

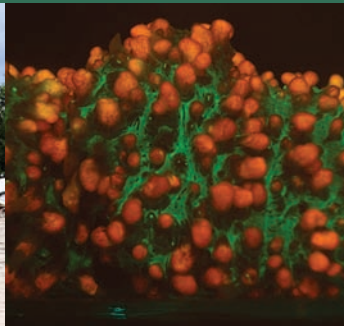


The Central Caribbean Marine Institute's

Green Guide to the Cayman Islands

Special Publication No. 3: **Sustaining Our Ocean and Islands**

By Dr. Carrie Manfrino and Tim Ecott



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What kind of mark are you making on Cayman?

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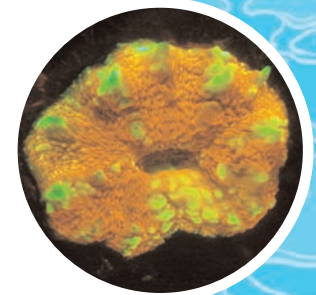
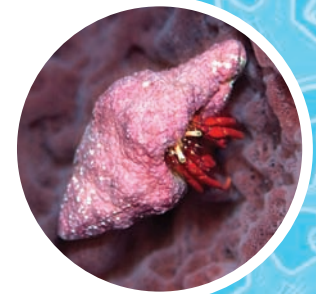
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Special Publication No. 3: Sustaining Our Ocean and Islands



A message from the **Chairman: Peter Hillenbrand**

Measures of Change Toward Sustainability

The question of sustainability in the Cayman Islands and on the Earth is one of vital importance, but oh so easy to sweep under the rug. It is fine for us to pay lip service to the practice of sustainable living when we are leaving our comfortable homes, driving our air-conditioned cars, drinking water from plastic bottles and eating fish sandwiches on the way to and from work. Our economic lifeblood in this Land Founded Upon the Sea is largely based on tourists who fly or cruise here to swim in our no longer pristine sea, and are—like us—contributing to the degradation of our natural and imported resources.

According to the World Bank the population in the Cayman Islands was under 20,000 in 1980 and had blossomed to almost 55,000 by 2008. The resources we use on these beautiful little islands cannot reasonably be sustained with the current level of consumption: just take a look at our local garbage dump in George Town. Our water, reefs, mangrove forests, flora and fauna and soil all have been degraded and in some areas even destroyed. We may believe that progress and prosperity make this depletion of our island resources acceptable—but where is the limit? When and where will enough be enough for the Cayman Islands?

This same story is being repeated and this same question is being asked all over the world.

How many of us are willing to make the major cultural and lifestyle shift to significantly reduce the amount of the earth's resources we are burning up?

If everyone lives as you do, how many Planet Earths would we need to meet our needs? For example, some scientists calculate that if everyone on our planet lived like the average citizen of the USA we would need the equivalent of 4 Earths to support ourselves with food, energy and water. Learn more by visiting www.myfootprint.org or <http://footprint.wwf.org.uk/home>. What does a sustainable lifestyle look like for a Cayman resident? Can you behave so you are living sustainably?

I hope you enjoy this issue of the Green Guide which highlights some of the changes that we see around us on our beautiful islands. And I hope you will support the Central Caribbean Marine Institute in our mission: Sustaining the World's Oceans for Future Generations.

Peter Hillenbrand
CCMI Chairman



About our Chairman:

Peter Hillenbrand has been visiting the Cayman Islands since 1973 and moved to Little Cayman in 1995. He was instrumental in helping CCMI become established in the Cayman Islands, supporting the efforts to build the Little Cayman Research Centre and to empower our youth to be conservation orientated. Peter is continuously exploring renewable energy designs for his Little Cayman resort, the Southern Cross Club.

Life on Earth is not sustainable without a cultural shift that transforms humanity from Consumerism to Sustainability.

*2010 State of the World Report,
World Watch Institute*

introduction

Lessons from Nobel Prize Laureates

What Price Marine Sustainability?

Sustainability is achievable. In December 2009, the Nobel Prize in Economics went to Dr. Eleanor Ostrom, whose work illustrates that human beings can interact with ecosystems, and yet maintain long-term sustainability. Her work shows that ecosystem collapse can be averted by collective action, trust, cooperation and good communications within a society.

Societies that are responsible for their own actions, and for monitoring and maintaining their own ecosystems, can achieve sustainability of their pooled resources (like forests or coral reefs). This important prize comes at a time when many societies are feeling the direct threat of environmental stress. In Cayman we can already see evidence of the impacts of things like beach erosion or coastal developments that interrupt the natural flow of water, nutrients and wildlife. Ugly heaps of trash are a more obvious sign of unsustainable behaviour and habits. How can we measure the value and cost of our actions, and what price can we put on sustaining a healthy marine environment?

The United Nations Environment Program has shown that coral reefs and their linked 'cultural services'—things like recreation and tourism—are valued at up to \$1.1 million per hectare. (Pavan Sukhdev, *The Economics of Ecosystems and Biodiversity*—TEEB project). However, I

would argue that we cannot put a price tag on the economic value of the reefs of the Cayman Islands. They are a physical barrier that protects our shores, and without healthy reefs our islands will eventually disappear.

