

BIO-info 15/2012, 27. april 2012 [BIO: sakslister og møtereferater](#) [BIO-info arkiv](#)  
submission deadline to [bio.info@bio.uib.no](mailto:bio.info@bio.uib.no) is Wednesday 16:00

## Fra toppen!

### Europa satser marint!

Denne uken har jeg tatt turen til Olhao på Algarve-kysten i Portugal. Her arrangeres en workshop for å forberede en ERA-net i [marin bioteknologi](#). Her møtes samtidig flere nært beslektede nettverk, organisasjoner og satsinger inn mot det marine, og det illustrerer igjen at det satses marint i EU. Her er f.eks. ESF's Marine Board, JPI Oceans-sekretariatet og EuroMarine-nettverket representert. Det siste representerer flere sammenslåtte networks of excellence (NoE) tilbake til FP6-programmet, inkl. Eur-Oceans, MAR-BEF og Marine Genomics Europe, der UiB er med.

Satsingen mot marin bioteknologi har et fokus som vil kunne favne flere av BIOS egne forskeres aktiviteter. I mitt innlegg på workshopen nevnte jeg bl.a. spennende akvakultur-rettete prosjekter, lakselus-forskningen, bioprospektering fra dyphavsoasene vha. metagenomikk, og utnyttelse av sekkedyr til bioenergi-produksjon, en nylig patentert idé fra forskere ved BIO og Uni. Mange av de andre som møtes her i Olhao vil representere nyttige samarbeidspartnere for flere av våre forskere når EUs utlysninger kommer til sommeren, og ERA-net Marine Biotechnology lanseres i 2013.



Hilsen Anders

### Ukens bilde



### Matrix project student surveying monkeys

Fotograf: **Amy Eycott**

Matrix project MSc student Rhoda Nankabiwa surveys red-tailed monkeys in Zika forest fragment near Kampala, Uganda. Matrix project is a collaboration between UiB and Makerere University, Uganda.

*You are invited to submit photos (electronically!) for "Ukens bilde". Please include a very short description and credit information. Picture can be of researchers / students in action, technology, organisms, field sites ... Please send your pictures to [bio.info@bio.uib.no](mailto:bio.info@bio.uib.no)*

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# BIO-info

## Nyheter fra Institutt for biologi

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[Facebook BIO](#) [Facebook STIM](#) [Facebook UiB](#)

## VIKTIG INFORMASJON

### BIO-arrangement kommende uke

Dato	Handlinger, navn	Tid og sted
30. april	Ph.d.-forelesning Irene Roalkvam	10.15 den 30. april, seminarrommet ved CGB, 4 etg. Realfagbygget.

## NYHETER OG GENERELL INFORMASJON

Ph.d.-forelesning Irene Roalkvam; Ny versjon av Miljøstatus; Forelesningsserien Horisonter

### Ph.d.-forelesning Irene Roalkvam

Irene Roalkvam vil holde en forelesning over selvvalgte emne:

"The syntrophic lifestyle - when teamwork pays off"

Evalueringskomite: Øivind Larsen, Uni og Antje Gittel, BIO

Tid og sted: 30. april kl 10.15 den 30. april, seminarrommet ved CGB, 4 etg. Realfagbygget.

Alle interesserte er velkommen

### Ny versjon av Miljøstatus

Med nytt design og struktur for manøvrering. Tekstsidene er blitt bredere og lenkene i venstremargen er fjernet og overført til toppen av sidene. Det er lagt vekt på å redusere dybden i søkehierarkiet.

Hav, kyst og ferskvann er splittet ved at det er etablert en egen inngangsside for [Hav og kyst](#). Lenken til Indikatorene fra Overvåkingsgruppa finnes her: [Overvåking av miljøtilstanden i Barentshavet](#) [Overvåking av miljøtilstanden i Norskehavet](#) Det er også laget en samleside [Havforvaltning](#) med alt stoffet om arbeidet med havforvaltning.

### Horisonter – forelesningsserie for de store spørsmål / Horizons lectures for «the big questions»

[Horisonter](#) er MN-fakultetets forelesningsserie der de store vitenskapelige spørsmål og utfordringer blir adressert. Forelesningene er åpne for ansatte, studenter og alle andre interesserte. Torsdag 3. mai vil Inga Berre snakke om [varm energi under horisonten](#) (se nedenfor).

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The [Horizons lectures](#) series by The Faculty of Mathematics and Natural Sciences aims at reaching staff, students and other interested parties, with a focus on major scientific questions and challenges.



### Studie

#### Exchange Scholarships for Icelandic and Norwegian Students in Arctic Studies

The Ministers of Foreign Affairs of Iceland and Norway signed a three year Memorandum of Understanding in Akureyri on September 29, 2011, concerning co-operation in the field of Arctic scientific research. Exchange scholarships for Icelandic and Norwegian Students in Arctic Studies are one of the key activities in this co-operation.

