



# Seagrass-Watch E-Bulletin

**31 October 2016**

Seagrass-Watch's electronic news service, providing marine and coastal news of international and national interest. Abbreviated/edited articles are presented with links to their source. Seagrass-Watch HQ recommends that readers exercise their own skill and care with respect to their use of the information in this bulletin and that readers carefully evaluate the accuracy, currency, completeness and relevance of the material in the bulletin for their purposes. You are free to distribute it amongst your own networks.

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## NEWS

### **Scientists discover an ancient sea cow in a paving stone in Spain**

31 October 2016, Knowridge Science Report

Last December, paleontologists stumbled upon a new discovery of a fossil sea cow in a very unexpected place – in a limestone paving stone in Spain! The finding is presented this week at the Society of Vertebrate Paleontology meeting in Salt Lake City, Utah. Researchers describe this remarkable finding and how it is changing our understanding of sea cow evolution.

The unusual pavement was spotted in the picturesque town of Girona, northern Spain. A local geologist first noticed the fossil and submitted it to Paleourbana, an online database of urban fossils worldwide. As word of the fossil spread, paleontologists from the Museum für Naturkunde, Berlin, visited Girona to take a look. Closer inspection of the paving stones revealed that the complex array of shapes was slices of the backbone and skull of an ancient marine mammal. Based on the skull and teeth, they concluded that it was a sirenian, or sea cow, a member of a group of large, plant-eating marine mammals represented today by the living manatee and dugong.

Once the significance of the fossil was understood, researchers worked with the mayoralty of Girona and local geologists to have the 50x30cm large paving stones removed for study. The scientists discovered that the 'Girona

Sea Cow' is most likely a representative of Prototherium, a genus of extinct sea cows from Spain and Italy. However, this finding is particularly important because the rocks from which the paving slabs were quarried are 40 million years old. Therefore, the finding represents one of the oldest sea cows in Europe, making it a unique opportunity to enhance the knowledge on the evolution and diversity of this marine mammal group that arose about 50 million years ago.

*more..... <http://www.seagrasswatch.org/news.html>*

### **Gwynedd summit calls for action over plight of seagrass meadows (Wales, UK)**

*25 October 2016, Cambrian News - Arfon & Dwyfor*

More than 140 scientists have signed a statement urging the world's media to publicise the plight of one of the planet's most overlooked, yet important natural environments. The statement, organised following a summit at Nant Gwrtheyrn, Swansea University academic and president of the World Seagrass Association, Dr Richard Unsworth, calls on all national governments and international policy-makers to "take local, regional and global action to ensure the future survival of sea grass meadows".

The signatories from 29 different countries include world-renowned marine biologists Prof Carlos Duarte, director of the Red Sea Research center at King Abdullah University of Science and Technology, and Prof Jeanine Olsen, chair of the Genomics Research in Ecology and Evolution in Nature (GREEN) group at the University of Groningen. The statement highlights the global importance of seagrass meadows, which are comprised of underwater flowering plants rather than the more common seaweed.

The motive for the statement's release is to bring an end to "the loss of seagrass from common human induced impacts such as poor water quality, coastal development, and destructive fishing."

*more..... <http://www.seagrasswatch.org/news.html>*

### **Barrier Reef's bleak report card reveals pollution levels too high (Australia)**

*20 October 2016, ABC Online*

The Federal Government has delivered another bleak report card for the health of the Great Barrier Reef, revealing pollution loads are still too high in most of its catchments.

The Great Barrier Reef Report Card 2015 shows sugarcane and grazing management and river catchment pollution have been graded either 'E' for very poor or 'D' for poor. It also stated that the overall inshore marine environment and the seagrass there were in poor condition in 2014-2015.

Federal Environment Minister Josh Frydenberg acknowledged there was significant work to do, but said there were some improvements. Queensland Environment Minister Steven Miles said the report shows parts of the reef are suffering. Mr Miles said the poor results in the report card are due to the former Newman government's failure to make progress on reef protection.