Glow in the Dark

In 2008, the Nobel Prize in Chemistry went to Osamu Shimomura (a marine biologist working at the Woods Hole Oceanographic Institute in Massachusetts), Martin Chalfie, and Roger Y. Tsien for the discovery and development of green fluorescent protein (GFP) in the jellyfish, *Aequorea victoria*. The protein has recently been found to be highly abundant and in many colours in tropical reef corals where it acts as an antioxidant. Medical scientists have found ways to utilize the sequence of the jellyfish and coral fluorescent proteins to tag specific proteins so that we can trace their movements and see how they interact. Fluorescent proteins have made the invisible become aglow—and are now being used to illuminate tumor cells, trace toxins, and to monitor genes. These important proteins have already led to major scientific breakthroughs in human afflictions like cancer and Alzheimer's disease.

Photo opposite: Illuminated corals showing fluorescent proteins

Nobel Prize laureates are concluding that sustainability is possible. They are also using marine proteins from corals to track and study serious human diseases.



The Age of Stupid

Major environmental catastrophes are giving us signals that it is time for us to make changes to our lifestyles. The recent film, "The Age of Stupid" asks the question: *Why do we continue to waste and consume the planet's resources if we know that our actions are leading to a global catastrophe?*

Right now there is a HEAP OF TRASH the size of Texas in the middle of the Pacific Ocean. Here in Cayman, anyone driving across Grand Cayman to Seven Mile Beach is reminded that the highest spot on the island is what we are now calling "Mount Trashmore" (shown opposite).

Grand Cayman's trash heap is a good example of what happens to all the waste we generate just by going about our daily lives. Various

solutions have been proposed to deal with the trash mountain, but for the present it remains an eyesore. Every one of us generates trash and refuse, but we can all help by trying to reduce our wasteful habits by demanding that our government and our friends and neighbours try to change their habits, and by encouraging other people to cut down on unsustainable behaviour. Small things can make a difference: not buying small plastic bottles of water, reusing containers, not keeping our homes and offices excessively chilled by aircon or just walking to the store or the beach instead of driving. Almost everyone can learn new habits that soon catch on.

There are many websites giving information on how to live more sustainably. Why not calculate your own impact on the planet? Visit <http://footprint.wwf.org.uk/home>



Photo: Sara Shoemaker Lind

What is Your Environmental Consciousness?

Will this lead to a sustainable future for our islands?



purpose

The CCMI Green Guide aims to:

- **illustrate** how our everyday life is linked to our natural environment
- **inspire** each individual to take action and make changes that will have a positive impact on the environment and on our own quality of life
- **expose** some of the shocking threats to our most critical habitats, species, and humans
- **communicate** to businesses, residents and visitors the value of preserving the biodiversity of our islands
- **offer** some concrete examples of the best green practices that will help preserve our planet

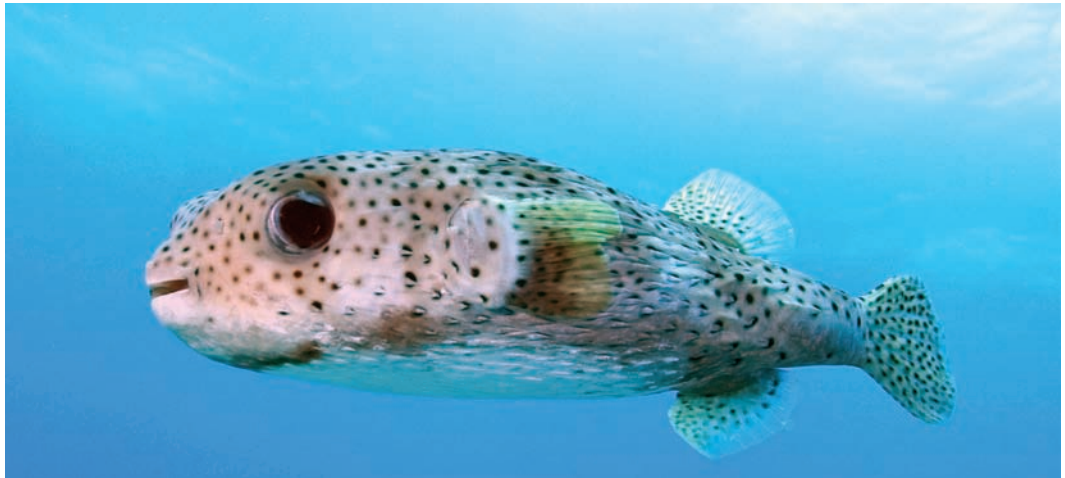


Photo: Sara Shoemaker Lind

threats

Connections—The Great Garbage Patch

According to the United Nations Environment Programme, plastic waste kills more than 100,000 marine animals every year. Every square mile of ocean contains approximately 46,000 pieces of floating plastic—some of it too small to be seen with the naked eye. 80% of trash found in the sea originates from the land.

The world's oceans are all connected. We know that things that are thrown into the sea can end up almost anywhere else in the world. The 'Great Pacific Garbage Patch'—sometimes called the 'trash vortex'—is a good example of this. Oceanographers have calculated that the vortex is the world's biggest trash dump, and may hold 100 million tonnes of flotsam. A plastic cup or an old rubber shoe can be thrown into the sea in California and easily end up in Japan or even Australia. According to Greenpeace, the Pacific trash patches contain six times more plastic than plankton (in dry weight of biomass).

In 1992, almost 30,000 toy plastic ducks and frogs made in China were washed overboard from a cargo ship in the Pacific. Ten months later, they started showing up on the shores of Alaska, two thousand miles from where they were lost. Some of them ended up frozen in the pack ice of the Arctic Ocean. Ocean currents took them slowly from Alaska all the way down the west coast of the USA. Three years later, some of them had travelled all the way to Hawaii. By 2000, some of the ducks trapped in the Arctic ice had crossed the Pole and were washed up on the eastern coast of the USA. In 2003, the first plastic frog was found in Scotland. Many of the plastic ducks and frogs are still floating around the world.

