

WALTER AND ANDRÉE DE NOTTBECK FOUNDATION

Annual Report 2017

The Walter and Andrée de Nottbeck Foundation was established in 1970, and 2017 was thus the Foundation's 47th year of activity.

The Foundation's Board of Directors consisted of D.Sc.h.c. **Georg Ehrnrooth** as a chairman until May 3rd followed by D.Sc.(Tech.) h.c. **Ole Johansson**. The vice chairman was partner **Henrik Mattson**, and other members prof. **Jorma Kuparinen**, prof. **Jari Niemelä**, Ph.D. h.c. **Carola Teir-Lehtinen** and prof. **Allan Johansson** until May, followed by Group CEO **Alexander Bargum**.

The Foundation's scientific committee consisted of prof. **Jari Niemelä** as a chairman, Ph.D. h.c. **Carola Teir-Lehtinen**, prof. **Jorma Kuparinen**, and two members from Stockholm university, Sweden, prof. **Ragnar Elmgren** and prof. **Christoph Humborg**. prof. **Allan Johansson** ended his long period as a member in the group in May and environmental counsellor **Maria Laamanen** joined the group in the autumn. The expert group's main task is to evaluate the grant applications and recommend to the board of directors the grants to be approved.

The Foundation's Board of Directors held three meetings together with the Scientific Committee: on February 13 in Helsinki, on May 3 at Tvärminne and on November 14 in Helsinki. The Foundation's annual meeting was held at Tvärminne on May 3. The Scientific Committee had a meeting in Helsinki, on October 2, 2017.

RESEARCH IN 2017

The principal aim of the research supported by the Foundation is to investigate the function and the changes in the Baltic Sea ecosystem. The professor in Baltic Sea Research, **Alf Norkko**, works at Tvärminne Zoological Station, and the professorship was jointly funded by the Foundation, the Finnish Environment Institute and the University of Helsinki.

In 2017 scholarships were held by three senior researchers, three postdoctoral researchers, six research projects, twelve Ph.D. students and three researchers with project grants, as well as and six M.Sc. students. Besides research projects, the Foundation also financed research related tasks, e.g. purchase of equipment, etc. The grants are listed below.

1. Senior research fellow grants, total sum **11 853,62 €**, including 8 300 € for grants and 3 553,62 € for other expenses

1.1. Ronnie Glud (one month's grant 2 800 €, other expenses 1 675,39 €) – *The breathing seabed: Linking benthic community structure to biogeochemical function*

1.2 Andrew Lohrer (five week's grant 3 000 €, other expenses 1878,23€)

” Resilience and functioning of Baltic and Antarctic benthic seascapes ”

1.3 Kay van Damme (one month's grant 2 500 €) – *The Baltic Sea Cladocera (Crustacea: Branchiopoda)*

2. Postdoctoral grants, total sum **53 803,19 €**, including 41 400 € for grants and 12 403,19 € for other expenses.

2.1 Karl Attard (12 month's grant 27 600 €; other expenses 12 403,19 €) – *The breathing seabed: respiration and primary production by benthic habitats in the Baltic Sea*

2.2 Maria Degerlund (three months' grant, 6 900 €) – *The role of cell death in phytoplankton growth and population dynamics*

2.3 Matias Scheinin (three months' grant, 6 900 €). – *Effects of ocean acidification and eutrophication on evolutionary adaptation.*

3. Research projects, total sum **62 628,92 €**, including 2 000 € for the grants and 60 628,92 € for other expenses.

3.1. Camilla Gustafsson (other expenses 6 088,92 €) – *Identifying relationships between plant traits and ecosystem processes along environmental gradients in diverse temperate plant communities.*

3.2 Kim Jaatinen (other expenses 4 927,06 €) – Direct and indirect impacts of environmental change on trophic interactions in the Baltic Sea

3.3 Tom Jilbert (other expenses 3 497,30 €) – COOLGAS: Winter-season methane sources in coastal waters of the Gulf of Finland

3.4 Ivan Rodil (other expenses 13 775,93 €) – Baltic Sea eutrophication: the effects of increasing accumulations of drifting algal detritus on the functioning of shallow coastal habitats.

3.5 Sanna Suikkanen and Anke Kremp (supervisor's grants 2 000 €, other expenses 19 147,60 €) – *Ecological and evolutionary significance of seed banks in toxic dinoflagellate expansion*

3.6 Tobias Tamelander (other expenses 13 192,11 €). – *Phytoplankton mortality in marine ecosystems: Feedbacks to the pelagic detritus pool and biogeochemical cycling in a changing environment.*

4. Work on Doctoral theses, total sum **246 880,54 €**, including 222 300 € for the grants and 24 580,54 € for other expenses.