*more..... <http://www.seagrasswatch.org/news.html>*

### **GBR: Governments must spend more to save World Heritage Area, green groups say (Australia)**

*20 October 2016, ABC Online*

Funding for Great Barrier Reef protection is inadequate and this is reflected in the latest poor assessment of reef health, which could prompt UNESCO to declare the World Heritage Area "in danger", conservationists say.

The Great Barrier Reef Report Card 2015 has given the reef an overall grade of D, or poor. Sugarcane and grazing management as well as river catchment pollution have been graded E (very poor) or D in most regions. Inshore marine environment and seagrass levels are also poor. Sean Hoobin from the World Wildlife Fund said poor funding levels were largely to blame for the latest results. He said both the federal and state governments needed to boost spending on reef protection ahead of UNESCO's World Heritage Committee review in December. Mr Hoobin said report cards had been saying the same thing for years.

Imogen Zethoven from the Australian Marine Conservation Society agreed more funding was crucial, saying it had to be focused on improving farm practice, reducing land clearing and putting a legal cap on fertiliser run-off. The Reef Alliance, a coalition of farm lobby groups, natural resource managers and government agencies, acknowledged the report was sobering. But spokeswoman Ruth Wade said it did not include major policy changes and projects rolled out over the past 12 months. Ms Wade acknowledged it would be a struggle to meet the ambitious reef targets by 2018, but that more funding from both governments would help.

*more..... <http://www.seagrasswatch.org/news.html>*

## **Seagrass (Wales, UK)**

18 October 2016, BBC Radio Wales

Adam Walton finds out about seagrass, which forms underwater "meadows" and plays a vital role in the ecology of the oceans. Adam is joined by Dr Richard Unsworth, a bioscientist based at Swansea University, and Ben Jones, from the Sustainable Places Research Institute at Cardiff University. They explain the importance of seagrass and how it is declining due to poor water quality and pollution. But also, there is some hope for improvements as governments and agencies are persuaded to monitor water quality and become aware of the crucial role it plays in sustaining fish stocks and stabilising the ocean bed environment.

We also hear from Dr Johan Eklöf, of the Department of Ecology, Environment & Plant Sciences at Stockholm University, who has been researching the importance of bio-diversity for the preservation of healthy seagrass. Len McKenzie from James Cook University in Queensland, Australia explains his work with seagrass on the Great Barrier Reef, and the role of seagrass meadows as a vital resource for dugongs and turtles.

*more..... <http://www.seagrasswatch.org/news.html>*

## **Coalition urged to regulate Indigenous hunting of endangered animals (Australia)**

11 October 2016, The Guardian

The Turnbull government is considering greater regulation of Indigenous Australians' hunting of dugongs and sea turtles. Malcolm Turnbull has asked the environment minister, Josh Frydenberg, to investigate serious complaints that vulnerable and endangered animals are being subjected to great cruelty by some Indigenous families and killed merely for commercial purposes, not cultural purposes.

The Coalition MP Warren Entsch raised the matter in the Coalition party room on Tuesday. He showed the partyroom a photo – since seen by Guardian Australia – of a green sea turtle lying upside down on a beach, its flippers cut off and its breast plate removed, its innards exposed. He told his Coalition colleagues the turtle had not been killed before it was mutilated, and it had been left to die in agony because its intestines were found to be inflamed (a sign the animal was diseased). He referred to scores of other incidents involving dead baby dugongs and boatloads of dead sea turtles that he said were killed by Indigenous hunters. He said some Indigenous families were killing the animals for commercial gain and selling the meat to all parts of the country. He called for a moratorium on the hunting of the animals in areas where they were deemed vulnerable so authorities could determine how many were left. He said vulnerable animals should only be allowed to be eaten where they were hunted, rather than flown around the country to be sold for a profit.

Frydenberg has accepted Turnbull's request to investigate the matter. He said Indigenous rangers working on the far north Queensland coast were trying to protect the animals, and many of the communities in which they worked had put their own prohibition on hunting the animals, but they lacked the authority to enforce the prohibition.