The story of the traveling plastic ducks sounds funny: but it proves that pollution and toxic chemicals can easily move around the world carried by the ocean currents. Small pieces of plastic trash are often found in the stomachs of dead sea-birds, of dead turtles, and dead whales and dolphins. And when fish eat the trash they can absorb chemicals that end up on our dinner table and in our bodies.



Photo: Myfanwy Rowlands

Tiny pieces of plastic gather together as they drift along with flotsam on the ocean currents

threats

Fish Swim, Don't They?

Recent scientific studies and high profile media campaigns have made people more aware of the connections that link our oceans. Scientists are interested in knowing what the connectivity is between one habitat and another, and between one population of the same species and another at a distant location. They are learning that it is not enough to protect one species in one country—because during the breeding season those fish may swim into waters where they may have no protection. Fish larvae also rely on ocean currents for distribution over a very wide area. For example, whale sharks are protected in the Maldives but they are not protected in Indonesia, and we now believe that they follow a migratory route between these widely separated island nations.

In Europe and the USA, there has been much publicity about bluefin tuna—*Thunnus thynnus*—because their numbers have declined by 97% since 1960. They travel thousands of miles across the Atlantic, and what were once thought to be separate populations in the Eastern and Western Atlantic are now known to cross-breed and mingle.

Bluefin can be found in the Western Atlantic from the Gulf of Mexico to Newfoundland. In the Eastern Atlantic they are found from Iceland to the Mediterranean. Both populations are severely over-fished—and although a female bluefin can produce 10 million eggs in one year, they do not begin to reproduce until they are at least eight years old. Most commercial tuna are caught and killed long before they reach

breeding age. And, the International Commission for the Conservation of Atlantic Tunas (ICCAT) says that twice as many fish are caught illegally as the legal quota.

Scientists have only discovered in the last twenty years that Atlantic bluefin tuna regularly criss-cross the ocean and even visit the Mediterranean. Some fish cross the ocean twice in one year and it seems likely that the two populations share breeding grounds where they spawn. This is fresh evidence that we cannot divide the ocean's resources into separate areas that 'belong' to one country or another. When we think about the ocean, it is important to remember to keep our own shores clean, not just for ourselves but for the species that inhabit our waters, if only for brief periods.

Many big fish that people rely on for protein contain high levels of dangerous pollutants, including mercury, because of a process called bioaccumulation. Useful information on levels of pollutants in fish can be found at the U.S.A.'s Food and Drug Administration website www.fda.gov.

While much international publicity has been given to the decline in large tuna species, we in the Caribbean are witnessing a parallel crisis with our beloved grouper populations. The Nassau grouper is one of the most important food-fish in the region, but breeding stocks of this fish are now believed to be below sustainable levels. In many areas of the Caribbean, the breeding stocks of Nassau grouper have been completely wiped out—because fishermen discovered where they gathered in huge schools to spawn.



Photo: Sara Shoemaker Lind

threats

Like tuna, groupers grow quite slowly and only begin to breed when they are 4-7 years old. They can live for thirty years—but in much of the Caribbean they are 'commercially extinct', and in spite of a ban on fishing for them in Florida, their numbers have not recovered. On reefs like we have in Cayman the grouper is one of the top predators, keeping smaller fish populations in balance. Since 1996, the Nassau grouper has been classified as Endangered by the World Conservation Union, which estimates its numbers to have declined by 60% in the last thirty years.

Hope for the Future

We now know that Cayman used to have at least five grouper spawning sites, but only one of them is still active with fish visiting the site each year—the Little Cayman site. With over half of the entire Caribbean's grouper spawning sites now classified as 'dormant' it is vital that we preserve this last spawning site. Currently

protected, the site is being actively studied by scientists from the Department of the Environment who are beginning to reveal accurate data about how important this grouper mating spot is, not just for Cayman but for the entire region. Any recreational diver or fisherman can already attest to the success of the protection of the Nassau grouper around Little Cayman.

Cayman Islands Department of Environment Law:

Nassau grouper: No fishing in designated spawning areas from 1st November through 31st March. Additionally no person may spearfish or set a fish-pot within a 1 mile radius of any designated grouper spawning area from 1st November through 31st March. No Nassau grouper may be taken by speargun. Size limit of 12 inches minimum applies year round.

