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Welcome to BioNews.

BioNews is a monthly newsletter by the Dutch Caribbean Nature Alliance (DCNA), focusing on biodiversity-related research and monitoring on and around the six islands of the Dutch Caribbean. BioNews provides you with an update of the on-going research and monitoring efforts currently happening on our islands as well as an overview of important events and meetings coming up in the near future.

Your feedback and comments on BioNews are most welcome!
research@DCNAnature.org



Editor's notes

BioNews profiles the research and monitoring efforts that are underway on the islands of the Dutch Caribbean. This month's issue focuses on the conservation efforts for the Red-billed Tropicbird, which is taking place on the islands of Saba and St. Eustatius. Preliminary studies last

year indicated that at two study sites on Saba breeding success was zero. One of the prime culprits appears to be feral cats. This edition of BioNews focuses on the plight of this charismatic and locally endangered sea bird.

BREAKING NEWS: Two-way route for Long-nosed Bats between Bonaire and Curaçao.

After almost five years of monitoring Long-nosed Bats (*Leptonycteris curasoae*) on Aruba, Bonaire and Curaçao, consisting of more than four years of continuous work on Bonaire and one year of fieldwork on Curaçao and Aruba, in mid-January the first evidence was found for inter-island bat travel. Three bats, which had been tagged on Bonaire, were recaptured on Curaçao.

This finding signified a major breakthrough in understanding the population dynamics of one of the most important pollinators and seed dispersers of the columnar cacti found on the islands. Cacti are in turn a major food source for the local terrestrial fauna.

In mid-April, STINAPA Bonaire's Natural and Historic Resources Unit, with the help of volunteers, recaptured an adult female Long-nosed Bat originally marked on Curaçao. This recapture confirms the hypothesis that there is two-way travel between Bonaire and Curaçao. It is speculated that they may even travel to Aruba and Venezuela.



Long-nosed Bat

What makes this even more remarkable is that the flight from Curaçao to Bonaire is against the wind and therefore requires considerable effort.

This demonstration of interchange between the islands highlights the necessity of adopting a regional approach to bat conservation, which includes not only tagging, but also protecting the caves used, by these bats on all three of the Leeward Islands of the Dutch Caribbean.

TEEB study: What is nature worth on St. Eustatius and Saba?

by Stijn Schep (WKICS)

In February 2013, funded by the Dutch Ministry of Economic Affairs, WKICS from Bonaire and the VU University Amsterdam started two TEEB (The Economics of Ecosystems and Biodiversity) research projects “What is Saba’s and St Eustatius’ Nature Worth?” Following on from the successful research project on Bonaire in 2012, the consortium now aims to identify the socio-economic importance of nature on the other two islands of the Caribbean Netherlands.

The nature on St. Eustatius and Saba is unique and the islands are rich in archeological and historical heritage. However, nature on these special islands is under stress by invasive plants (like Coralita), free roaming livestock, unmanaged waste and other threats. Healthy nature and adequately managed archaeological heritage will support sustainable economic development and increase well-being for the population of the islands. Insights into the link between nature and welfare can support the local and national government in its decision-making. This can eventually lead to balanced economic, social and ecological developments on Saba and St. Eustatius.

To kickstart the project on Saba and St. Eustatius, a seminar among stakeholders on each island profiled the process of valuing socio-economic services of nature and the importance of at-

taching a value to these services. Discussions took place on the current threats to their environment, but also on the added value and the possible applications of this research to both islands. As part of the research the project team will conduct surveys which will provide insights into the perceived value of nature by residents and tourists on each island. The results will be presented to the local and national government.

The seminars on Saba and St. Eustatius were attended by, amongst others, representatives of the local and national government, local businesses, STENAPA, Saba Conservation Foundation, SECAR and the tourism agencies. Both commissioner Tarr of St. Eustatius and Governor Johnson of Saba emphasized in their speeches the essential connection between economy and nature for their islands.

Research overview

Below you will find an overview of the research work, taking place in the Dutch Caribbean in April 2013.

