

WILDLIFE DIARY

November 2009



Great Finds

Did You Know?

Dugongs, *Dugong dugon* sighted on Seagrass Watch trip to Blue Hole (North of Crab Is) near Moreton Island, and plenty of **White-spotted shovelnose rays**, *Rhynchobatus djiddensis*, abundant **Green turtles**, *Chelonia mydas* and **Bottlenose dolphins**, *Tursiops spp*, playing in the wake of the vessel.

Six of the seven species of **seagrass** found in Moreton Bay found at the Blue Hole.

POPULATION MATTERS

If you are one of those choosing to have more people and to consume resources far beyond your needs, then, as the planet warms, the loss of biodiversity accelerates, and countless millions are displaced by rising sea-levels and climate change, do me a favour and accept responsibility for your actions. Above all else, please do not embarrass me or yourself with protests of uncertainty and calls for more research. We know the problem, it is us.

Harry F. Recher, 19 August 2009

Christmas beetles

Christmas beetles (*Anoplognathus* species) are members of the family Scarabaeidae. There are 34 species of Christmas beetle distributed throughout Australia, although most species occur in the higher rainfall areas of the southern and eastern states. Adults beetles are usually between 20 and 30 mm in length, have small clubbed antennae and spiky legs. Depending on the species, Christmas beetles come in a range of colours including: pale to dark brown, green and iridescent green. Christmas beetle larvae have a distinctive 'C' shape and are often called curl grubs. They inhabit the soil throughout grassland areas, and can be found in: agricultural and native pastures, grassy woodlands and suburban gardens.

Christmas beetles have a seasonal life cycle, which may be annual or biennial depending on the climate of a particular region. From December to January adult Christmas beetles mate and lay eggs into the soil surface. Larvae develop through three stages (instars), and in warmer areas of the country spend one winter in the soil, emerging as adults the following spring. In cooler parts of the country larvae spend two winters in the soil. Several waves of emergence can occur from late November through to February depending on: different species, individuals passing through one or two-year life cycles and timing of rainfalls. Christmas beetles emerge late afternoon and can fly distances of several kilometres.

Did you know Australian government spends millions of dollars on monitoring and evaluation effort on testing the null hypothesis 'fishing does not kill fish' in the name of defending the creation of Green Zones? Perhaps a more cost effective method would be to go to the local primary school and ask a small child: "If we stop killing all the fish in a place do you think there may be more of them and the ones left may be bigger?"

Did you know Moreton Bay supports the largest population of dugongs adjacent to a major metropolitan centre in the world?

Did you know the **Leaden Sand Snail**, *Polinices sordidus*, grows to about 50mm yet lays its eggs in a jelly matrix which rapidly absorbs water swelling to a kidney-shaped egg jelly over 100g in weight? Hold one up to the light and you will see very small spots inside, these are the eggs.

Did you know there has been a massive **Cyanobacterium**, *Lyngbya majuscula* bloom in Moreton Bay? Large areas of the seafloor, including seagrass meadows, have been blanketed by lyngbya. Large floating mats of Lyngbya are now washing up on the Western shores of Moreton Bay.

Did you know the humble sea squirt could well be the envy of many: the marine organism never has to worry about contraceptives or IVF as sea squirts have a natural ability to control their reproductive cycle, becoming more or less fertile as required. PhD student with UQ's [School of Integrative Biology](#), Angela Crean found marine organisms could tailor their reproductive cells depending on the level of competition in the sea. When there are lots of competing males trying to fertilise the eggs of females, males produce larger, more competitive sperm that live for longer. Similarly, when females detect that there are too many males competing for her eggs (too many sperm can kill the eggs of some organisms) the females 'play hard to get' producing smaller eggs that are harder for searching sperm to find. These changes make sense if you're stuck to a rock like sea-squirts are.

Great Walks

If you get a chance a walk around the sand flats surrounding the Blue Hole has to be a memorable one. All manner of sea creatures can be seen.