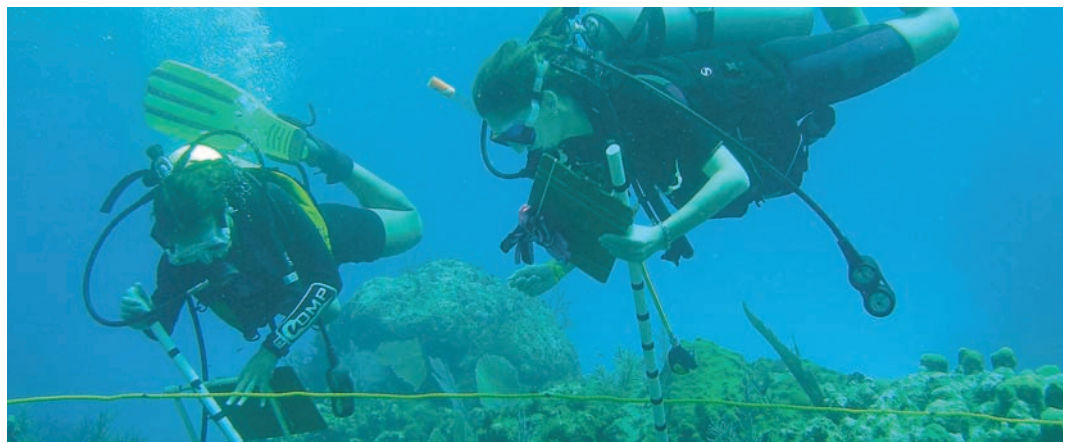


Photo: CCMI



protection

Transforming Culture

The World Watch Institute's "State of the World 2010: Transforming Cultures from Consumerism to Sustainability" gives us numerous examples of the change that is possible and offers some key solutions to many current environmental sustainability issues. In the Cayman Islands, we can reflect on three examples, two of increasing sustainability and one that is suggesting an environmental collapse with currently no clear solution. The culture of Cayman Islanders is already changing considerably. Any elderly local fisherman will tell you that there was a time when he could fish using a hand line from the beach and catch

huge Nassau groupers. Those days are gone. Some islanders feel sad about the changes and are already supporting more protection of their precious resources. With one of the last remaining Nassau grouper aggregation sites in the whole Caribbean, the Cayman Islands have an opportunity to show leadership in environmental protection.

Further information:

www.worldwatch.org website
Watch CCMI's video on threats to our reefs at http://www.reefresearch.org/ccmi_website/aboutccmi/aboutccmi_00.htm



Photo: Myfanwy Rowlands

Our precious island lifestyle is under increasing threat. Catching large fish from the shore is now rarely possible.

protection

The Story of the Nassau Grouper

In 2000, local fishermen on Little Cayman discovered a massive number of Nassau grouper off the west end of the island. The men proceeded to catch several thousand fish in just a few days. The only limit to the number of fish was the size of their 14ft skiff. In the two following years, news travelled throughout the Cayman Islands and up to 13 fishing boats were seen on any one day at the aggregation site in January 2002. In February 2002, the Cayman Islands Marine Conservation Board (MCB) closed the Nassau grouper aggregation site on alternate fishing years (i.e. 2003, 2005, 2007). During fishing years, 12 Nassau grouper could be taken per boat per day. In December 2003, the MCB issued an eight-year ban on fishing from spawning areas. Before these laws were enacted, it was estimated that more than 5000 Nassau grouper had been fished out of the aggregation site. In follow-up studies led by the Department of the Environment, an estimated 2,000-3,000 fish remained. This is an excellent example of introducing sustainable practice with positive cascading effects across our reefs. Without protection, this aggregation site would certainly be gone today.



Photo: Sara Shoemaker Lind

Coral Reef Regeneration

Conservation and preservation of the Cayman Islands reefs—especially around Little Cayman—is important because most other Caribbean sites are highly degraded. In the three decades leading up to 2000, scientists reported a reduction of about 80% in hard coral cover for the Caribbean.

In Cayman we know that almost 50% of hard or stony corals have been lost on average since 1999. This means we have moved from an average of 26% of hard coral cover to 13%.

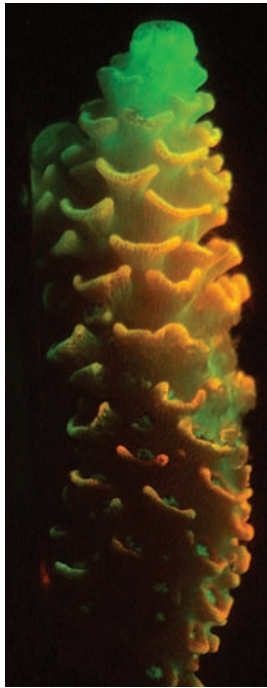
The good news is that CCMI research has shown that the reefs surrounding Little Cayman are reproducing, and a new generation of coral reefs is developing. But repairing the damage takes time. We are measuring tiny (millimeter-scale) juvenile corals growing at rates that are fast enough to make it possible for the reefs to regenerate over the next 100 years. Our data indicates that if we protect the areas of coral settlement, the remaining population of adult corals and larvae that might be floating in from elsewhere are capable of providing baby corals for a new generation of reefs. The coral community of the future may look slightly different, but what we see now is healthy coral growth. These results are good news, but only if the recovery continues, and if we are aggressive in protecting what remains.

protection

Deep Reefs in Deep Trouble

Shallow reefs experience enormous stress partly because they lie close to the surface where they are vulnerable to increasing surface water temperatures, but also from intense storms and from direct human activities. At CCMI work began in 2008 toward understanding how shallow reefs are connected with deeper reefs. We hypothesized that deep reefs may have the potential for re-seeding shallow reefs, because they are slightly removed from the major threats. Our results so far are not very hopeful, because we find that as we go deeper (below 125 feet) that the adult and juvenile coral populations are of much lower density. In addition, the juvenile communities at depth are statistically different than those in the shallow waters. This means they are not 'connected.' Our work already hints that the deep reefs probably have their own set of problems, and may not provide a safety net for the dying shallow corals that populate Caribbean reefs.

Fluorescent proteins are found in many varieties of hard coral on both deep and shallow reefs (below & opposite)



Ideas for Sustainability

Continue to protect threatened species.

Identify and protect areas that are critical sources and sinks for juvenile coral.

Promote sustainable lifestyles and cultural shifts away from consumerism.