Don't see your research on this list? Email us: research@DCNAnature.org

Category	Title	Islands	Organisation: Project leader
Birds	Red-billed Tropicbird migration study (geo-locator project)	EUX	STENAPA: Hannah Madden CU: Dr. Pat Jodice
Birds	Red-billed Tropicbird nest predation study with camera traps	SAB	SCF: Kai Wulf
Corals	Large scale mapping of reefs	CUR	Catlin Seaview Survey University of Queensland
Corals	Study of coral reef microbes	CUR	CARMABI: Mark Vermeij SDSU: Forest Rohwer
Corals	Microbial ecology of coral reefs	CUR	CARMABI: Mark Vermeij and students
Corals	Study of gene flow of corals on meso-photic reefs	CUR	CARMABI: Mark Vermeij UoQ: Pim Bongaerts
Sponges	Study of energy recycling by sponges in benthic ecosystems	CUR	CARMABI: Mark Vermeij UvA: Jasper de Goeij
Plants	Study of grazing effects on plant abundance, composition and density by exclusion of goats	EUX	STENAPA: Steve Piontek
Plants	Phenology study of Yellow-shouldered Amazon Parrot food resource tree species	BON	Echo: Sam Williams
Plants	Human impact study on seagrass distribution in Sorobon, Lac Bay	BON	STCB: Mabel Nava HHDB: Rene Vissia
Invasives	Lionfish stomach content study (continuation of 2011 study)	BON	CIEE: Fadilah Ali
Environmental	Study of the relationship between dissolved organic compounds and bio erosion	CUR	NIOZ: Benjamin Mueller
Environmental	Water quality study of Curaçaoan coastal waters	CUR	CARMABI: Mark Vermeij LU: Tim Jonkers
Environmental	Nutrient dynamics on coastal reef environments	CUR	CARMABI: Mark Vermeij UvA: Joost den Haan

Monitoring overview

Below you will find an overview of the monitoring, which took place on the islands in April 2013. In each future BioNews newsletter you will find an update on monitoring underway in the last month. Please check our website for a complete overview of all long-term monitoring programmes that are in place in the Dutch Caribbean: www.dcnanature.org/resources/research-monitoring

Category	Title	Islands	Organisation: Lead Scientist
Mammals	Marine mammal sightings	SAB, EUX, SXM	SCF: Kai Wulf STENAPA: Steve Piontek Nature Foundation: Tadzio Bervoets
Mammals	Bat population monitoring	ARU, BON	FPNA: Indra Zaandam STINAPA Bonaire: Fernando Simal Jafet Nassar
Birds	Flamingo abundance monitoring (monthly counts)	BON	DRO: Frank van Slobbe STINAPA Bonaire: Fernando Simal
Birds	Red-billed Tropicbird abundance and breeding success monitoring	EUX	STENAPA: Hannah Madden
Birds	Island-wide bird monitoring of: - wetlands - winter seabird colonies - Brown Pelican colonies	SXM	EPIC: Adam Brown
Reptiles	Sea turtle monitoring: - foraging grounds monitoring - in-water surveys - capture-mark-recapture programme - Hawksbill project Lac - monitoring programme Lagoen	BON	STCB: Mabel Nava
Reptiles	Sea turtle nesting and beach monitoring	ARU, EUX, SXM	Turtugaruba: E. & R. van der Wal STENAPA: Jessica Berkel Nature Foundation: Tadzio Bervoets
Reptiles	Sea turtle sightings	BON, EUX, SXM	STCB: Mabel Nava STENAPA: Jessica Berkel Nature Foundation: Tadzio Bervoets
Reptiles	Lesser Antillean Iguana sightings	EUX	STENAPA: Hannah Madden LVV: Erik Boman
Fish	Fisheries landings	BON, SAB, EUX	WUR: Oriana Wouters (Bonaire) SCF: Brooke Rodgers LVV: Erik Boman (St. Eustatius) IMARES: Martin de Graaf
Fish	Shark tagging and migration	SXM	Nature Foundation: Tadzio Bervoets
Fish	Fish surveys using stereo baited remote video	SAB, EUX	IMARES: M. Graaf & D. Debrot WUR: Jelmer Pander (Saba) WUR: Tiedo van Kuijk (St. Eustatius)
Mollusks	Queen Conch population study (Capture-Mark-Recapture) in Lac Bay	BON	Sabine Engel STINAPA Bonaire: Ramon de Leon
Mollusks	Queen conch monitoring Saba Bank (reproduction, distribution & abundance)	SAB	IMARES: Martin de Graaf WUR: Sanne Koenen
Crustaceans	Spiny Lobster monitoring (reproduction, distribution & abundance)	EUX	IMARES: Martin de Graaf WUR: Suzanne Poiesz
Insects	Monitoring of butterfly species	EUX	STENAPA: Hannah Madden
Plants	Ongoing study of Flora of Aruba, Bonaire and Curaçao	ARU, BON, CUR	Naturalis/WUR: André van Proosdij
Invasives	Invasive seagrass	BON	STINAPA Bonaire: Sabine Engel
Invasives	Lionfish Control Programme and abundance	ARU, BON, CUR, EUX, SXM	STINAPA Bonaire: Ramon de Leon CARMABI: Mark Vermeij STENAPA: Anna Maitz Nature Foundation: Tadzio Bervoets
Environmental	Remote water quality testing in Simpson Bay Lagoon and Great Bay	SXM	Nature Foundation: Tadzio Bervoets with SLAC
Human impact	Diver visitation	BON, SAB, EUX, SXM	STINAPA Bonaire: Ramon de Leon SCF: Kai Wulf STENAPA: Anna Maitz Nature Foundation: Tadzio Bervoets

