

## 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](mailto:research@dcnanature.org)



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## Foreword

### This month's issue profiles the EEZ Meeting that took place on Curaçao.

From a global perspective, March has been busy when it comes to regulatory affairs with the CITES meeting in Bangkok, Thailand, in which worldwide

protection for several shark species and manta rays was established and, closer to home, with the EEZ Meeting which will be showcased as the 'Meeting of the Month'. This report is complemented by a short article on the importance of marine mammal conservation in the Dutch Caribbean.

## Dutch Caribbean Biodiversity Database

**The Dutch Caribbean Biodiversity Database (DCBD) is an initiative of the Ministry of Economic Affairs (EZ) to create a central online resource, which will house all biodiversity and conservation related information for the Dutch Caribbean region. The Database will be used to organise, securely store and display data and information as well as produce statistics, graphics, maps and reports on biodiversity.**

The following datasets have been submitted by the researchers on the islands and are ready to be uploaded into the Database:

- St. Eustatius point count and transect data of terrestrial birds (STENAPA) (2009 – to date)
- Red-billed Tropicbird population surveys, breeding success, invasive predation monitoring on Saba and St. Eustatius (SCF, STENAPA & Adrian Delnevo)
- St. Eustatius butterfly data (STENAPA) (2009 – to date)
- Bonaire point count and transect data of terrestrial birds (STINAPA, Echo, IMARES, Adrian Delnevo & Jerry Ligon)
- Yellow-shouldered Amazon Parrot roost count data (DRO, STINAPA & Echo)

Preparations are underway for Database developers at Alterra to visit the Windward Islands from 22 to 29 May to work one-on-one with the data collectors focussing on their input, storage and analysis needs for the Database.

### Need help?

If you have research or monitoring data, the DCNA Secretariat can help you get it housed in the Database 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.



## Shark protection follows CITES Conference in Bangkok, Thailand

**Six months after an historic decision to legally protect sharks in St. Maarten’s territorial waters, sharks and rays have now become the focus for international conservation attention in the Convention on the International Trade in Endangered Species (CITES).**

The Conference closed with historic decisions and measures to protect five shark species and two manta rays. Introduced by Colombia, Brazil, Ireland and Ecuador, the proposals to include the Oceanic Whitetip (*Carcharhinus longimanus*), Scalloped Hammerhead (*Sphyrma lewini*), Great Hammerhead (*S. mokarran*), Smooth Hammerhead (*S. zigaena*), Porbeagle Shark (*Lamna nasus*), Great Oceanic Manta Ray (*Manta birostris*) and the Reef Manta Ray (*M. alfredi*) in Appendix II of the CITES Convention were adopted by the Member States. All these species, except the Porbeagle Shark, are believed to occur in Dutch Caribbean waters. They are commercially valuable shark species, harvested primarily in Asia in huge numbers for their valuable fins and, in some cases, meat. Since their incorporation

in Appendix II of the CITES Convention, they can now only be traded with CITES permits and evidence will have to be provided that they are harvested sustainably and legally. These listings mark a milestone in the involvement of CITES in marine species conservation.

### Research of the Month

The St. Maarten Nature Foundation took a leading role in the process of getting legal protection for sharks, rays and skates on the island in 2012. Besides being the catalyst this process, the St. Maarten Nature Foundation is now also spearheading a project to learn more about shark abundance and migration in the marine park and coastal waters, which involves ‘in-water’ as well as ‘catch-and-release’ shark tagging.

## Research overview

Below you will find an overview of the research work, taking place in the Dutch Caribbean in March 2013. *Don't see your research on this list?* Email us: [research@DCNANature.org](mailto: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	Inventory of potential Yellow-shouldered Amazon Parrot nesting cavities around Dos Pos	BON	Echo: Sam Williams
Corals	Large scale mapping of reefs	CUR	Catlin Seaview Survey University of Queensland
Corals	Development of restoration methods for threatened Acropora species	CUR	CARMABI: Mark Vermeij SCORE Foundation
Corals	Microbial ecology of coral reefs	CUR	CARMABI: Mark Vermeij
Plants	Phenology study of Yellow-shouldered Amazon Parrot food resource tree species	BON	Echo: Sam Williams
Plants	Flora collection on St. Eustatius	EUX	UPR: Franklin Axelrod
Plants	Phenology study (associated with ongoing bat monitoring programme) incl. inventory and mapping of caves	ARU	FPNA: Indra Zaandam
Invasives	Lionfish stomach contents study (continuation of 2011 study)	BON	CIEE: Fadilah Ali
Environmental	Study on 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 March 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](http://www.dcnanature.org/resources/research-monitoring)