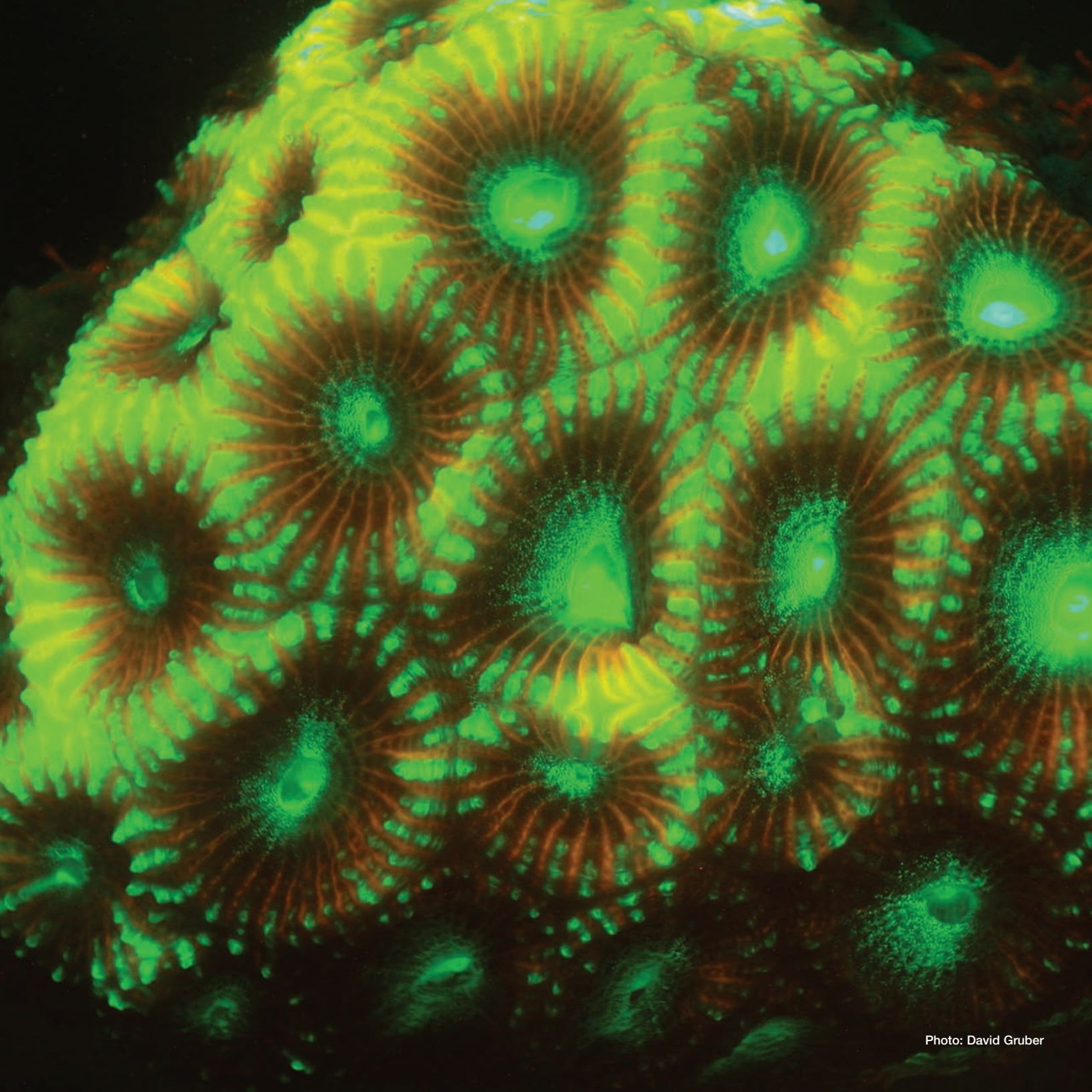


Photo: David Gruber



protection

Cayman Environmental Laws and Policy– What are These Laws Protecting?

Open and Closed Seasons:

The protection of the beautiful and diversified natural resources of the Cayman Islands is vital. For this reason there are some guidelines to follow. Please seek guidance from the Cayman Islands Department of Environment for a complete set of environmental laws.

CLOSED SEASONS & LIMITS

Conch: Closed Season 1st May - 31st October - open season catch limit is 5 conchs per person/10 per boat, whichever is less.

Echinoderms: May not be taken from Cayman waters at any time.

Lobsters: 1st March - 30th November (CLOSED) - open season catch limit is 3 per person/6 per boat, whichever is less.

Nassau grouper: No fishing in designated spawning areas from 1st November through 31st March. Additionally no person may spearfish or set a fish-pot within a 1-mile radius of any designated grouper spawning area from 1st November through 31st March. No Nassau grouper may be taken by speargun. Size limit of 12 inches minimum applies year round.

Sharks: No feeding or attracting of any type of shark is allowed.

Other Protected Fish: Goliath Grouper, Tilefish (whities), Filefish (pipers), and Angelfish (including grey, french, and queen fish) may not be taken at any time. A fish size limit of 8 inches minimum applies on all other fish, except goggle eyes, herrings, anchovies, and silversides.

Turtles: Closed 1st April - 31st October. Only a handful of remaining traditional Caymanian fishermen are eligible and require a licence from the Marine Conservation Board. Additional rules apply and are strictly enforced. No more than 4 turtles can be caught between the months of November and March. Only Green and Loggerhead Turtles may be taken. Turtles over the maximum allowable size of 24 inches Curved Shell Length and under 16 inches CSL shall not be taken. The use of any spearing device or any net which is affixed to any object in any manner (e.g. 'swing' or 'set' net) is prohibited. Turtles shall not be taken along West Bay Beach or in the George Town Harbour or any of the Bays. Possession of turtle eggs is strictly prohibited.