Need help?

If you have research or monitoring data, the DCNA Secretariat can help you get it housed in the Dutch Caribbean Biodiversity Database (DCBD) and will work with you to develop a user-friendly process for data input as well as the production of any statistics, graphics, maps or reports you might need.

Don't see your monitoring programme on this list?

Email us:

research@DCNAnature.org



'Research of the month': Conservation Science: Red-billed Tropicbirds on Saba and St. Eustatius

by Adrian Delnevo

In April 2012, representatives from each island within the Dutch Caribbean, DCNA, and several other organisations and institutions discussed how cooperative biodiversity monitoring might be prioritised. A number of approaches were considered and each island provided valuable insight into their own perception of biodiversity priority. Relatively high on this list for Saba, were Red-billed Tropicbirds. This iconic species is central to the Saba Conservation Foundation (SCF) emblem, and residents and visitors alike revel in the aerobatic displays, and sheer majesty of this primarily white, long-tailed seabird.

Unfortunately, this seemingly abundant bird was experiencing a significant impediment to its long-term survival, and the possibility that the regionally important populations on Saba and St. Eustatius were under real threat. Coincidentally, the first indication that something was wrong became apparent during a field course and workshop to monitor the species. Some nests that had an egg or chick were empty a few days later. Following the tropicbird workshop, resident Michiel Beuken continued the monitoring of tropicbird nests, and unfortunately discovered that no nests successfully raised any young at two significant tropicbird colonies. Both of these colonies are relatively near the Saba harbour and the island landfill. However a third area, Old Booby Hill, that has long been known as an area for nesting tropicbird did raise some young, but here too, there clearly were some problems. It is not clear whether St. Eustatius has similar predator problems to Saba, and it is not known if there is any inter-change or movement of birds between these islands. Consequently, it is helpful to know whether there is one large meta-population with interchange between islands, or whether the populations are independent.

On Saba it soon became apparent that predators were taking both eggs and chicks from tropicbird nests. However, identifying the problem is only the first step. The next step was to determine the scale of the problem, whether the problem was more widespread, and what to do about it. With support and collaboration from the Netherlands, under the guidance of Dolfi Debrot, DCNA, Vogelbescherming and with additional input from IMARES, a plan was developed for a coordinated approach to first quickly get to understand the problem, and then develop an approach to best conserve this species. A key component of the work was to establish how best to study them, and to identify appropriate study colonies. However, predator species, number and distribution including other factors negatively affecting the tropicbird population would need to be assessed too. Determining which predator spe-

cies might be involved proved an easy task, but understanding whether a small number of individuals or a localised predator population was involved, needed some extra effort. Using infrared cameras along island trails, and within and around the nesting colonies, it became apparent that feral cats and rats were widespread and a significant problem for nesting tropicbirds. Cats have been photographed taking young chicks from the nest, and rats removing eggs. Without the aid of the cameras it would have been easy to assume that Saba accommodates a healthy population of adult tropicbirds, but this information indicated that few, if any, young were being produced. Predation upon tropicbirds had been a problem in the past, but it was unknown how long some colonies have experienced zero nesting success.

