MangroveWatch
Newsletter No. 7
February 2012

Happy New Year

Welcome back to another year of Mangrove Watching. This year celebrates our third year and we'd like to thank you all for your dedication and time.

You will find the usual array of articles in this edition; including latest trends, interesting facts about mangroves and the relevant tide times on the back page for February and March .

Looking forward to hearing from you soon to book kits and best of luck for the new year.

Kind Regards

Alix Baltais

An interesting find from our Nudgee Beach site – Barnacles on a Mangrove Leaf

Be sure to send us any interesting photos that you've taken and well put them on the website.

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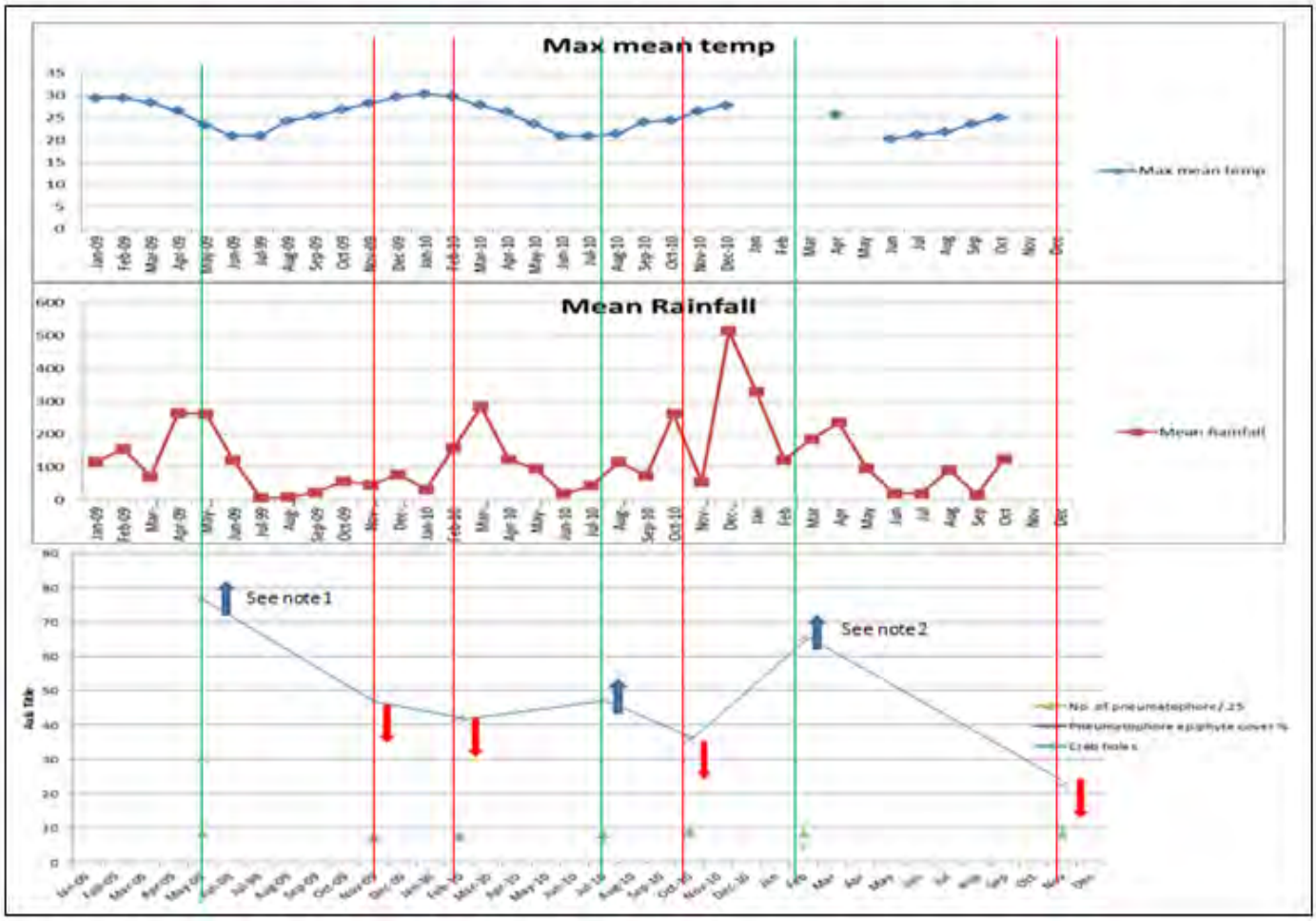
Mangrove Trends

Notes

Mangroves are primarily distributed according to temperature and rainfall regimes.

