



# Roebuck Bay Working Group NEWSLETTER

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## Celeb's plea to garden to keep coastal waters clean

With Broome Shire giving away native plants and North West Expo running a garden theme, the timing was perfect to run a [Gardening the Roebuck Bay Friendly Way](#) display and host talks before and after Costa Georgiadis' passionate presentations in May. Run by RBWG and the Society of Kimberley Indigenous Plants and Animals, the aim is to encourage Broome folk to plant local natives and trap rain to reduce runoff that can become food for Lyngbya blooms in the bay. The stall was popular and 150 left with a free book on planting a native garden in Broome.



Thanks Inspiring Australia and Rangelands NRM

## Infographics are cool

Pictures are a cool way to show how to [Garden the Roebuck Bay Friendly Way on a brochure](#) and blind developed by the RBWG with help from the Society of Kimberley Indigenous Plants and Animals. To promote Gardening the Roebuck Bay Friendly Way, RBWG submits features to the Broome Advertiser and Science Network WA website. Indeed, a [feature on manta rays](#) has had 2359 views, ['muddy invertebrates'](#) 1181 and July's [inshore dolphin story](#), 1092 so far! The next innovative media product is a 12 page infographic brochure and short film with local gardeners demonstrating water trapping, growing a native garden without fertiliser that can wash into the bay and become food for toxic blooms of *Lyngbya majuscula*.

**GARDENING THE ROEBUCK BAY FRIENDLY WAY**

- 1 Plan**  
Draw a simple diagram of your garden. Group native plants with similar water and light needs together. Work out how big native plants will grow to so they have enough space and won't damage your house in a cyclone.
- 2 Trap rainwater**  
Dig depressions around plants, with the downhill side built up to capture sheet rain. Depressions and pits filled with gravel under runoff from roofs and in the flow path, will help capture water and allow it to soak in. For paths, use gravel instead of cement to allow rain to sink into the soil and recharge Broome's aquifer.
- 3 Mulch, Mulch, Mulch**  
Mulching will capture and soak up water, reduce evaporation, improve the soil to make plants stronger and more pest resistant. It slows rainwater that might otherwise run straight off a bare pindan surface, causing erosion.

Roebuck Bay Working Group is supported by:



## Keep our bay clean campaign

**Poorly maintained septics can leach sewerage** into groundwater that flows into Broome's coastal waters. With septics unregulated in WA, RBWG is mailing fridge magnets to septic owners, with easy tips on septic maintenance. A well maintained septic prevents sewerage from polluting Broome's groundwater and surrounding coastal waters and becoming food for toxic blooms of *Lyngbya majuscula*.

## Pindan plumes streak across bay

**Orange plumes flowed into Roebuck Bay during** May and Jun rainfall events. The plumes appear to be entering the bay from Dampier Creek. RBWG is working with developers, DPaW and the Shire to reduce runoff entering Roebuck Bay as well as rolling out a Gardening the Roebuck Bay Friendly Way project, home delivering Keep Our Bay Clean fridge magnets and producing three films about Lyngbya and the bay. DPaW Rangers and LandCorp collect stormwater samples for analysis and DEC scan the bay regularly for Lyngbya blooms.

## Lyngbya forum in Broome

**Environs Kimberley and RBWG held a Lyngbya** Forum on July 1 to get a snapshot of what we now know about *Lyngbya* in Roebuck Bay, what is being done to monitor it, what the knowledge gaps are and where to now. Marine biologist Malcolm Lindsay from Environs Kimberley is using the information from the presentations and discussion to develop a Lyngbya Report Card.

## Survey on Lyngbya awareness

**Results from 50 surveys filled out by Broome** locals (98%) indicate awareness of Lyngbya (72%), with a good understanding of factors that can contribute to blooms (80%). Nutrient rich runoff was identified as the most important factor (72%) with sewerage, animal faeces and pindan runoff prominent. Most respondents are (87%) willing to try to reduce runoff, with free native plants, a brochure for planting a native garden listed as helpful.