4.1. Charlotte Angove (twelve months' grant, 23 400 €, other expenses 670,95 €). – *Relationships between aquatic plant traits and ecosystem processes along environmental gradients in diverse plant communities.*

4.2. María Teresa Camarena Gómez (four months' grant, 7 800 € other expenses 2 055,10 €). – *Changes in spring bloom community composition and its effects on nutrients flux in the Baltic Sea.*

4.3. Samu Elovaara (twelve months' grant, 23 400 €, other expenses 2 614,11 €). – *Cycling of dissolved and particulate organic matter in the pelagic marine environment: Impact of phytoplankton community mortality and microbial degradation.*

4.4. Sara Enberg (three months' grant, 5 850 €). – *Winter ecology: Microbial assemblages and their benthopelagic coupling during and after the occurrence of sea ice.*

4.5 Johanna Gammal (twelve months' grant, 23 400 €, other expenses 3 632,47 €). – *Benthic macrofaunal communities and ecosystem function relationships in the heterogeneous coastal zone*

4.6. Jacqueline Jerney (twelve months' grant, 23 400 €, other expenses 5000 €). – *Ecological and evolutionary significance of seed banks for the expansion of phytoplankton blooms in the Baltic Sea.*

4.7. Mari Joensuu (twelve months' grant, 23 400 €, other expenses 4 492,47 €). – *Sediment resuspension and nutrient fluxes across habitat gradients of the Baltic Sea*

4.8 Henri Jokinen (three months' grant, 5 850 €). – *Population characteristics and bottlenecks in population maintenance of flounder at the edge of its distribution range.*

4.9 Ilmari Kahma (eleven months' grant, 21 450 €). – *The effects of increasing accumulations of algal detritus on the fate of organic carbon in shallow coastal habitats from the Baltic Sea*

4.10 Pinja Näkki (eleven months' grant, 21 450 €, other expenses 1 979,47 €). – *The fate and impacts of microplastics in seafloor habitats*

4.11 Martta Viljanen (ten months' grant, 19 500 €, other expenses 719,40 €). – *Adaptation to environmental light conditions in Mysid shrimps*

4.12 Leena Virta (twelve months' grant, 23 400 €, other expenses 3 416,57 €). – *A trait-based approach for diatom functional biogeography in the Baltic Sea*

5. Pro gradu theses (MSc theses) were supported with **12 045,42 €**, of which 8 920 € were grants and 3 125,42 € were used for other expenses.

5.1 Anne Aittomäki (grant 2 000 €) – *The origin and regeneration of free-living populations of Fucus vesiculosus in the northern Baltic Sea*

5.2 Piritta Anttila (grant 2 000 €, other expenses 600 €) – *The effects of heavy metal pollution on sediment macrofaunal community*

5.3 Lauri Kuismanen (grant 2 000 €, other expenses 593,56 €) – *The effect of salinity on the emergence and survival of calanoid copepods*

5.4 Anna-Riina Mustonen (other expenses 753,84 €) – *Microplastics in benthic invertebrates in the Baltic Sea along the Helsinki coastline*

5.5 Jens Skog (grant 920 €, other expenses 580,34 €) – *Breeding dispersal by the endangered Baltic Sea common eider (Somateria mollissima): effects of predation, individual character and individual history*

5.6 Nora Uotila (grant 2 000 €, other expenses 597,68 €) – *Carbon binding capacity of different coastal biotopes*

6. Research equipment, travel, meetings, total sum 18 003,18 € for expenses.

6.1 Eero Asmala (expenses 2 624,44 €) – writing group meeting for working on journal manuscript "Role of macrovegetation in nutrient and carbon cycling in coastal sediments"

6.2 Karri Flinkman (expenses 4 000 €) – Educational posters of typical underwater habitats with their associated fauna found in the Tvärminne area

6.3 Antti Takolander (expenses 5 116,13 €) – Seasonal ecophysiology of the Bladder wrack *Fucus vesiculosus* in the Northern Baltic.

6.4 Simon Thrush (expenses 6 262,61 €) – Ecology of Marine Sediments

7. Other research costs

The Foundation supported several researchers' participation in international congresses and workshops abroad, as well as foreign researchers' visits at Tvärminne. Most of these costs were paid by the projects. The Foundation also paid for laboratory equipment, travelling, lodging at the Tvärminne Zoological Station, etc. These costs have been paid by the separate projects.

Prof. **Alf Norkko** used **4735,39 €** for research expenses, his own travel costs and the costs of guest researchers' visits at Tvärminne. A PhD course led by Alf Norkko was supported by **8 000 €**. The publishing costs of the PhD thesis of Anne-Mari Luhtanen and Sara Enberg were supported with **4 216,81 €** in total. Support for the Tvärminne Zoological Station, including updating and servicing equipment was **4 298 €**. Travel costs for tenure track professorship interviews amounted to **2 307,21 €**. The experts' remunerations and secretary's salary costs was totally **12 562,99 €**. Costs of meetings including the two Swedish experts' travel costs amounted to **5 514,95 €**. The administration costs were **356,30 €**, and the cost for home page maintenance **372,00 €**.

TOTAL BUDGET for 2017

The total sum of personal grants was **282 920 €**. The Foundation's share of the cost for the professorship was **34 915,65 €**. The Foundation supported research work by subsidising research visits, participating meetings and congresses, laboratory chemicals, equipment and analyses, research vessel costs, etc. with the total sum of **145 852,28 €**. Administrative costs covering also the expert group meetings and the experts' and the secretary's remuneration was **18 806,24 €** in total. Other costs, including bank costs, accountancy, auditing, etc. was **11 446,50 €**. The bank cost for the stock portfolio was **24 633,16 €**. The payments of all costs were handled through SEB, Skandinaviska Enskilda Banken AB.

January 24, 2018

Elina Leskinen
Secretary