Note 1: Epiphyte cover on pneumatophores is one feature that had been showing a potential seasonal trend. While percentage cover for different sites varies, epiphyte cover in winter is beginning to show higher percentages across transects and sites. This is consistent with the findings made by Saifullah and Ahmed (2007) who found epiphytic algal on grey mangrove, *Avicennia marina* were more common in shaded areas and also during colder months.

Note 2: Twilley *et al* (1985) also showed nutrients influenced Epiphytic algae growth. High rainfall events in Nov – Dec bringing increased nutrients maybe a cause for a reverse in the expected winter/summer seasonal trends. The long term downward trend in Pneumatophore epiphyte cover is worth noting.



We have started to put some fact sheets together on the Mangrove Watch sites. The fact sheets give an overview of the mangrove species found at particular sites and presents some trending information. The above chart highlights how temperature can affect the growth of Epiphyte cover on pneumatophores.

For more details visit: http://tinyurl.com/78ra2p5

World Wetland Day

2nd February 2012

160 Contracting Parties
1,994 Designated Sites
191,860,656 Total Surface area (hectares)
940,000,000 International Tourists




To celebrate the end of Ramsar's 40th year they produced a photo mosaic illustrating the diversity and beauty of wetlands around the world.

See the mosaics click on ...
http://www.40thramsar.org/mosaics.html

Science in the Grandview Hotel
http://tinyurl.com/7pce6by

Mangroves in the Media

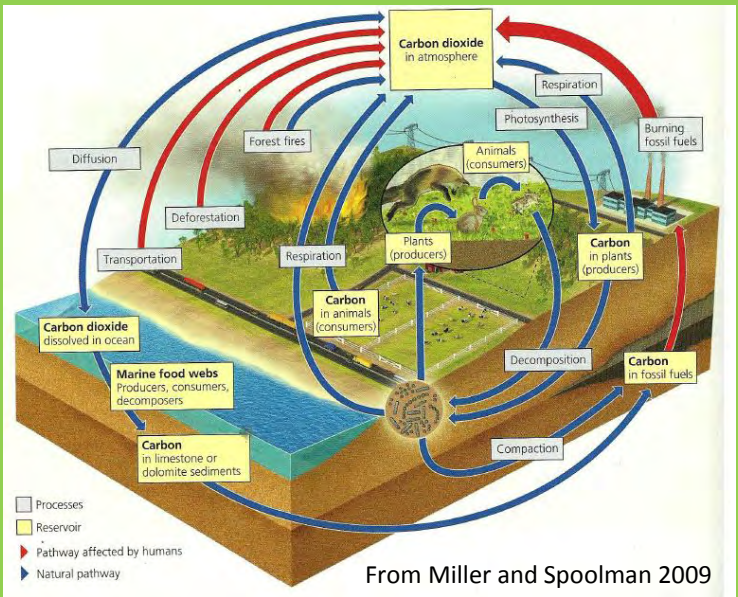
A mangrove shield against storm surges

By Juan Escandor Jr.
Inquirer Southern Luzon
Full article: http://newsinfo.inquirer.net/138183/a-mangrove-shield-against-storm-surges

CALABANGA, Camarines Sur [Philippines] — With over five hectares of green canopy rising and creeping above the shallow tidal flat, a mangrove plantation in Calabanga town in Camarines Sur has been attracting volunteers since 2009.
The mangrove project in Cagsao, 39 kilometers northeast of Naga City, is part of the community's disaster risk reduction and mitigation plan, according to its barangay chair, Pascual Sta. Ana.
Cagsao, a coastal village highly vulnerable to storm surge sits on the side of a steep hill before dropping to the narrow shoreline. It has over 1,600 people, mostly fishermen. In all, 730 families are clustered in seven zones, 21 of them living in front of the mangrove plantation.
Sta. Ana said the project is one of the small-scale measures undertaken by the community so it could have a natural buffer against storm surges…… continued on weblink.

Carbon Cycle

After the last newsletter, some interest was generated about carbon sinking so here is some more information on the carbon cycle and why mangroves play such a critical role.



