

NEWSLETTER

No. 4 October 2007

SEADRAGON FOUNDATION INC.



www.seadragonfoundation.org

Welcome to our Newsletter and thank you for joining

Seadragon Foundation Inc (SFD)

Experience the sustainable management of the Leafy Seadragon through the Seadragon Foundation, tailored for the conservation challenges of the 21st century.

Events

Sunday 18th November 9.30 am register/coffee until 4pm. Friends of Gulf St Vincent annual meeting is at the Henley Surf Life Saving Club. This meeting will give presentations over the course of the day on various aspects of conservation of Gulf St Vincent. SFI President Robert Browne will give a presentation on desalination plants. Orders for the new definitive 'Natural History of Gulf St Vincent' book will be taken.

Sunday 9th December 10am. The Marine Life Society of South Australia Christmas celebration will be at Normanville meeting at the jetty. Those who want to dive can link up then; contact Phillip Hall pmhall@sa.chariot.net.au Lunch and convivial time after that. Normanville is the site of what we hope will become a series of syngnathid and inshore fish special spots for conservation diving.

**The SFI thanks Karen Whitford for producing and emailing this newsletter.
Cover image of Leafy Seadragon, Graham Short (DNA article this newsletter).**

SEADRAGON FOUNDATION INC. REPORT

It has been an exciting month for the SFI. Although we are only forming we have already made substantial contributions to the conservation of the leafy seadragon. Our desalination report is influential in targeting leafy seadragon and other syngnathids for environmental consideration in consideration of the proposed desalination plants. The studies we have been fostering to find and describe the biodiversity of syngnathids in South Australia and globally are advancing. The stimulus we provided to the conservation of the blue groper has contributed to a more affirmative conservation effort.



BAD LUCK BLUEY

Divers have been encouraging the protection of big blue groper for over 30 years.

After a vigorous debate and endorsement by other marine environment organizations, The Marine Life Society of South Australia sent a letter endorsed by the SFI to the Minister of Conservation, Hon. Gail Gago, supporting the conservation of the Blue groper and Harlequin fish.

However, the government has not protected the blue groper even after so much community concern. Both the pleading letter [MLSSA Letter cc to Honorable Minister Gago](#) and the negative response letter [Premiers Letter](#) can be found in the publications list on the SFI website <http://www.seadragonfoundation.org/SFI%20Articles/Publications.htm>



The images to the left/above show alpha western blue groper and harlequin fish taken as trophies by reef fishers.

SYNGNATHIDS AND PORT BONYTHON DESAL PLANT

We thank the Minister of Conservation, Hon. Gail Gago for presenting our conservation concerns with syngnathids through “*A Conservation Guide to the Proposed BHP Billiton Desalination Plant.*” to the EPA.

The guide to the proposed Port Bonython desalination plant can be found at

<http://www.seadragonfoundation.org/SFI%20Articles/Publications.htm>

Port Bonython Desalination .Plant. Conserv. Guide; No 1 Sept. 2007

Hon. Gail Gago wrote “I have forwarded your report to the EPA (Environment Protection Authority) and the information within it will help the evaluation of any impact from the proposed BHP Billiton desalination pilot plant and the full scale plant at Port Bonython. In particular the report provides useful knowledge of marine communities in the Port Bonython region, particularly syngnathids.”

Our members were enthusiastic about the inclusion of SuFi Seadragon’s emails in the newsletter and we will continue to publish them as they arrive. The SFI has welcomed a reciprocal sending of Newsletters with the Friends of Gulf St Vincent, and the Marine Life Society of South Australia. We also welcome our first member from the United Kingdom.

We are still establishing numerous administrative and cultural activities, and structures, to carry us in the long run so thank you for your patience.

We will be conducting our first web meeting soon and we are facing the challenge. We require an agenda, a means of discussion within the SFI, and a secure means of voting. Hopefully we can accomplish this shortly after Christmas. We will give two weeks notice of the finalization of the agenda.

Cheers Robert

WEB NEWS AND MEMBERSHIP NEWS

Karen Whitford

Hi everyone, the rains are coming and hopefully our creeks will overflow and flush out all the debris that has been building up. We have had a few rainy days this November already and there is apparently more to come.

Our membership has grown since the last newsletter with members from China and the United Kingdom. Welcome newcomers!!! We still need more members so if you know of anyone in your family or a friend please invite them to our website to join up.

Our site has increased in total monthly hits at 2317 monthly average in October from 1547 in September. This is good news and its amazing how many people are looking at it from all over the world.

SFI CONTRIBUTES TO GLOBAL SYNGNATHID SURVEY

A major initiative of the Seadragon Foundation Inc. has been to elucidate knowledge of the biodiversity of syngnathids and other inshore fish in South Australia.

After all how can you conserve marine fish when in virtually total ignorance of even the species present, and their range, distribution and biology. We like to know what we are talking about.

From when we began our conservation work on the inshore fish in 2003 it became apparent that little was known about syngnathid taxonomy and that there would be many undescribed species. There had been no significant work done in this area since the mid 80's.

We were soon finding new species that were very distinct, but other fish looked pretty similar but begged the question; Are you a different species?

Our conservation efforts can be hampered by insufficient knowledge about fish species, especially syngnathids. We had found new pipefish species in 2003 just off Adelaide suburban beaches, and are looking at several more possible species. From a biodiversity viewpoint the conservation significance of a species is increased if the species is more ancestral or representative of a species group.

One good way to tell most species and their ancestry is to use their DNA. The Seadragon Foundation is contributing to two DNA projects for South Australian syngnathids. One was begun several years ago and concerns one group of pipefish found in South Australia.