Clearly, if this situation were to continue, the ageing adult birds would not be replaced by young birds recruiting into the breeding population. The work continues and a coordinated effort to understand the scale of the problem is still underway. This is a practical challenge and careful thought is being given to how it can be managed quickly and appropriately. For example, if the feral cats were to be eradicated, this may lead to an explosion of the rat population. On Saba there typically are three populations of cats. There are the domesticated cats that stay close to people in and around the houses. There are also cats that spend some of their time near to people, and some of their time wandering further afield. Thirdly, there are cats that are feral and have little to do with humans and typically avoid areas with people. It is this last group of cats that is believed to be the immediate problem, and particularly those that stay around the island's landfill. The cats studied at the landfill are not in good condition, and they scavenge for food, often ingesting non-food items and poor quality food.

Understanding the predator-prey relationship is an important component of successful conservation management, but there are other factors that may be contributing to the poor breeding success. There is some evidence that tropicbird chicks that do not get taken by the cats are growing slowly. This suggests that chicks are not receiving sufficient and quality food. Tropicbirds primarily eat fish, mostly flying fish, but they will occasionally bring squid to their young. Preliminary data suggest that chick growth is being influenced by feeding rates, with some chicks being fed infrequently and with small, poor quality fish. This is useful information to understand the stressors or factors influencing nesting success, but it also provides an indirect indicator or measure of relative fish abundance within the broader marine environment.



Research of the Month

If you have suggestions for projects we could profile as 'Research of the Month' in BioNews, please let us know.

A look along the coast, particularly in the late afternoon, would suggest there are large numbers of tropicbirds. However, the breeding status of these flying birds around a colony and how these birds relate to the number of nesting pairs remains unclear. Consequently, the only way to monitor the population and breeding success of tropicbirds is through labor-intensive studies and monitoring. The cameras have helped enormously, and can aid us in determining how often chicks are being fed, whether a nest is successful, and how much time adults attend an egg and/or feed their young and thus protect them. The cameras can even help to recognise individual cats, and the rate of nest visits by cats or other predators.

There is a significant need to know the relationship between the number of flying birds and the number of nesting pairs, as this will make the population monitoring much easier and free-up time to work on other important species and issues. One way to

understand many of these issues is to place satellite transmitters on the tropicbirds. This will provide information on exactly where, and when they are feeding, the timing of their return to the colonies and many other aspects of their lives. All together, this information will inform how to assist and prioritise any conservation efforts. A great deal of information on tropicbirds has already been collected and many more is currently on-going. Analysis of these data occurs on the go, as is the development of adaptive approaches that will ultimately contribute to a sustainable tropicbird population. I am sure we all hope that this magnificent and iconic species will be seen around the islands for years and generations to come.



Adrian Delnevo is a Conservation Ecologist from the UK with a Ph.D. in seabird population ecology. Adrian is CEO of Applied Ecology Solutions Inc. and science advisor for DCNA and has been active in the field of bird conservation around the world for over 30 years.

Red-billed Tropicbird research on St. Eustatius

by Hannah Madden (STENAPA)

In January 2013 the St. Eustatius National Park foundation (STENAPA) started a seabird monitoring project, thanks largely to a small grant by the Society for the Conservation and Study of Caribbean Seabirds (SCSCB), which emphasises on Red-billed Tropicbirds (*Phaethon aethereus*). The project is managed by National Park Ranger Hannah Madden and intern Andrew Ellis, with the weekly assistance of two dedicated high school students. The aim is to assess the risk of predation on tropicbirds and establish the nesting success of this species. This involves visiting three nesting sites per week to measure and weigh chicks, as well as banding adults and chicks as part of a long-term research project.

A Red-billed Tropicbird monitoring workshop in 2011 run by conservation ecologist, and DCNA scientific advisor, Dr. Adrian Delnevo, found no breeding success for the Red-billed Tropicbird at several nesting colonies on Saba. Cameras set up outside nests captured photos of predating feral cats. The skills learned during the 2011 workshop have since then been applied to monitor this species on Saba and St. Eustatius. This combined with other information will be used to develop a coordinated conservation strategy for the Red-billed Tropicbird.

Given that Saba and St. Eustatius are home to the Caribbean's largest nesting population of Red-billed Tropicbirds, STENAPA deemed it necessary to determine the risk of predation on St. Eustatius' own Red-billed Tropicbirds. DCNA loaned STENAPA two cameras, which have been strategically placed outside active nests containing a young chick. Within just a few days one of the cam-

eras photographed a cat outside one of the nests. It is too early to say whether the tropicbirds on St. Eustatius face the same risk of predation as those on Saba; data is still being collected and the results of this six-month study will be available in June. If predation rates prove to be high, STENAPA will take steps to control the feral cat population by working with the animal welfare foundation to sterilise/neuter or euthanise the animals. As well as cats, it is believed that rats may also play an important role in predation; live traps will be set up at nesting sites in an attempt to confirm this. It is hoped that the long hours and hard work invested in this project will bring interesting and encouraging results for the only species of seabird known to nest on St. Eustatius.