Category	Title	Islands	Organisation: Lead Scientist
Mammals	Marine mammal sightings monitoring	SAB, EUX, SXM	SCF: Kai Wulf STENAPA: Steve Piontek Nature Foundation: Tadzio Bervoets
Mammals	Bat population monitoring	ARU	FPNA: Indra Zaandam
Birds	National Bird Count	ARU	FPNA in cooperation with ABC and CBS
Birds	Flamingo abundance monitoring (monthly counts)	BON	DRO: Frank van Slobbe STINAPA Bonaire: Fernando Simal
Birds	Baseline habitat data collection within newly established herbivore exclusion areas	BON	Echo: Sam Williams
Birds	Terrestrial bird monitoring (point counts)	BON	Echo: Sam Williams
Birds	Red-billed Tropicbird abundance and breeding success monitoring	SAB, EUX	SCF: Kai Wulf STENAPA: Hannah Madden
Birds	Island-wide bird monitoring: - wetlands - winter seabird colonies - Brown Pelican colonies - (Songbird) monitoring on the northern flanks of Pic Paradis and in northern section of Dutch Cul-de-Sac	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 monitoring	BON, EUX, SXM	STCB: Mabel Nava STENAPA: Jessica Berkel Nature Foundation: Tadzio Bervoets
Reptiles	Lesser Antillean Iguana sightings monitoring	EUX	STENAPA: Hannah Madden LVV: Erik Boman
Fish	Fisheries landings monitoring	BON, SAB, EUX	WUR: Oriana Wouters (Bonaire) SCF: Brooke Rodgers LVV: Erik Boman (St. Eustatius) IMARES: Martin de Graaf
Fish	Shark tagging and migration monitoring	SXM	Nature Foundation: Tadzio Bervoets
Fish	Fish surveys using stereo baited remote video	SAB, EUX	IMARES: Martin de Graaf & Dolfi 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
Invasives	Invasive seagrass monitoring	BON	STINAPA Bonaire: Sabine Engel
Invasives	Lionfish Control Programme and abundance monitoring	ARU, BON, CUR, EUX, SXM	STINAPA Bonaire: Ramon de Leon CARMABI: Mark Vermeij STENAPA: Anna Maitz Nature Foundation: Tadzio Bervoets
Environmental	Installment of remote water quality testing devices in the Simpson Bay Lagoon and Great Bay	SXM	Nature Foundation: Tadzio Bervoets with SLAC
Human impact	Diver visitation monitoring	BON, SAB, EUX, SXM	STINAPA Bonaire: Ramon de Leon SCF: Kai Wulf STENAPA: Anna Maitz Nature Foundation: Tadzio Bervoets

### Need help?

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*Don't see your monitoring programme on this list?*

Email us:

[research@dcnanature.org](mailto:research@dcnanature.org)

## 'Meeting' of the month: EEZ Meeting on Curaçao

by Paul Hoetjes

**Curaçao, March 28<sup>th</sup> – The fourth meeting of the Dutch Caribbean Committee on Marine Biodiversity and Fisheries marked a significant step forward in achieving sustainable management of the Dutch Caribbean Exclusive Economic Zone (EEZ).**

The Curaçaoan Minister of Health, Environment and Nature, Ben Whiteman, joined the meeting to express his support for biodiversity conservation and cooperation between the islands and to announce the signing by Curaçao of the Memorandum of Agreement for joint, coordinated management of the biodiversity and fisheries in the Dutch Caribbean EEZ.

The Dutch Caribbean EEZ, which covers an area of roughly 67,000 km<sup>2</sup>, is home to and a migratory stopover point for species such as sharks, whales, sea turtles, rays, dolphins, seabirds and commercially valuable spawning fish. Planning and partnerships are critical when working

within such a large area and with so many stakeholders. Participating in the Committee meeting were the Royal Dutch Caribbean Coastguard, the Dutch Ministry of Economic Affairs, the Dutch Ministry of Infrastructure and Environment, the Dutch Caribbean Nature Alliance and Island Government officials and nature conservation managers from Curaçao, Bonaire, Saba, St. Eustatius and St. Maarten all of whom play a role in the management of EEZ resources.