Whelks: Closed 1st May - 31st October - Open season catch limit to 2.5 gallons in shell limit or 2.5lbs of processed meat.

Chitons, Bleeding Teeth and Periwinkles: May not be taken from Cayman waters at any time.

protection

General Rules

- It is prohibited to damage coral by anchor, chains or any other means anywhere in Cayman waters.
- It is not permitted to take any marine objective alive or dead while on scuba.
- No coral, sponge, etc. are to be taken from Cayman waters.
- It is prohibited to wear gloves while diving or snorkeling.
- It is prohibited to export live fish.
- It is prohibited to fish with gill nets, poison or any noxious substance.
- It is prohibited to dump anything into Cayman waters.
- A CITES permit is required to export conch shells and black corals.

Violations in Cayman May Incur Severe Penalties

- Violation of any of these laws is an offence which carries a maximum penalty of KYD\$500,000 fine and one year in jail.
- Upon conviction, forfeiture of the vessel or other equipment may also be ordered.

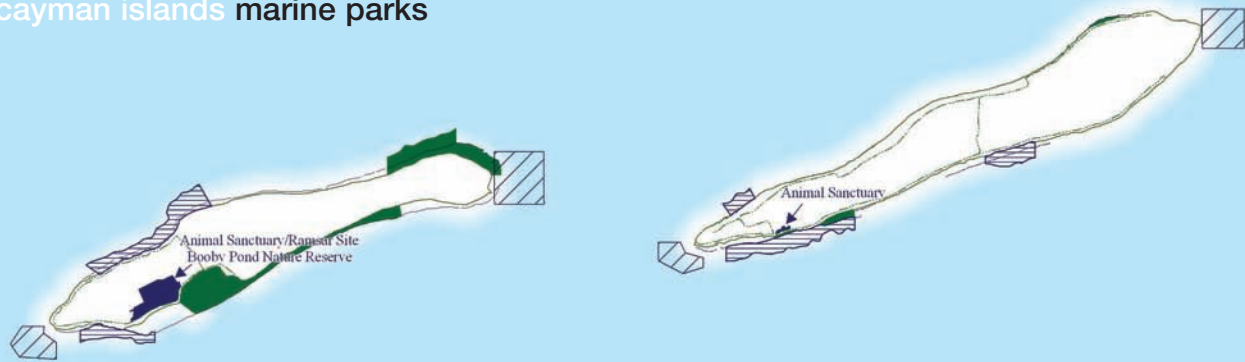
Marine Parks

Marine parks abound in the Cayman Islands. While visitation is encouraged, there are many rules and regulations to follow depending on which type of park you intend to visit. To minimise problems, always pay close attention to where you are, and talk to guides and local people before you go!

REPORT AN OFFENCE
Call: 948-6002 or 911 or VHF: Channel 17

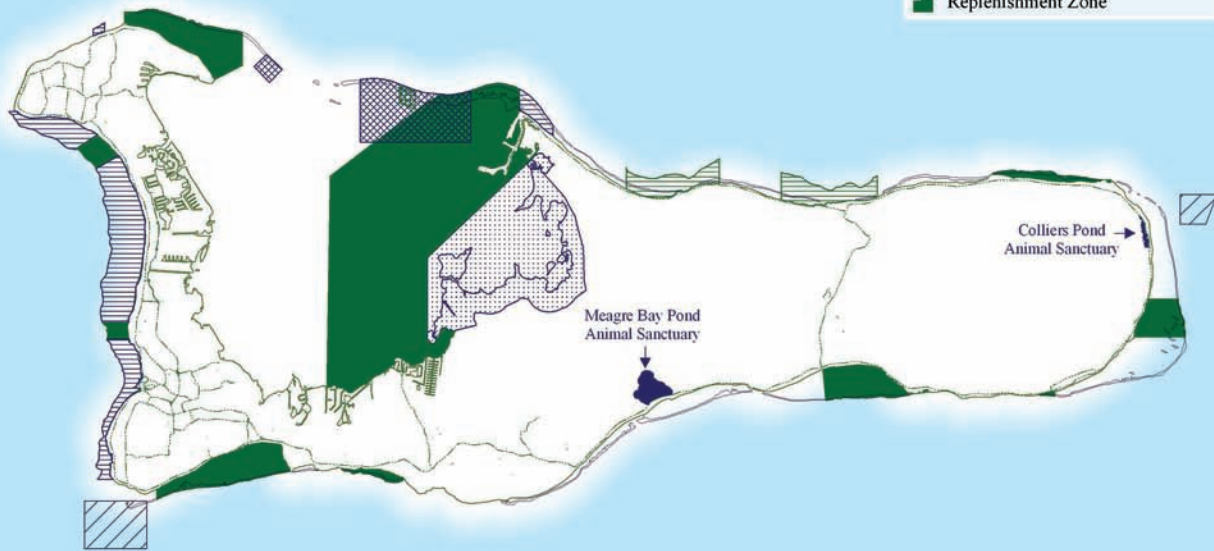


cayman islands marine parks



know the marine park signs

- Designated Grouper Hole
- Sand Bar - No Scuba Diving Zone
- Wildlife Interaction Zone
- Environmental Zone
- Marine Park
- No Dive Zone
- Replenishment Zone



<p>DEPARTMENT OF ENVIRONMENT</p>	<p>CAYMAN LAND INFO</p>	<p>0 0.5 1 2 3 4 5 Kilometers</p>	<p>N</p>
		<p>Projection: UTM, Zone 17N Datum: Nad27 Created By: Dept of Environment CI Government Data Source: Dept. of Lands and Survey CI Government</p>	

conservation

Sustainability and Island Life

Living 'sustainably' in an island community is not always easy. But reducing our impact on our planet means taking a look at many of the simple everyday actions that we take for granted.