*more..... <http://www.seagrasswatch.org/news.html>*

## **Seagrass is a marine powerhouse, so why isn't it on the world's conservation agenda?**

11 October 2016, The Conversation UK

Seagrass has been around since dinosaurs roamed the earth, it is responsible for keeping the world's coastlines clean and healthy, and supports many different species of animal, including humans. And yet, it is often overlooked, regarded as merely an innocuous feature of the ocean.

But the fact is that this plant is vital – and it is for that reason that the World Seagrass Association has issued a consensus statement, signed by 115 scientists from 25 countries, stating that these important ecosystems can no longer be ignored on the conservation agenda. Seagrass is part of a marginalised ecosystem that must be increasingly managed, protected and monitored – and needs urgent attention now.

As the WSA statement calls, seagrass meadows must be put at the forefront of marine conservation today. We need to increase its resilience by improving coastal water quality, prevent damage from destructive fishing practices and boating, include seagrasses in Marine Protected Areas and ensure that fisheries aren't over exploited. Seagrasses also need to be managed effectively during coastal developments, and steps taken to ensure recovery and restoration in areas where losses have occurred.

The scientific community must be more united, not only in its work, but in engaging more actively with the general public, coastal managers and conservation agencies too. Seagrass ecosystems must fully pervade policy around the globe too, as well as the consciousness of our global coastal communities. For the sake of future generations we need to work together to ensure the survival of the world's seagrass meadows now.

*more..... <http://www.seagrasswatch.org/news.html>*

## **Matthew could deliver mixed bag for the Indian River (FL, USA)**

08 October 2016, Florida Today

In the short-term, Hurricane Matthew's surge likely benefited the Indian River Lagoon's water quality, diluting pollution and algae that clouds out seagrass and kills marine life. But the storm also pushed pulses of nitrogen and phosphorus from farms, lawns and septic tanks along the lagoon watershed. And in the longer-term, those two nutrients can fuel harmful algae blooms. So the storm's benefits or banes remain to be seen.

Seagrass impacts mostly depend on the direction and duration of the wind. Long fetches of wind over long distances in the lagoon can move sediments around and tear seagrass out. Hurricanes can also cause muck sediments to fan out from residential canals into the lagoon at large, smothering some seagrass beds.

more..... <http://www.seagrasswatch.org/news.html>

## **ECU research finds climate change could stop smelly seaweed on beaches (Australia)**

06 October 2016, Community Newspaper Group

Climate change could mean the end of piles of smelly seaweed on WA's south west beaches, ECU research has found. The university's Centre of Marine Ecosystems recently investigated the potential shift of species of marine life – including seagrass, seaweed, fish, turtles and dugongs, as ocean temperatures warm. Lead researcher Associate Professor Glenn Hyndes said one of the potential impacts of the process, known as 'tropicalisation', was herbivorous fish species moving south from the waters of sub-tropical WA.

Prof Hyndes and colleagues used information on projected sea temperature rises to predict the distribution of species of seagrass, fish, turtles and dugong in 2100. They found the annual mean sea surface temperature off the coast of WA had been increasing by about 0.1 degrees Celsius per decade for the past 110 years. Prof Hyndes said the changes predicted here were more rapid than elsewhere in the world.

The journal Biosciences published the research in an article titled 'Accelerating Tropicalization and the Transformation of Temperate Seagrass Meadows' in September.

more..... <http://www.seagrasswatch.org/news.html>

*Related article:*

*Tropical marine species predicted to compete with western rock lobster for seagrass meadows (ABC Online)*  
<http://www.abc.net.au/news/2016-10-07/seagrass-lobster/7913852>

## **Returning home? Sightings of dugongs increase in Seychelles' Aldabra atoll (Seychelles)**

03 October 2016, Seychelles News Agency

Nine separate sightings of dugongs within the space of a month have left conservationists working on the Aldabra atoll filled with hope that the rare mammals may decide to return to the Seychelles. Once a common sight throughout the archipelago of 115 islands, they disappeared entirely from view in the region. But a few may have escaped to the isolated refuge of Aldabra and the nearby islands surrounding Madagascar.

