

Status update Netherlands Arctic Station Ny-Ålesund

by Maarten Loonen

Presented 1 April 2017 during the NySMAC meeting at ASSW2017 in Prague.

The Netherlands Arctic Station will be open this summer from 2 June to 14 August 2017. We will live in the huts London II and London III and are supported with our logistics by the AWIPEV station. Our work is a continuation of a monitoring series of Barnacle Geese, starting in 1990. We are collecting hatch dates, catching geese and apply individually coded plastic rings for detailed observations on terrain use, predation and breeding success. The dataset is now analysed by a Ph.D. at NTNU and a master student from NTNU will join our field operations. We are also quantifying behavioural observations of individually marked geese to determine the existence of differences in personalities.

We are also monitoring bird migration of barnacle geese and arctic terns using geolocators attached to leg-rings. We have to retrieve the geolocators by catching the birds. For arctic terns, we are monitoring the breeding population in Kongsfjorden and plan more nest observations on diet and food availability. We will cooperate with a Norwegian monitoring project on the glacier front. Measurements on vegetation production and grazing pressure are also part of our monitoring effort. Studies on the vegetation change caused by grazing are based on exclosures erected in 2005. These exclosures are also studied for microbial activity by a team of Mette Svenning (University of Tromsø) and for litter degradation by our own team as part of the global teabag index. A post-doc, visiting the University of Groningen from Japan will study the potential of migratory geese as vector for other organisms.

We are intensifying our studies on biodiversity of Arctic lakes in relation to eutrofication by geese cooperating with Kirsten Kristoffersen (UNIS) and two students.

Wildlife camera's will be used to quantify activity of birds and predators and will be used also in the monitoring of the effect of the building of the new geodetic observatory.

A Dutch group from Leiden will stay at AWIPEV to measure biodiversity indices from multispectral images (hopefully with a drone, otherwise with a long stick).

A team of Wageningen University is studying marine organisms and their sensitivity to pollution, with a new project on estimating Hg and PAH levels.

Finally I showed an option for a middle class research vessel, which is currently evaluated for research in Svalbard.



university of
 groningen



arctic centre
 Partner with AWIPEV

Netherlands Arctic Station Plans for 2017



Maarten J.J.E. Loonen
 NySMAC Prague
 1 April 2017
 Fools Day



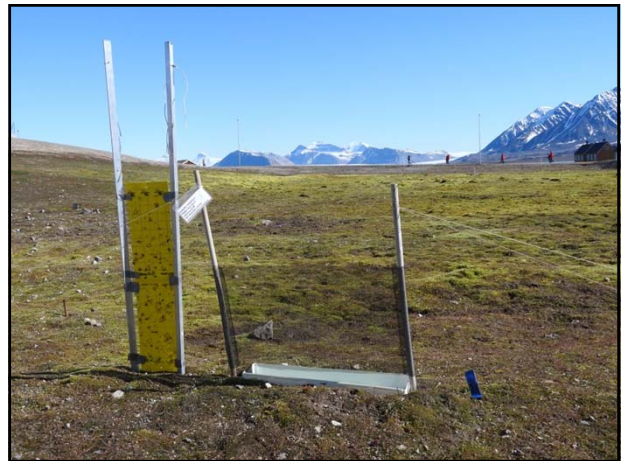
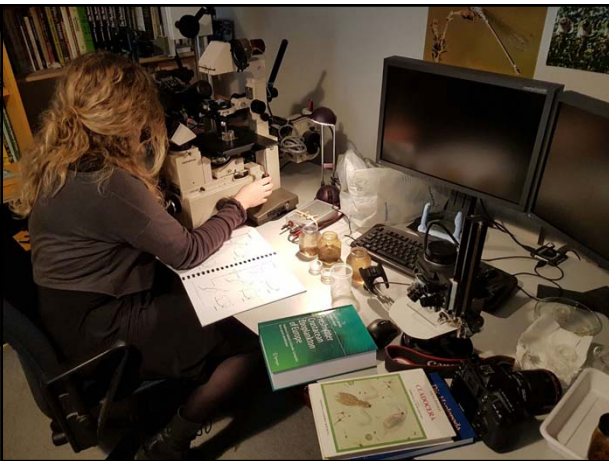
WILLEM
 BARENTSZ
 POLAR
 INSTITUTE