Besides monitoring tropicbirds, the project also aims to confirm the presence of Audubon's Shearwater (*Puffinus lherminieri*). This is a nocturnal seabird that is thought to nest in the cliffs of the northern hills of St. Eustatius, but its presence has long since been confirmed. In order to determine its presence now, the team will have to go out at night with a playback device and play the call of the bird repeatedly to lure them into answering the recording, since Shearwaters tend to be most active around midnight.



Hannah Madden is a National Park Ranger on St. Eustatius. Next to giving guided hike tours and coordinating educational programmes, Hannah monitors local flora and fauna and has worked on several bird conservation projects for STENAPA.



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Nature Policy Plan for the Caribbean Netherlands finalised

After more than two years of intense debate and discussion, the Dutch version of the Nature Policy Plan for Bonaire, Saba and St. Eustatius (“Natuurbeleidsplan Caribisch Nederland 2013 - 2017”) was printed this month and sent to Parliament by State Secretary Sharon Dijksma of the Ministry of Economic Affairs. It provides a framework for decision making for the next five years and context for the development of Nature Policy Plans for each island. An English version is expected shortly.

The Ministry of Economic Affairs took the unusual step of allowing the islands to take the lead in the development of this critical policy document. Stakeholders from throughout the Dutch Caribbean, including civil servants, nature conservationists and businesses gave their input into the plan, the final draft version of which was sent to the Netherlands at the end of 2012.

The Nature Policy Plan, will be used to set priorities for nature conservation and to ensure the wise allocation of resources including the allocation of Euro 7.5 million earmarked by the Dutch Parliament for nature conservation over the coming four years.

Strategic goals focus on mainstreaming, or integrating nature conservation and sustainable use into all sectors of government, and sound nature management of protected areas and species.



Download the Dutch ‘Natuurbeleidsplan Caribisch Nederland’ from:

<http://tinyurl.com/natuurbeleidsplancn>





Reports and publications

Below you will find an overview of the reports and publications on biodiversity related subjects in the Dutch Caribbean which came out in April 2013.

Freitas, J. de; Lannoy, C. de (2013)

Inventarisatie vegetatie Terrassen Landschap Midden Bonaire (Caribisch Nederland). CARMABI rapport. Rapportnr: BON-201203-01.1

Garcia-Casco, A.; Knippenberg, S.; Rodríguez Ramos, R.; Harlow, G.E.; Hofman, C.; Pomo, J.C.; Blanco-Quintero, I.F. (2013)

Pre-Columbian jadeitite artifacts from the Golden Rock Site, St. Eustatius, Lesser Antilles, with special reference to jadeitite artifacts from Elliot's, Antigua: Implications for potential source regions and long-distance exchange networks in the Greater Caribbean. *Journal of Archaeological Science*. doi: 10.1016/j.jas.2013.03.025.

Giry, C.; Felis, T.; Kölling, M.; Wei, W.; Lohmann, G.; Scheffers, S. (2013)

Controls of Caribbean surface hydrology during the mid- to late Holocene: insights from monthly resolved coral records. *Clim. Past* 9: 841–858. doi:10.5194/cp-9-841-2013.

Luksenburg, J.A.; Parsons, E.C.M. (2013)

Attitudes towards marine mammal conservation issues before the introduction of whale-watching: a case study in Aruba (southern Caribbean). *Aquatic Conservation*. doi: 10.1002/aqc.2348.

Lyons, W.G.; Snyder, M.A. (2013)

The Genus *Pustulaturus* Vermeij and Snyder, 2006 (*Gastropoda: Fasciolaridae: Peristerniinae*) in the Western Atlantic, with Descriptions of Three New Species. *Zootaxa* 3636(1):035-058. doi: 10.11646/zootaxa.3636.1.2.

