https://australian.museum/blog/amri-news/pint-sized-perfect-brenners-bobtail/>.

The new species has been named *Euprymna brenneri* in honour of Prof. Sydney Brenner, a renowned molecular biologist and Nobel Prize winner who died in 2019.

The squid, dubbed ‘Brenner’s Bobtail’, was identified as a new species on the basis of its unique morphology and molecular characteristics. It is described in *Communications Biology* (Sanchez G., Jolly J., Reid A., Sugimoto C., Azama C., Marlétaz F., Simakov O. & Rokhsar D.S. (2019): *New bobtail squid (Sepiolidae: Sepiolinae) from the Ryukyu islands revealed by molecular and morphological analysis*. *Communications Biology*. 2: 465. Doi: 10.1038/s42003-019-0661-6) as:



- Up to about 22 mm in total body length (excluding the head and arms)
- Differs from all other species in the genus because the females have enlarged arm suckers (only the males usually have this trait)

A photo of an adult female *Euprymna brenneri*, an embryo developing inside an egg and a hatchling (all taken by J. Jolly) can be found at <https://australian.museum/blog/amri-news/pint-sized-perfect-brenners-bobtail/>.

According to the web page found at <https://australian.museum/learn/animals/molluscs/southern-bobtail-squid-euprymna-tasmanica-pfeffer-1884/>, *Euprymna tasmanica* is a close relative of

Euprymna brenneri. *Euprymna tasmanica* is known as either the Southern Bobtail Squid or the Southern Dumpling Squid. According to Allison Runck, "Members of this genus can glue sand grains to their upper body to aid camouflage with their environment".

In *Euprymna tasmanica*, "Each arm possesses four rows of suckers, with mature males having enlarged suckers on the inner and outer rows or arms 2-4. A saddle-shaped bacterial light organ* is present inside the mantle cavity. *Euprymna tasmanica* lives on sand and mud areas, often in association with seagrass beds. They are found up to depths of at least 80m. Distribution (is) Southern Indo-Pacific: found in Australian waters from Brisbane south around to Shark Bay. *E. tasmanica* emerges at night to forage for crustaceans and fish. * ("The light organ is used at night to cancel out their silhouette from predators on the seafloor. The organ is filled by luminescent bacteria that are trapped from the seawater by the organ.")

Euprymna species "bury themselves in the seafloor during the day and use their second pair of arms to rake sand grains over (their) head and body. The entire upper surfaces of their skin contain two very special cell types. One acts like a glue, holding a coat of sand over the body- so that even if flushed out of the sand by a predator the sand will remain. The second are special acid cells that can be used to disconnect the entire sand coat at once- leaving it as a sinking decoy for a predator while the squid jets away."

"Spawning typically occurs in spring and summer months when females lay pale orange eggs in loose clumps, usually at the base of seaweeds or seagrass. Hatchlings will quickly settle to the seafloor and bury in the sand. Young hatch without the bacteria needed for their light organ and must obtain this from the water column."

Details regarding *Euprymna tasmanica* can also be found on iNaturalist at <https://www.inaturalist.org/taxa/151331-Euprymna-tasmanica>.

A specimen of *Euprymna tasmanica* was found by MLSSA member Paul Liew at low tide in the shallow tide pool at the Lady Bay Reef Watch site. Details, including 7 photos (taken by David Muirhead), can be found at <https://www.inaturalist.org/observations/39397071>.



The specimen found by Paul Liew (Photo taken by David Muirhead) (Source: <https://www.inaturalist.org/observations/39397071>)

According to <https://www.inaturalist.org/observations/22122384>, MLSSA member Dan Monceaux found some in West Lakes in 2019. Details of those that Dan found in the Kingscote tidal pool can be found at <https://www.inaturalist.org/observations/9221310>.

ABOUT THE SDFSA...

SDFSA is a non-profit, incorporated membership association dedicated to the preservation and enjoyment of our unique underwater world.

JOIN US FOR FREE:

<https://sdfs.net/membership-categories/>

The more members we have, the stronger our influence. We serve as a peak body representing the interests of South Australian recreational scuba divers and the related sports of freediving and snorkelling, including the provision of information to government and the general public.

Together we can have real impact on the issues affecting the South Australian diving community.

If you wish to be added to the mailing list for this Newsletter, join the SDFSA!

You can also read about the Federation's work in monthly issues of DiveLog Australasia, Scubadiver ANZ and on our website at <https://sdfs.net>. Stay up to date with the latest news through our Facebook page, <https://www.facebook.com/scubadivesa/>.

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