Lyngbya suffocates seagrass. © Fiona Bishop



Plume in bay, June 2013. © Kimberley Media



Lyngbya wash-up, Town Beach. © E Burke



Trap rain, grow natives & reduce runoff.

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## RBWG on a friendship drive

**News is posted on Roebuck Bay's Facebook page** most days, like the sighting of humpback whales in Roebuck Bay in June this year. Note the second fin, revealing that there are indeed, two whales. Please invite friends and colleagues to ['like' Roebuck Bay's Facebook page](#) » and boost our network reach 😊

## Roebuck Bay research committee

**With increasing numbers of scientists wishing** to undertake research on Roebuck Bay and interconnecting waters, RBWG and Nyamba Yawuru Buru have formed a Roebuck Bay Research Steering Committee. With many gaps in research identified in RBWG planning processes, it is beneficial to attract quality independent researchers. The committee is working on Terms of Reference, cultural protocols, funds for a research audit and a repository for research publications.

## Sources of nutrients in Roebuck Bay

**Practical recommendations to reduce Lyngbya blooms** are included in Dr Estrella's final post doctorate report on the [Effects of Nutrient Enrichment and Toxic Lyngbya Blooms on Benthic Invertebrates and Migratory Shorebird Communities of the Roebuck Bay Ramsar site](#) » Dr Estrella said it is not possible to control a Lyngbya bloom once developed; the appropriate management is to prevent blooms. Scientific data collected over the last three years, indicates nutrient levels in Roebuck Bay are above water quality guidelines.

## How does Roebuck Bay circulate?

Gayan Gunaratne's PhD study on [The effects of altered hydrology on water quality and nutrient delivery to Roebuck Bay](#) is providing data on nutrient entry, oceanic circulation and flushing of Roebuck Bay, and drivers of Lyngbya blooms. Gayan hopes to provide critical information on the ecological services of habitat, flood storage, and water quality maintenance that can be permanently lost if no plan for managing wetland values is implemented.

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Humpbacks in the bay. © Kimberley Media



Gayan and Rangers test water quality. © DPaW



Isotope study of shorebird blood reveals their diet



DPaW Yawuru Rangers assist Gayan Gunaratne with stormwater runoff studies.

## [National Science Week event »](#)

A gardening event at Magabala Botanical Park in Broome North on August 25, showed residents native plants that thrive in Broome, rain trapping techniques and native garden tips. A big positive of water trapping and native gardens, is less water and fertiliser use, and less nutrient and pindan enriched runoff reaching surrounding coastal waters and contributing to nutrients that can be food for toxic blooms of *Lyngbya*.



Grevillia formosa attracts birds. © K Curran

**Thanks National Science Week for funding RBWG science events in 2012 - 13**

## Do your bit for the bay 😊

Want to learn about shorebirds, mud invertebrates and life in the seagrass? Yes, then go to the [Roebuck Bay volunteer calendar](#) to be involved. Not only is volunteering fun; the scientific data gathered helps to manage and conserve the bay's remarkable life.



Volunteering is a great experience. © K Curran

## Meetings - productive and fun

Being proactive continues to be a strength of the RBWG, with meetings at member's workplaces in 2013. The outcome is increased attendance and fascinating tours of the Broome Aquaculture Centre, Broome Port and new Nyamba Buru Yawuru offices 😊

## New Management Committee

Kevin Smith and Grey Mackay bring diverse skills and experience to RBWG's Management Committee. Kevin, a chartered accountant and Manager of Broome's Small Business Centre, has a genuine passion for Broome's coast, regularly seagrass and turtle monitoring. Greening Australia's Kimberley Program Manager, Grey Mackay, has worked in environmental restoration, tree planting and management of phosphorus flows into waterways and Ramsar listed Peel Harvey Estuary. Out of hours, Grey enjoys exploring the rugged Kimberley.



RBWG's meeting at Nyamba Yawuru Buru.



Grey Mackay (Vice Chair), Kevin Smith (Chair)

**For RBWG enquiries email [Kandy Curran](#), or visit the [RBWG website](#) and [FB page](#) »**

Disclaimer: RBWG has made every effort to verify all information in this newsletter.

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