The priorities of this Committee are to plan and execute activities related to research and monitoring, fisheries development, enforcement, funding, shipping and anchoring, species protection and pollution control within the entire EEZ.

The focus of this meeting was the Saba Bank, the third largest, submerged coral reef atoll in the world, which is just five kilometers from Saba and spectacularly rich in biodiversity. In October last year the Saba Bank became

the 13<sup>th</sup> Particularly Sensitive Sea Area (PSSA) in the world designated by the International Maritime Organization (IMO). Associated Protective Measures (APMs) approved by the IMO for the area are No Anchoring Zone and Area To Be Avoided (ATBA) for ships larger than 300 GT. Although the ATBA status will not go into effect until June 2013, there has already been a marked drop in shipping traffic on the Saba Bank. Anchoring on the Saba Bank has not been reported since Dutch legislation made this illegal in December 2010.

The recently formed Saba Bank Management Unit, which is run by the Saba Conservation Foundation, is facilitating research on the Saba Bank such as the deployment of underwater microphones (hydrophones) which record passing marine mammal sounds such as songs from Humpback Whales. After recording for several months the hydrophones pop-up as buoys to be collected and analysed by researchers. This provides

## Marine Mammal Conservation in the Dutch Caribbean

by Tadzio Bervoets

**Since the ban on commercial whaling there has been a slight increase in the number of marine mammals and in particular whale species in the Caribbean. Despite this increase marine mammals in general and whales more specifically are still critically endangered.**

Especially in the Caribbean whales encounter significant issues with regards to their survival that include small-scale hunting, net entanglement, and ship strikes. Nature conservation practitioners in the Dutch Caribbean have been working with their counterparts within the region in establishing a Wider Caribbean Marine Mammal Sanctuary in which these magnificent animals, the ambassadors of the Ocean if you will, are protected by transnational laws. During the summer months numerous species of marine mammals, particularly Humpback Whales (*Megaptera novaeangliae*), migrate through the

territorial waters and EEZ of the Dutch Caribbean from their northern feeding grounds in order to mate and bear and rear their young. Since whales do not abide by human made borders, it is essential that formal protection is put in place on a transboundary basis to ensure protection and a safe environment for them.

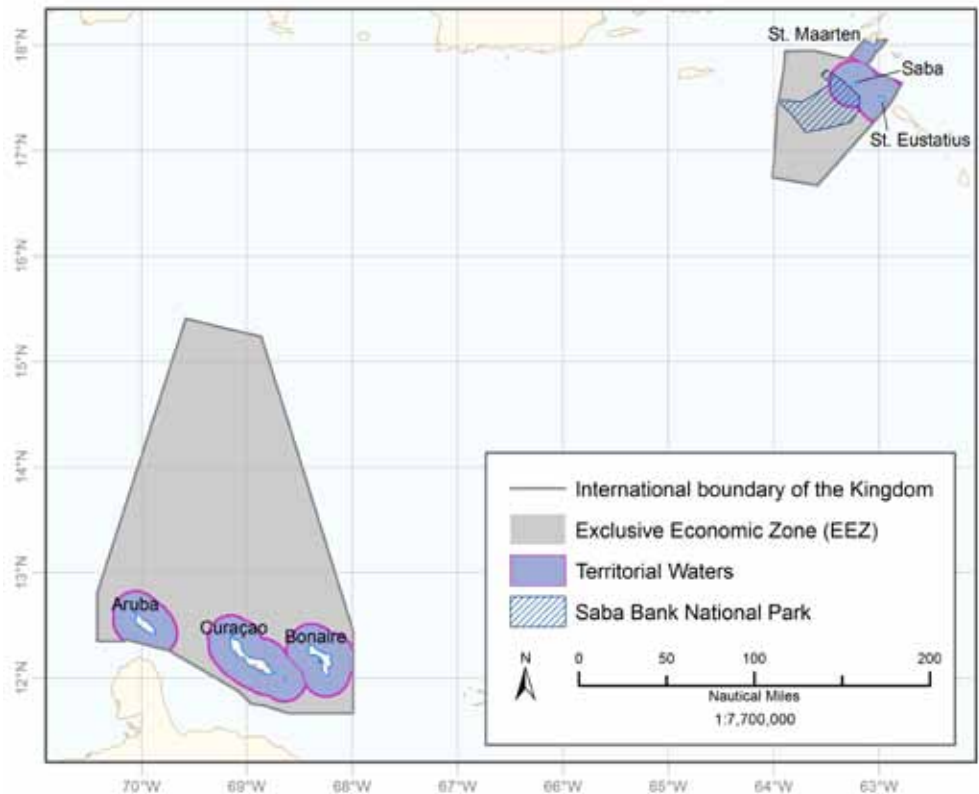
Conservation organisations in the Dutch Caribbean have conducted baseline Marine Mammal Census projects with the goal of conducting a wide scale census of all marine mammals. Several questions were answered as a result of this study, including most numerous species and migration routes and dates. The study relied heavily on sighting forms developed by the St. Maarten Nature Foundation that were distributed to Dive Centers, Yacht Charter Companies, Marinas and Private Individuals. The most abundant marine mammal species recorded was the