From Miller and Spoolman 2009

Wetlands represent the largest portion of terrestrial carbon sequestration and as such Mangroves also play a very significant role in the carbon cycle (Chmura *et al*., 2003). Mangrove forests have exceptional productivity where below ground biomass production can extend to 8 meters deep (Chmura *et al*., 2003). The net sequestration is further enhanced in this tidal environment due to extensive sediment accumulation from on shore runoff (Chmura *et al*., 2003).

The carbon cycle is a complex process based on inputs and outputs in the form of photosynthesis and aerobic respiration by the earths organisms. Plants sequester atmospheric carbon by photosynthesis, other organisms consume the carbon through the food web and then return carbon to the soil by decomposition. The carbon is then returned to the atmosphere via respiration and the process begins again (Miller and Spoolman, 2009). Furthermore, humans have enhanced this process adding new avenues of carbon movement by the burning of fossil fuels, increased prevalence of forest fires and extensive deforestation.

Greenhouse warming is likely to result in a diminished ability for mangroves and other tidal wetlands to sequester carbon if tidal regimes are altered . Rising sea levels will alter the areas in which mangroves can grow, and as coastal development increases the area in which mangroves could expand into is limited thus increasing potential for wetland loss (Chmura *et al*., 2003).

Chmura. G L, Anisfeld. S C, Cahoon D R and Lynchh J C, 2003, “Global carbon sequestration in tidal, saline wetland soils”, GLOBAL BIOGEOCHEMICAL CYCLES, vol. 17, no. 4, pp (22) 1-12.
Miller. G T and Spoolman. S E, 2009, Living in the Environment, Brooks/ Cole Cennage Learning, Belmont, California, USA.

MangroveWatch surveys are undertaken three times a year. The **February/March** monitoring period is upon us and there is a limited number of good tide times – see tide times opposite (Brisbane Bar). Those who have been trained and have sites established should choose from the very limited number of days and email Alix at seagrassmb@gmail.com to book a kit.

Please give plenty of notice (at least a week).

Kit Checklist

- ❑ Compass
- ❑ Clipboard
- ❑ Hazard Form
- ❑ Survey Sheets
- ❑ QPWS Permit
- ❑ Site Information
- ❑ Info sheets (Species and Epiphytes)
- ❑ Quadrat Identifier
- ❑ Tape Measure
- ❑ Quadrat
- ❑ Digital Camera
- ❑ Pencils
- ❑ Ruler
- ❑ Clip Lock Bags
- ❑ Rubber Gloves
- ❑ First Aid Kit

Please check your kits when receive them and notify us immediately if there are item missing

Wear enclosed footwear, hat & be sun smart

Thank you

Thankyou to all volunteers for generously giving their time to this valuable community monitoring program.

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Wildlife Preservation Society of Qld Bayside

PORT of BRISBANE
Here for the future

Good Tides

Month	Day	Time/height in metres
February	Sat 04/02	1340 0.76m
	Sun 05/02	1427 0.65m
	Mon 06/02	1510 0.56m
	Tue 07/02	1551 0.48m
	Wed 08/02	1630 0.41m
	Thu 09/02	1708 0.36m
	Sat 11/02	0546 0.35m
	Sun 12/02	0631 0.46m
	Mon 13/02	0723 0.60m
	Tues 14/02	0827 0.73m
	Sat 18/02	1342 0.60m
	Sun 19/02	1432 0.51m
	Mon 20/02	1516 0.46m
	Tue 21/02	1553 0.44m
	Wed 22/02	1625 0.43m
	Thu 23/02	1654 0.43m
	Sat 25/02	0524 0.51m
	Sun 26/02	0557 0.60m
March	Mon 05/03	1354 0.62m
	Tue 06/03	1438 0.50m
	Wed 07/03	1519 0.40m
	Thu 08/03	1559 0.32m
	Fri 09/03	1637 0.27m
	Sat 10/03	1714 0.26m
	Sun 11/03	0539 0.35m
	Mon 12/03	0628 0.46m
	Tue 13/03	0722 0.60m
	Sat 17/03	1220 0.68m
	Sun 18/02	1316 0.58m
	Mon 19/03	1403 0.51m
	Tue 20/03	1442 0.46m
	Wed 21/03	1517 0.43m
	Thu 22/03	1547 0.42m
	Fri 23/03	1614 0.41m
	Sat 24/03	1640 0.41m
	Sun 25/03	1706 0.43m
	Mon 26/03	0537 0.61m
	Tue 27/03	0612 0.69m

Take care with a turning tide late in the day, and ensure you have sufficient time to complete your monitoring