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List of acronyms

ARU	Aruba	IMARES	Institute for Marine Resources and Ecosystem Studies
BON	Bonaire	IUCN	International Union for the Conservation of Nature
CUR	Curaçao	LU	Leiden University, the Netherlands
BON	Bonaire	LVV	Department of Agriculture, Animal Husbandry and Fisheries
SAB	Saba	Min EZ	Ministry of Economic Affairs
EUX	St. Eustatius (Statia)	NIOZ	Royal Netherlands Institute for Sea Research, The Netherlands
SXM	St. Maarten	SCF	Saba Conservation Foundation
CARMABI	Caribbean Research and Management of Biodiversity Foundation	SDSU	San Diego State University, USA
CIEE	Council on International Educational Exchange	SLAC	Simpson Bay Lagoon Authority, St. Maarten
CRFM	Caribbean Regional Fisheries Mechanism	STCB	Sea Turtle Conservation Bonaire
CU	Clemson University, South Carolina, USA	STENAPA	St. Eustatius National Parks
DCBD	Dutch Caribbean Biodiversity Database	STINAPA	Stichting Nationale Parken Bonaire
DCNA	Dutch Caribbean Nature Alliance	UoQ	University of Queensland, Australia
DRO	Directorate of Spatial Planning and Development, Bonaire	UPR	University of Puerto Rico
EPIC	Environmental Protection In Caribbean	UvA	University of Amsterdam, the Netherlands
EEZ	Exclusive Economic Zone	VU	Amsterdam University, the Netherlands
FPNA	Fundacion Parke Nacional Arikok	WKICS	WolfsKater International Consultancy Services B.V.
HHDB	HAS Hogeschool Den Bosch, the Netherlands	WUR	Wageningen University and Research Center, the Netherlands



Calendar

BioNews provides you with an overview of biodiversity research and monitoring related events coming up in the next six months. More events to add to this calendar?

Please email us: research@DCNAnature.org and we will include them in the next issue.

May

6 - 8	Workshop	Helix Mooring Installation Workshop - organised by SCF/DCNA - Saba
12 - 14	Symposium	Symposium on sustainable fishing in the northern Leeward Islands – organised by Réserve Naturelle & French Oversea Collectivity - Saint Barthélemy, French West Indies
16	Meeting	IUCN Netherlands members meeting - Amsterdam
17 - 18	Meeting	Caribbean Challenge Initiative (CCI) Summit of Caribbean Political and Business Leaders - Necker Island, British Virgin Islands.
20 - 24	Meeting	Cariwet (Caribbean Wetlands Regional Initiative) meeting - organised by Ramsar - Surinam
23 - 29	Workshop	Dutch Caribbean Biodiversity Database (DCBD) workshops with Alterra and data collectors on St. Maarten (23-25 May), Saba (26-27 May) and St. Eustatius (28-29 May)
27 - 4	Fieldwork	Water quality monitoring coastal waters Bonaire and ecotoxicological study Goto lake - Diana Slijkerman (IMARES)
29 - 2	Fieldwork	Submarine surveys on Bonaire using Seaquarium deep sea submersible – Erik Meesters (IMARES)
31	Meeting	Seventh Meeting of the CRFM Ministerial Council - Bridgetown, Barbados

June

11 - 12	Workshop	Tourism & Marine Protected Area workshop - organised by SPAW Regional Activity Centre – St. Maarten/St. Martin (MPA workshop to be confirmed)
19 - 22	Congress	BirdLife World Congress - Ottawa, Canada
26 - 28	Meeting	Inter-American Sea Turtle Convention (IAC) 6th Conference of Parties – Galapagos Islands

July

8 - 12	Congress	Eighth International Congress on Marine Protected Areas - Cuba
27 - 31	Meeting	Regional meeting of the Society for the Conservation and Study of Caribbean Birds (SCSCB) - St. George's University, Grenada

October

TBA	Meeting	EEZ Committee meeting
2 - 4	Meeting	19th DCNA Board Meeting on Bonaire
14 - 17	Meeting	28 th General meeting of the International Coral Reef Initiative (ICRI) - Belize City, Belize
14 - 18	Workshop	Global Coral Reef Monitoring Network (GCRMN) Caribbean workshop - Belize
14 - 18	Meeting	Convention of Biological Diversity (CBD) Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) meeting - Montreal, Canada
21 - 25	Congress	Third International Marine Protected Areas Congress (IMPAC3) - organised by IUCN - Marseille, France

November

4 - 8	Meeting	66 th Gulf and Caribbean Fisheries Institute (GCFI) meeting - Corpus Christi, TX, USA
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If you do not wish to receive future issues of BioNews, or if you have suggestions of colleagues you would like us to add to our mailing list, please contact us on research@DCNAnature.org.

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