One of the furthest-flung group of islands in the Seychelles archipelago, the Aldabra atoll is one of the most remote and difficult places to access, even for citizens of the island nation. The area is a special nature reserve protected by the Seychelles Islands Foundation (SIF), and only conservation officers, scientific researchers and a few very carefully selected visitors are allowed on the ring of coralline islands with its shallow central lagoon. According to the SIF, between July and August this year the team reported nine separate dugong sightings, the highest number of opportunistic sightings recorded annually since the Aldabra research station was established in the early 70s.

The SIF hopes that the increased number of sightings indicates that Aldabra's dugong population is increasing, and several observations of female dugongs with juveniles in Aldabra's lagoon suggest that the site plays an important regional role as a dugong breeding and nursery area.

more..... <http://www.seagrasswatch.org/news.html>

## **Clams could help give muscle to seagrass beds (USA)**

30 September 2016, Bradenton Herald

Bald patches in seagrass around Port Manatee will likely fill in and grow with the help of an Eckerd College marine science professor and over a half-million clams. With \$59,150 from the Tampa Bay Estuary Program Restoration Fund, Bruce Barber began his two-year research in September on how planting native southern quahog clams, *Mercenaria campechiensis*, in seagrass beds could improve the sediment quality.

Barber is also the executive director of Gulf Shellfish Institute, which was created to promote shellfish aquaculture and research like his own. Barber hypothesizes that the clams will take nutrients from the water column and distribute them in the sediment through their fecal matter, helping seagrass to grow in a way other than clearer water.

Aside from commercial fisherman negatively affecting the bi-valve population, Barber said, the most damaging thing to the population is dredging and filling. Around 2000, Isiminger said, the port transplanted and protected 20 acres of new seagrass beds before they impacted 5.3 acres of seagrass for two dredging projects in 2005 and 2011. But even with the port's mitigation efforts, there were some unsuccessful, barren spots.

*more.....* <http://www.seagrasswatch.org/news.html>

## CONFERENCES

### **Coastal & Estuarine Research Federation 24th Biennial Conference (CERF2017) (Providence, Rhode Island, USA, 5-9 November 2017)**

Theme: Coastal Science at the Inflection Point: Celebrating Successes & Learning from Challenges

The CERF 2017 scientific program offers four days of, timely, exciting and diverse information on a vast array of estuarine and coastal subjects. Presentations will examine new findings within CERF's traditional science, education and management disciplines and encourage interaction among coastal and estuarine scientists and managers. Additionally, the Scientific Program Committee plans to convene special sessions and workshops that promote intellectually stimulating discussions. Join us and over a thousand of your colleagues to network, celebrate our work, learn from each other and grow within our amazing profession.

*for more information, visit* <http://www.erf.org/cerf-2017-biennial-conference>

### **The 13th International Seagrass Biology Workshop (ISBW13) and World Seagrass Conference (June 2018, Singapore)**

Theme: Under pressure – Seagrass science and conservation in stressful environments

The International Seagrass Biology Workshop (ISBW) is the only international meeting specifically tailored to seagrass scientists, professionals and students. The International Seagrass Biology Workshop (ISBW) provides a good opportunity for the scientists working on various aspects of seagrass ecosystems to come together and discuss their latest findings. The ISBW13 will be held in June 2018 at the National University of Singapore, Singapore, organized by National University of Singapore, National Parks Board, and DHI Water & Environment, Singapore.

*more information soon....*

## SEAGRASS-WATCH on YouTube

**Seagrass: Pastures of the sea** <http://www.youtube.com/watch?v=66Y5vgswj20> or <http://www.seagrasswatch.org/seagrass.html>

Presentation on what seagrasses are and why they are important (over 43,225 views to date)

## ...seagrass matters blog

**World Seagrass Association blog** <http://wsa.seagrassonline.org/blog/>

Keep up to date on what's happening around the world from the WSA with regular updates from WSA President Dr Richard Unsworth and *notes from the field* by Dr Siti Yaakub.

## FROM HQ

**Past E-bulletins** <http://www.seagrasswatch.org/publications.html#ebulletin>

**Frequently Asked Questions** <http://www.seagrasswatch.org/faq.html>

**Seagrass-Watch Magazine** <http://www.seagrasswatch.org/magazine.html>

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