The others involved in the Seadragon Foundation, including Kevin Smith, David Muirhead, Karen Whitford, Jasmine Stewart - surveying the syngnathids on the north coast of Kangaroo Island. We were especially interested in providing DNA samples for a project by Graham Smith and Dr Healy Hamilton – Californian Academy of Science, who joined the survey – to create the entire ancestral tree of the syngnathids. Besides contributing to this pioneering scientific enterprise we also will find out the species status of the types found on northern Kangaroo Island. There are several species on the north coast of KI that may be threatened and greater scientific knowledge is urgently needed. The area is close to the seahorse die-offs on York Peninsula and dead leafies are often found washed up on beaches.

Here is a recent email from Graham Short who is completing an ancestral tree of the syngnathids including the Leafy Seadragon.

“ At this point we have extracted DNA and performed PCR for four mitochondrial and one nuclear gene fragment for many syngnathid genera including pipefish, seadragon, seahorse, seahorse, and also coronet fish, trumpet fish, snipefish, and out groups including different genera of sticklebacks . This represents a huge amount of work and we are still receiving and have yet to receive other genera of pipefish, so it's all very exciting. The next three weeks will be focused on creating phylogenetic trees from the gene sequences and analyzing the data to look at patterns in morphology and geography.”

Another study we are supporting is a specific analysis of the DNA of the Monkeytail pipefish. This group scientifically called the *Stigmatopora* sp. are very special to South Australia, as we have the highest diversity of this unique and ancient group. The monkeytails are equal in evolutionary importance to the whole 30 or so seahorse species put together.

Prof. Dawson, University of California, has been working on the group for a few years now and we are excited to see his results. They will tell us if a type our divers found that looks like a new species really is. Guess we are going to find out after xmas.

“Hi Michael; I am writing an article for the Seadragon Foundation Newsletter which refers to your work on the *Stigmatopora*. Any more news particularly about the little red nosed type we sent through last. Cheers Robert.

Hi Robert; We're getting very close ... I am disappearing into the field for 5 weeks, though. Back late-December. Hopefully the tech in my lab will finish the sequences while I'm away. Best, Mike.”

To learn more about the Seadragons collaborations with DNA projects read the occupying document in our publications list

<http://www.seadragonfoundation.org/SFI%20Articles/Publications.htm>

Syngnathid Molecular Phylogeny

Two calamary lovers at Normanville Beach



This beautiful image by David is of a pair of southern calamari, *Sepioteuthis australis*, living squid rings to the gastronomics among us.

Jewels of the sea to many.

David says “Hi there, Just thought you might like this shot taken(31-01-06) at the hotspot at Normy, despite no syngnathids seen in it!Cheers....David.

Ed: Normy is the site where MLSSA is having their dive, see cover this newsletter. So there are other things to see beside syngnathids there.

SuFI Seadragon

Received: Saturday, 24th October 2007 2:36 PM

To: Jasmine, C/O Seadragon Foundation Inc.

Subject: SuFI Hello

Email: [REDACTED]@[REDACTED]

Dear Jasmine

It was interesting hearing about all the SFI activities, and all the new members. I am so happy with you all joining together to protect Bluey and his family. He said that when he was young he almost got speared by divers. The same divers are his friends now and they have great times together. Lots of people said that they would protect Bluey. Blue says the fishers are now deliberately targeting the biggest old fish like him. Some protection! Anyway keep trying maybe things will get better.

So much has happened since I last wrote. Bluey came home from hospital and soon made short work eating up the bad sea urchins. He was skinny after not eating much because of his sore mouth but now is putting on weight nicely. Bluey still talks with a mumble and says SluFI instead of SuFI, and lurchin instead of urchin. So the other day saw Bluey lurchin toward SluFI with a smile on his face.

Bluey was very proud and came to invite SluFi – me - to his 50th birthday. “SluFI ould u luike tlu clum tlu mey blirthay”. “Sure!” I said “Count me in.”

There are going to be a lot of his family there. Bluey and his wife have a lot of children; seven million two hundred and eighty one thousand four hundred and twenty three children in all 7,281,423. Scary! Huh! So many presents where would Bluey put them all? And where to have the party?

Blue groper are a bit the opposite to seadragons when it comes to having babies. Seadragon only have four hundred children – 400 – and the children move further from home as they grow older. What about Blueys 7,281,423 children. Are there ever too many around for their Blueys birthday.

My blue groper book – that bluey gave me for my 16th birthday said. “Blue groper’s minute eggs and tiny babies are at the mercy of the tides, waves and currents. For months they drift far away and live alone in the open ocean like dust blowing in the wind. The survivors after their lonely and dangerous journey find their way back to the reefs.”.

In another part it said “Many babies just disappear, but with so many eggs the blue groper always has dozens of relatives from the length from 10 cm to adults when the habitat is un-fished. At first the babies hide in the shallows eating tiny mussels and other shellfish, but then brave deeper water of two to three meters depth and grow for ten years until they are sub-adults 20-60 cm long. Along open coasts these sub-adults are not abundant and are at densities of one to eight every hundred meters of rocky coastline.”.

Soooo! Bluey has only invited the older children to his party, making a respectable list of 25 relatives, mother, fathers, uncles, aunts, grandmothers, grandfathers, nieces, nephews, sons and daughters, and SuFI and her cousin Jade, Goby, wrasse, and the weed fish clan. I am tired now, from all this reading and writing. I wonder what to buy Bluey for his present and what will Jade wear. Bye bye. Love SuFI xxx