Reducing the amount of waste in your household or business is a good way to start. When you go to the supermarket or the corner store, do you take along your own bags to carry your shopping home?

Plastic bags are a threat to the environment because they last for years as trash, and when they go into the sea they entangle marine life. Turtles are often victims of plastic bags—they eat them because they resemble jellyfish or floating seaweed, and the plastic blocks their intestines. This may cause them to bloat and eventually starve to death.

Plastic waste accounts for about 10% of world landfill space and 8% of world oil production goes to manufacturing plastic goods.



More than 180 animal and fish species have now been recorded eating plastic.

(Scientific American, July 2008)



Photo: Myfanwy Rowlands

Turtles are often victims to plastic bags because they resemble jellyfish or floating seaweed

conservation

Are We Doing Enough?

Why not join the new campaign by the Corporate Green Team Network/Cayman Islands Department of Environment to reduce waste plastic? Ask your store to stock alternatives such as biodegradable and reusable bags for shopping. Visit www.caymanbecome.ky

In Your Home

Instead of always buying paper towels for the kitchen, why not use rags and reusable dishcloths? Try to buy eco-friendly household cleaning products—and if not available, ask your local store if they will stock them. When buying home appliances, check to see if they have an energy efficiency rating telling you how much water or power they will consume.

At School

Teachers can have students upload reports and email their reports and assignments rather than printing them out for grading.

At the Dive Centre

Dive shops can give every visiting diver a briefing on the topic of sustainability and how seriously threatened the coral reefs are globally. Just raising awareness can improve our environment's capacity to survive. Have them buy into the CCMI Dollar-a-Dive campaign.

On the Road

Sitting in traffic is really stressful, and wastes your petrol and time. Why not set a clear achievable goal to reduce your family's contribution to traffic volumes? If you use a car to get to work, you could cut down on the number of miles you drive each week by



walking, cycling, taking the bus or even sharing a lift with a neighbour or co-worker. You could choose this option one or two days per week.

When you get a new car please think about which models will be fuel-efficient, and keep in mind that vehicles with large engines are gas guzzlers.

At Work

For offices, develop an intranet system with passwords for your employees where you can distribute notices rather than printing them on paper.

Does your employer practice any sustainable programmes? Do you re-use or recycle any office waste?

Could you reduce your use of plastic drinking cups by getting everyone their own china mug or glass to keep at work?

In Hotels and Restaurants

If you use a lot of glass bottles, why not buy a glass crusher? The crushed glass can be recycled into building materials by mixing it with concrete foundations to make aggregate.

conservation

Don't Be Too Cool!

How cool is your home, office or school? Could you reduce energy consumption by not having your air-conditioner turned up so high? Have you thought about solar panels to heat your hot water, or about making sure you unplug electrical appliances at night rather than leaving them on standby?

Think Green

Can you make a compost heap and use it to fertilise a small vegetable patch of your own?

There are plenty of ways that we can all reduce our individual impact on the environment. Perhaps we can simply reduce the amount of trash we generate by keeping a compost bin in our yard, or by using reusable containers for bulk goods like rice or flour. It's worth asking your local store if they would consider selling goods with less packaging.

Sometimes you can change the way people think about their trash habits just by asking the right questions.

Other ideas can be found at:

<http://reefresearch.org>
www.caymaneco.org
<http://www.nationaltrust.org.ky/seasense.html>
www.greenschools.net
www.live-sustainably.org
<http://actonco2.direct.gov.uk>

Beach clean-ups near the Little Cayman Research Centre show how much trash is brought in by the tides each year (shown right).

Reduce and Re-use!

On a small island we cannot always do the things available to people in larger societies like the UK or the USA, and some of these websites contain information that may not seem relevant to Cayman. But you may find tips and ideas that you can adapt for island life. One important thing you can do is to talk to your friends and family about these issues and get them to learn more about how to reduce their impact on the planet.

- Did you know that you can collect used batteries and deliver them to the landfill or even have them picked up?
- Used engine oil can also be disposed of at the dump.
- You can collect aluminum cans and drop them at recycling points at supermarkets—or call Department of Environmental Health (345 949 6666) or visit: <http://www.doe.ky/about/sustainable-development-unit/>



Photo: Dr. Carrie Manfrino

competition

Are You a Green Genius?

CCMI wants you to think about how you can live more sustainably. We are offering a prize to the young Cayman resident (16 yrs old or under) who can come up with the best 'sustainability idea'. The prize will be three tickets to our annual Festival of Trees Gala event in November 2010 where you will receive our Green Genius Award.

How to enter:

Send us your idea and, most important, how you plan to make it happen. Perhaps you want to get your school principal to allow you to put up posters on 'Sustainable Living Tips' or to organise an 'eco-club' at school? Or you could think of something that everyone in your street could do to cut their waste? Or maybe you have a bigger idea and want to start a campaign to ask the government to do something practical to help your school or community recycle their trash?

We want to hear your ideas, and how far you have gone to putting them into practice. The more information you include about your project—especially about how you will achieve it—the better chance you have of winning.

