CARIBBEAN NETHERLANDS SCIENCE INSTITUTE

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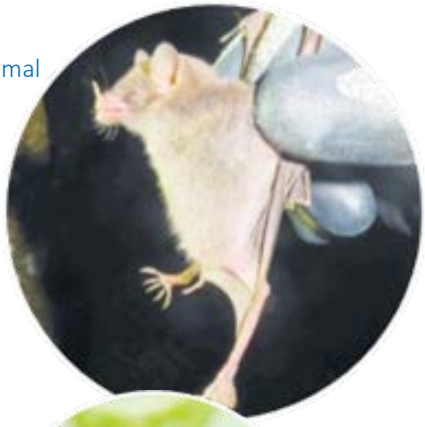
# Newsletter

## *January 2016*

Newsletter of the Caribbean Netherlands Science Institute at St Eustatius (CNSI)

## *Naturalis Caribbean Programme*



In October 2015 a team of researchers from Naturalis Biodiversity Centre, the Netherlands Mammal Society, the Netherlands Amphibian, Reptiles and Freshwater Fish Foundation (RAVON), the Netherlands Insects Foundation (EIS) and St Eustatius National Parks Foundation (STENAPA), together with a group of students, used CNSI as their home base for a terrestrial expedition on St Eustatius. The team recorded at least 80 plant and animal species that were never reported for St Eustatius before. Some of these species may be entirely new for the Caribbean or even for science. The team was especially proud of the discovery of the Lesser Antilles long-tongued bat, the Statia bee and the Caribbean silver-body fly, which may be new to science.

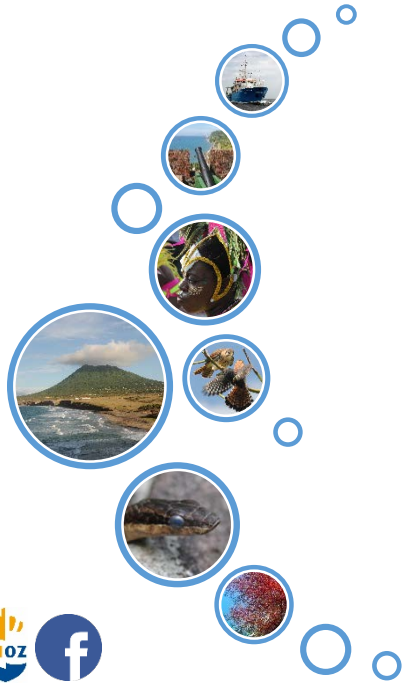

Many of the specimens that were collected from 250 traps deployed all over the island were brought to Naturalis for further analysis. DNA tests will reveal if the number of new records will increase.

During their stay, members of the expedition team offered several excursions for the general public of St Eustatius. People could choose between a lizard expedition, a bat expedition and a bird expedition or decide to join all three of them.

More information: www.naturalis.nl/en/news/Sint_Eustatius_Terrestrial_2015/

## *CNSI in 2015*

In 2015 CNSI supported 44 projects and received 125 different guests; Ba-, Ma- and PhD-students, postdocs and senior researchers, in age ranging between 18 and 80, who together stayed well over 3000 nights in the accommodation facility of the institute. Local experts and guests of CNSI delivered a total of 39 presentations during Science Cafes attended by visitors and the general public of St Eustatius. Research vessel *Pelagia* visited the island and welcomed school children on board. School children were also welcomed at CNSI for after school science and to present the results of their 'sector projects'.



## *Single-Celled Organisms, Sponges and the Consequences of Ocean Acidification in Tropical Waters*

A team of scientists from NIOZ Royal Netherlands Institute for Sea Research and the Alfred-Wegener Institute for Polar and Marine Research (Germany) launched a series of experiments in October 2015 at CNSI in order to ascertain the consequences of ocean acidification due to atmospheric $CO_2$ increase, from the organism level all the way up to – in the end – the entire ecosystem.

Planktonic foraminifera are single-celled organisms living in the top layer of the oceans that form tiny calcareous skeletons. They produce a large part of all calcium carbonate in the oceans, and they thus play an important role in the global carbon cycle. Foraminifers were collected from the ocean and taken to the CNSI lab where they were kept alive under controlled conditions. In an experimental set-up, carbon dioxide concentrations can be increased to levels that are expected to occur in the near and more distant future. Once the foraminifers have built new calcareous skeletons under these conditions, their response to increased acidification can be determined.

Another group of organisms that is crucial to the global carbon cycle is formed by boring sponges. They may infect corals and dissolve their interior, resulting in a process that is the opposite of calcium carbonate production by e.g. the foraminifera. It is assumed that increased acidification of sea water will make it easier for the sponges to dissolve coral calcium. This means that ocean acidification may well have a twofold effect: decreased calcium carbonate formation by corals as well as increased dissolution of their calcareous skeleton by the sponges. The numerous non-linear processes make experiments like these, which simulate future ocean conditions as realistically as possible, crucial for accurate predictions of future developments.

## *Arts and Social Sciences*

CNSI hosted a UNESCO conference on Intangible Cultural Heritage to sensitize and to bring together a diverse group of stakeholders responsible for safeguarding their heritage and implementing relevant policy. More information at www.unesco.sx/news/

Are the Dutch preserving the inequality of the relationship that exists between Caribbean people and the European Dutch by enforcing their own standards after the recent constitutional reform of the Netherlands Kingdom? was the subject of a symposium on Internalised Oppression held at CNSI. Visit Facebook 'Raising the Curtain on Race'.

The projects 'The Politics of Belonging and Nationness on St Maarten and St Eustatius' and 'Hybrid Identities and Governance in Small-scale Island Jurisdictions' want to unravel how political reforms and intensive migrations affect historically grounded identities and political practices in the Dutch Caribbean. But what are these identities, do they exist and how are they nurtured? Research is ongoing and intermediate results are presented and discussed at workshops and meetings at CNSI.


## *Students welcome*