cutting-edge science, which will help managers to better understand marine mammal distribution in the Dutch Caribbean waters. The intention is to have the EEZ designated as Marine Mammal Sanctuary later this year complementing the already existing U.S. and French sanctuaries.

The Saba Bank Management Unit is also working with the Coastguard to improve monitoring and enforcement of fishing and anchoring regulations on the Saba Bank. A tough task considering the Saba Bank National Park is 2,679 km<sup>2</sup> of open sea.

Recent spills on Curaçao and St. Eustatius have served as reminders of the islands' sensitivity to oil spills and the importance of adequate preparedness. Recent hands-on trainings, the development of Oil Spill Response Plans and availability of on-site equipment should improve the Dutch Caribbean response to oil spills and similar emergencies.



Map view of Dutch Caribbean Exclusive Economic Zone waters (EEZ). These waters are to become a marine mammal sanctuary in the near future. (Map by Eseld Imms)

Other subjects discussed by the Committee included the recent placement of so-called Fish Aggregation Devices (FADs), both

off St. Eustatius and off Curaçao. FADs are a way to develop or stimulate pelagic fisheries by providing better catches of

pelagic fish such as tuna, mahi-mahi, and wahoo, and thus reducing fishing pressure on the sensitive reefs.

Humpback Whale, with 41 individuals in 2012, including calves. The second most abundant species was the Common Bottlenose Dolphin (*Tursiops truncatus*), with 21 individuals; the third most abundant species was the Long-snouted Spinner Dolphin (*Stenella longirostris*) with 15 individuals recorded. Various Sperm Whales (*Physeter macrocephalus*) including mothers with calves were also observed. Since this is only preliminary research, much more needs to be done, including a Dutch Caribbean organised research project determining species composition and distribution, habitat, threats etc. Acoustic monitoring is another essential component of this research. However the main constraint with this, and many other conservation initiatives, is secure and continuous funding.

This baseline data shows that there is a good motive for conservation, showing that the wa-

ters of the Dutch Caribbean are an important area for marine mammals. It is essential that a case be made for the establishment of a Marine Mammal Sanctuary for the Dutch Caribbean.

Not only is it important to safeguard these species, but sensitisation and education of both the local population and visitors to the islands are essential. Therefore it is also necessary to conduct a multi-island educational program that showcases, highlights and edifies the plight of cetaceans. Additionally, there is a push for regulated marine mammal watching excursions which would be offered to patrons and the local populations alike. It is the belief that protection should involve small-scale and low-impact commercial observation of the animals in the wild, while simultaneously gathering important research data.





## Nature parks of the Dutch Caribbean



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## Reports and publications

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

**Deerix, R.; Peterson, G.; Marquez, D. (2013)**

The National Bird Count in 2011 in Aruba. Central Bureau of Statistics (CBS) Aruba Dept. Environmental Statistics, Oranjestad – p. 25.

**Morsink, J.; Clausager, S.; Hull B.; Guzman, A.; Plomp, E. (2013)**

Archaeological Assessment Corre Corre Bay 2 (SE 29) St. Eustatius, Caribbean Netherlands. S.E.C.A.R., Oranjestad – p. 18.