WWW

Population matters
www.population.org.au

Sea Level

<http://www.aph.gov.au/house/committee/ccwea/coastalzone/report/Final%20Report.pdf>

Lyngbya updates

http://www.derm.qld.gov.au/environmental_management/coast_and_oceans/marine_habitats/lyngbya_updates/monitoring_update/index.html

Sea Squirts

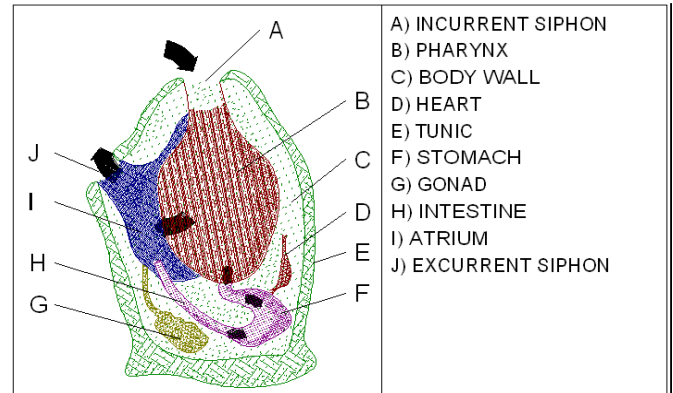
Ascidians belong to the subphylum Urochordata - one of the major groups of the phylum Chordata, which includes the vertebrates (fishes, amphibians, reptiles, birds and mammals). Although you don't look much like a sea squirt now, during development before you were born, you had the same characteristics present in all chordates at some stage of their life.

These characteristics of chordates include:

- a nerve cord along the back of the body
- a 'notochord' or firm rod of cells beneath the nerve cord (this is your backbone)
- gill slits (they have disappeared now in some chordates, but were present during evolutionary development).

Ascidians are an evolutionary link between invertebrates and vertebrates. They have a primitive backbone at some stage of their life cycle, but in other aspects they resemble invertebrates.

Most ascidians are hermaphrodites (produce both eggs and sperm) and reproduce by external fertilisation (releasing eggs and sperm into the water). The free-swimming larva they produce are known as ascidian tadpoles. After a few hours, the 'tadpoles' secrete slime, and attach themselves to a rock surface head-first, and then absorb their tail. Adult ascidians are 'sessile' (unable to move around) and filter food particles from the water by pumping water in one siphon and out the other.



Their common name of sea squirt arises from their habit of squirting a jet of water when you stand on or near them when they are uncovered at low tide.

A number of species can be found in Moreton Bay. One of the most obvious is ***Eudistoma elongatum*** as it looks like a cluster of white or cream sausages growing to 1.5 metres in length and 5 – 20cm in diameter but generally they grow to 30cm. Each sausage is actually a cylinder or tunic containing numerous small individuals. They can be found on the jetty pylons at Manly and Amity Banks and becomes more prevalent during summer. This species has found its way to New Zealand and is now a major problem in their marine aquaculture industry. ***Leptoclinides rufus*** is a robust often extensive sheet like colony of sea squirts, opaque to marbled pattern of orange, black and grey they can cover extensive areas of seagrass. This species has been seen in a variety of places, in some cases covering extensive areas of seagrass in the Ormiston area. ***Botryllus schlosseri***, Sea Daisy, is another sheet like colony of sea squirt with small brightly coloured zooids arranged in a circle. Another eye-catching Sea Daisy is ***Botrylloides leachi***. Species common along the rocky shores and harder substrates are ***Ritterella dispar***, an attractive flat topped slightly opalescent and translucent pinkish blue species that forms colonies. Individual animals can be found like ***Ascidia emperes*** a solitary 60mm long cloudy grey in color. In this species the siphons are quite obvious while ***Microcosmus exasperatus*** another solitary species is 50mm long, squat and orange in color. This species is readily found from Wynnum to Ormiston.

Source: http://faunanet.gov.au/wos/group.cfm?Group_ID=16

Never doubt that a small, group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. Margaret Mead.