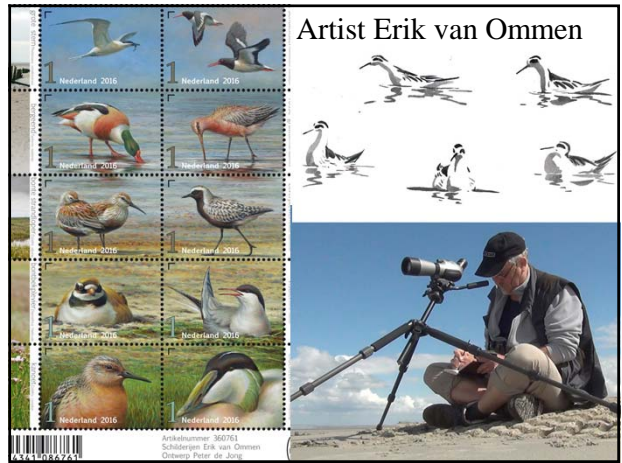
2016: 405 person days
 2017: 473 (+84) person days
 (3 June-14 Aug)






Vegetation diversity via multispectral scan (AWIPEV-NL)





| RIS-id | Project name |
|--------|---|
| 6359 | BARNACLE GOOSE ECOLOGY: INTERACTIONS WITH A CHANGING ENVIRONMENT |
| 6360 | ARCTIC TERN ECOLOGY: INTERACTIONS WITH A CHANGING ENVIRONMENT |
| 6361 | FROM HISTORICAL DATA TO A PREDICTION OF THE FUTURE FOR GEESE ON ARCTIC TUNDRA? |
| 10668 | NEST SITE COMPETITION AND PERSONALITY IN A GROWING BARNACLE GOOSE (BRANTA LEUCOPSIS) POPULATION |
| 10652 | BARNACLE GOOSE POPULATION DYNAMICS: INVESTIGATING CLIMATE AND DENSITY DEPENDENCE |
| 10651 | CAUSES AND CONSEQUENCES OF VARIATION IN AGE AT FIRST REPRODUCTION IN BARNACLE GEESE |
| 10678 | MEASURING GOOSE INFLUENCE ON ARCTIC LAKES BY DETERMINING SPECIFIC SPECIES COMPOSITION |
| 10208 | THE MICROBIAL METHANE FILTER IN THE ARCTIC: RESILIENCE AND RESPONSE TO CLIMATE CHANGE |
| 10041 | THE EFFECT OF GOOSE GRAZING ON VEGETATION COMPOSITION AND PRODUCTIVITY (GRAZING) |
| 10028 | LIMITS OF ACCEPTABLE CHANGE IN NY-ÅLESUND: ANALYSIS OF LOCAL IMPACTS ON VEGETATION |
| 10595 | DECOMPOSITION AND THE CARBON CYCLE STUDIED BY THE TEA BAG INDEX |
| 10042 | INSECT ABUNDANCE IN THE ARCTIC SUMMER |
| 10714 | CAN SNAILS FLY IN THE SKY?: TESTING HYPOTHESIS OF LONG DISTANCE DISPERSAL OF SNAILS BY MIGRANT BIRDS |
| 10731 | INDICATORS FOR MARINE INVASIVE SPECIES IN THE ARCTIC |
| 10258 | ASSESSING THE SENSITIVITY OF ARCTIC ALGAE AND MARINE INVERTEBRATES TO HUMAN ACTIVITIES |
| 10739 | ESTIMATING INPUT OF HG AND PAH LEVELS FROM HISTORICAL LOCAL SOURCES AND LONG RANGE TRANSPORT INTO THE COASTAL MARINE SYSTEM OF KONGSFJORDEN, SVALBARD |