

July 2015

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

Naturalis Caribbean Programme

Naturalis Biodiversity Center started a Caribbean programme this year, researching and mapping the diversity of plants, animals and fungi of the Dutch Caribbean region. With this programme Naturalis hopes to increase our knowledge of the biodiversity on these islands. Several experts and partner organisations from the Netherlands and the Dutch Caribbean participate in this programme.

Marine expedition

Naturalis' marine expedition to St Eustatius 7 – 28 June 2015 discovered several new species for science and many new species records for St Eustatius (and even for the Caribbean and Atlantic Ocean). St. Eustatius' marine biodiversity is higher than ever recorded before.



Tropical biodiversity course (terrestrial expedition)

From 21 September until 18 October 2015, Naturalis Biodiversity Center and Leiden University will organise a course in Tropical Biodiversity, consisting of lectures, self-study and fieldwork in St. Eustatius: • To make an inventory of and analyse 12 different vegetation plots and collect data on birds, spiders, butterflies and other insects, vascular plants, mosses and more • To get trained in data collection methods: variety of trapping techniques, night collection, bryophyte survey, botanical vouchers, local uses of plants, bird watching • To practise all field and data analysis methods, possibility to focus on your favourite group. Possibilities to extend with internship projects.

Starting date Monday 21 September 2015 • week 39–40: lectures, self-study and exam in The Netherlands • week 41–42: fieldwork on St Eustatius.

Find out more from Naturalis' blog at: https://science.naturalis.nl/en/about-us/news/Sint_Eustatius_2015/

TRAACS nutrient analyser installed

In May 2015 with help of the nutrient lab of NIOZ Royal Netherlands Institute for Sea Research a TRAACS nutrient analyser was installed at CNSI for automated analysis of phosphate, silicate, ammonium, nitrite and nitrate in (sea)water.



CNSI Mesocosm facility running

At the location of the Fisheries Building at Gallows Bay at St Eustatius, CNSI realised a facility for conducting experiments using running sea water. Sea water is pumped from the bay into a buffer tank from where it is pumped into two ring lines equipped with taps. Researchers wishing to perform experiments on e.g. sea life under different environmental conditions may use this running sea water facility to hook up mesocosm setups. They can choose between filtered and unfiltered sea water.



As of October 2015 the facility will be used (i) to measure the joint impact on coral reefs of changing sea water chemistry (e.g. ocean acidification), eutrophication and bio-erosion due to coral-excavating sponges, (ii) to determine the degree of coral dissolving by sponges at different acidity levels and to understand the physiological basis of the dissolving of chalk by coral-excavating sponges and (iii) to examine the effect of changing sea water chemistry under different wave climates on coastal calcareous algae vegetation.

Researchers wanting to use the running sea water facility should contact CNSI (cnsi@nioz.nl) for availability. The facility is kept as adaptable as possible, as different researchers may require different size mesocosm tanks, materials, number of replicates, etc. This means that CNSI only provides the running sea water. Researcher should design and build their own research setups as required. The mesocosm area is approximately 80 m². Redundant pumps and auxiliary power are available for continued operation in case of pump malfunction or power failure.

CNSI Objectives

CNSI is a facility that supports basic, strategic, applied, societal and policy relevant research and education in all fields of science and humanities. CNSI aims to facilitate scientific curiosity in which issues relevant to the sustainability of tropical small island economies are addressed. Its mission is to realise a permanent scientific presence in the Caribbean Netherlands with research and outreach facilities and accommodation for visitors. CNSI welcomes users from around the globe.

Students welcome

For (bachelor and master) students CNSI may be the field base for internships on a Caribbean related subject. Students should be supervised by their home institutions and come with an approved research plan.