## List of acronyms

ARU	Aruba	EPIC	Environmental Protection In Caribbean
BON	Bonaire	EEZ	Exclusive Economic Zone
CUR	Curaçao	FPNA	Fundacion Parke Nacional Arikok
BON	Bonaire	IMARES	Institute for Marine Resources and Ecosystem Studies
SAB	Saba	IUCN	International Union for the Conservation of Nature
EUX	St. Eustatius (Statia)	LU	Leiden University, the Netherlands
SXM	St. Maarten	LVV	Department of Agriculture, Animal Husbandry and Fisheries
ABC	Aruba Birdlife Conservation	Min EZ	Ministry of Economic Affairs
BNMP	Bonaire National Marine Park	NIOZ	Royal Netherlands Institute for Sea Research, The Netherlands
CARMABI	Caribbean Research and Management of Biodiversity Foundation	SCF	Saba Conservation Foundation
CBS	Central Bureau of Statistics	SLAC	Simpson Bay Lagoon Authority, St. Maarten
CIEE	Council on International Educational Exchange	STCB	Sea Turtle Conservation Bonaire
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	STENAPA	St. Eustatius National Parks
CRFM	Caribbean Regional Fisheries Mechanism	STINAPA	Stichting Nationale Parken Bonaire
CU	Clemson University, South Carolina, United States of America	UPR	University of Puerto Rico
DCBD	Dutch Caribbean Biodiversity Database	UvA	University of Amsterdam, the Netherlands
DCNA	Dutch Caribbean Nature Alliance	VU	Amsterdam University
DRO	Directorate of Spatial Planning and Development, Bonaire	WKICS	WolfsKater International Consultancy Services B.V.
		WUR	Wageningen University and Research Center, the Netherlands

### Credits

Photo credit: SHAPE Photography, B.S. & R.D. Kirkby, Sharkwater Productions.

DCNA is a proud beneficiary of the Dutch National Postcode Lottery and receives funding support for this initiative for the Dutch Ministry of Economic Affairs.



# 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](mailto:research@DCNAnature.org) and we will include them in the next issue.

## April

- Meeting – 14 to 17 April - 14<sup>th</sup> Annual Caribbean Conference on Sustainable Tourism Development: Port of Spain, Trinidad & Tobago
- **Meeting – 19 April – Stakeholder meeting for the TEEB (The economics of Ecosystems and Biodiversity) study on Saba – VU and WKICS**
- **Meeting – 25 April – Stakeholder meeting for the TEEB (The economics of Ecosystems and Biodiversity) study on St. Eustatius – VU and WKICS**
- Meeting – 24 to 26 April – 11<sup>th</sup> Meeting of the Caribbean Fisheries Forum: Bridgetown, Barbados - CRFM

## May

- **Workshop – 6 to 8 May – Helix Mooring Installation Workshop on Saba – SCF / DCNA**
- Meeting – 20 to 24 May - Cariwet (Caribbean Wetlands Regional Initiative) meeting: Surinam – Ramsar
- **Workshop – 22 to 29 May – Dutch Caribbean Biodiversity Database (DCBD) workshops with Alterra and data collectors on Saba, St. Eustatius and St. Maarten**
- Meeting – 31 May – Seventh Meeting of the CRFM Ministerial Council: Bridgetown, Barbados

## June

- Meeting – 19 to 22 June - BirdLife World Congress: Ottawa, Canada
- Meeting – 26 to 28 June - Inter-American Sea Turtle Convention (IAC) 6<sup>th</sup> Conference of Parties: Galapagos
- **Workshop – Marine Protected Area workshop – SPAW Regional Coordinating Unit (TBA)**

## July

- Meeting – 27 to 31 July – Regional meeting of the Society for the Conservation and Study of Caribbean Birds (SCSCB): St. George's University in Grenada

## October

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

## November

- Meeting – 4 to 8 November – Annual Gulf and Caribbean Fisheries Institute (GCFI) meeting: Corpus Christi, TX, USA

## Nature parks of the Dutch Caribbean



### Curaçao

CARMABI  
Piscadera Baai, Curaçao  
tel: +599-9-462-4242  
[www.carmabi.org](http://www.carmabi.org)



### Saba

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### St. Eustatius

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### St. Maarten

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Dutch Caribbean Nature Alliance  
Safeguarding nature in the Dutch Caribbean