The winner will be announced by the end of October 2010.

All submissions must include

- 1) a Project Title
- 2) Your name, address, email address, & school
- 3) Summary—100 words that describe your idea
- 4) The Plan. A description of the actions required for you to put the idea into practice (up to 250 words total).

Email your submission by October 15th, 2010. Applications only accepted by email.

Send your ideas to CCMI:
greenguide@reefresearch.org



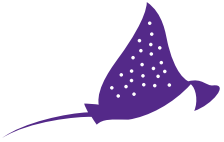
Photo: Sara Shoemaker Lind



Photo: Sara Shoemaker Lind

Questionnaire

Your Ideas for Sustainable Living



If you are over 16 we want to hear about your own plans and ideas for sustainable living in Cayman.

Please email greenguide@reefresearch.org and tell us what you think we could all be doing to promote sustainability in our islands. Do you have ideas to create a lobby group or an initiative that could help us all to reduce our negative impacts on the environment?

If you come up with a really good idea we will invite you to the Little Cayman Research Centre to discuss ways of putting your strategy into practice.

Make a Pledge to Preserve Our Planet by Supporting Sustainability

We Support Making a Cultural Change from Consumerism to Sustainability

CCMI has made a pledge to work towards reducing human impacts on coral reefs. Our research aims to address the major threats facing the Cayman Islands, the Caribbean basin and the world's oceans. We must protect what is left.

With your support, CCMI will embark on research with our partners to explore ways in which we can help make these fragile habitats more resilient.

Make a pledge to support our efforts.

You Can Do Something, Too! Please make a tax-deductible* contribution and help fund our Coral Reef Research, Education and Conservation. Your contribution will support our operations, underwrite research and provide funding for our ocean awareness campaign for our children.

Coral Reefs are important and we will help take immediate action.

I'd like to join CCMI and fight to save our world's reefs and preserve our planet's most important ecosystem by sponsoring research, education and conservation!

Please find my check made out to CCMI enclosed, or charge my credit card.

I would like to become a member at the following level:

Explorer___ Mariner___ Conservator___ Navigator___ Eagle Ray___ Loggerhead___ Grouper___

NAME: _____ COMPANY: _____

PLEASE ACCEPT MY CONTRIBUTION: (\$) _____

ADDRESS: _____ CITY _____ STATE _____

COUNTRY _____ POSTAL CODE: _____

TEL: _____ E-MAIL _____

CREDIT CARD # _____ EXP. DATE _____
(Master Card & Visa only)

AUTHORIZED SIGNATURE _____

Yes, my company has a matching gifts program. _____

Send your contribution to:

Central Caribbean Marine Institute
Caribbean Office: PO Box 10152
Grand Cayman KY1-1002
Cayman Islands Tel: 345 948-1094

or to

USA: CCMI
PO Box 1461
Princeton, NJ 08540
US Tel: 609 933-4559

* Contributions are tax deductible in the US and UK

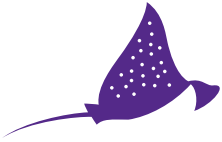


Photo: Sara Shoemaker Lind



Please detach at perforation

CCMI Membership Levels & Benefits



Explorer:	\$100,000 - \$249,999
Mariner:	\$50,000 - \$99,999
Conservator:	\$10,000 - \$49,999
Navigator:	\$1,000 - \$9,999
Eagle Ray:	\$500 - \$999
Loggerhead:	\$250 - \$499
Grouper:	\$100 - \$249

Benefits of Membership:

All members receive our quarterly CCMI E-Newsletter which gives up-to-date news on coral reefs and announcements about upcoming programs and events.

Eagle Ray members also receive invitations to the complete Reef Report Series on Grand Cayman.

Become a Navigator and receive the above, plus invitations to attend private Meet the Scientists evenings.

Conservators receive the above plus two advance reservations to the Annual Festival of Trees.

Mariners are invited to participate in the Dive-With-A-Researcher program at the Little Cayman Research Centre.

Explorers receive all of the above benefits, plus a private dinner and tour at the Little Cayman Research Centre, and an invitation to work side-by-side with the scientists at LCRC.

Contributions are tax deductible in the US and UK

acknowledgements

The Central Caribbean Marine Institute relies on the generosity of our corporate partners and donors to further its mission. When the Green Guide was just an idea, it was Ogier who helped make it a reality. Ogier is one of the leading providers of offshore legal and fiduciary services, operating from Bahrain, the British Virgin Islands, the Cayman Islands, Guernsey, Hong Kong, Ireland, Jersey, London and Tokyo.

We recognize...

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Dr. Manfrino acknowledges Kean University's generosity in providing sabbatical leave to develop the current five-year Green Guide initiative, and sustainability outreach programmes for CCMI.

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designed by: **René Kammeyer Seeland, RAKS Graphic Design**

photo credits:

Thanks go to

Professional photographer Sara Shoemaker Lind, *www.sarashoemakerlind.com*

CCMI Research Associate Dr. David Gruber, (Dept. Biology & Environmental Science, City University of New York, Baruch College)

Kate Pellow of CCMI

and Rolex Scholar 2009, Myfanwy Rowlands
for allowing us to use their photographs in this Green Guide.

sponsored by:



The Central Caribbean Marine Institute is a Cayman Island non-profit organization dedicated to sustaining marine biodiversity through research, education, and conservation.

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Green Guide to the Cayman Islands:
Special Publication 3: Sustaining Our Ocean and Islands

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CCMI is a Registered UK Charity # 1104009
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