The scholarships in 2012/2013 will be 520€ per month for subsistence and a maximum 1.200 € travel grant. Minimum duration is one month and the maximum duration is 12 months.

The eligibility criteria are the same as for Nordplus Higher Education grants for studies or work placements, with the addition that doctoral students are also eligible for support.

**Priority will be given to Master and Ph.D. students** and students wishing to study at Norwegian and Icelandic universities that are members of the University of the Arctic network. Read [More](#).

### Nyansatte

Pascale Michel



I was born in France and lived for the past ten years in New Zealand. My research interests focus on species interactions, functional traits and ecosystem dynamics, and I worked with birds, plants and invertebrates. I first completed a MSc thesis in Ecology at the University of Aberdeen (Scotland) and a PhD in Zoology at the University of Otago (New Zealand). I researched the effect of environmental factors (e.g. climate change, habitat quality and food availability) on the breeding ecology of seabirds and forest passerines. I later was awarded a FRST postdoctoral fellowship with Landcare Research NZ, to investigate the ecology and eco-physiology of New Zealand bryophyte species. I more specifically looked at bryophyte distributions along environmental gradients, their interactions with vascular plants and contribution to ecosystem services (hydrology and litter decomposition). I am now starting a postdoctoral position with the SEEDCLIM team to research the bryophytes' response to climate change and their role in community assembly.

### NYE UTLYSNINGER

Mer info om utlysninger inkl. løpende, dvs. uten frister finner du [her](#)

Husk å sende søknadsutkastet til [post@bio.uib.no](mailto:post@bio.uib.no) 1 uke i forveien (gjelder ikke mindre bevilgninger som legater og fonds)

# BIO-info

## Nyheter fra Institutt for biologi

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New issue FunderFinder; Kreftforeningen; NORKLIMA; Postdoc fellowships LabexMER; Geocyan Summer School

### New issue of FunderFinder

It contains a lot of information about information seminars and proposal writing workshops here in Bergen, so please take the opportunity to attend and meet us in person in May and June. [Link](#)

### Midler fra kreftforeningen

Kreftforeningens årlige hovedutlysning av forskningsmidler til stillinger og drift er nå kunngjort. Det kan her søkes om støtte til forskerinitierte kreftforskningsprosjekter innen følgende forskningstema: grunnforskning, translasjonsforskning, klinisk forskning, epidemiologisk forskning, helse- og sosialfaglig forskning og alternativ/komplementær forskning.

Søknadsfristen er fredag 1. juni 2012 kl. 12:00. Kreftforeningen aksepterer kun søknader som sendes inn elektronisk via vår søknadsportal.

For utfyllende informasjon, se kreftforeningens [nettsider](#) eller gå til [søknadsportalen](#).

### Klimaendringer: Økosystemrespons og tilpasning ( NORKLIMA )

Formålet med utlysningen er å få bedre kunnskap om hvordan økosystemer på land og i ferskvann responderer på klimaendringer, og om hvordan økosystemforvaltning og strategier for klimatilpasning kan bidra til å redusere negative effekter og tilrettelegge for positive økosystemresponser.

**Søknadsfrist:** 05.09.2012 13:00 CET

[Les mer](#)

### International postdoctoral fellowships in Marine Sciences

A new program for young scientists, co-sponsored by the LabexMER cluster of excellence, Ifremer, the University of Brest and the Brittany Regional council.

Deadline for applications: May 21<sup>st</sup>. Starting date of employment: September to December 2012. [More info](#)



Symposium & Summer School - Brest - August 27-31, 2012

### 1st announcement for the GEOCEAN Symposium & Summer school:

August 27-31, 2012, Plouzané, Brest - France

Join us at the GEOCEAN scientific Symposium, in tribute to Jean Francheteau, and Summer School focused on "Geodynamic processes and biochemical interactions at seafloor spreading ridges".

Post-graduate, post-doctoral and research scientists interested in seafloor spreading processes and their interactions with the ocean and the biosphere are welcome to attend to these events.

The Symposium (August 27-28) is open to anyone, upon free registration. Abstracts for oral or poster presentations must be submitted by May 31st, 2012.

The Summer School (August 29-31) will host a limited number of participants. A 360€ registration fee applies and includes lodging and lunches for 5 days. Funding is available for students on a limited basis.

Registrations to the Symposium and Summer School are due for May 31st, 2012. [More info](#)

PhDs who would like to join the summer school have possibilities for coverage of travel and registration fee. Contact [Anne Fjellbirkeland](#) for more info.

## KOMMENDE MØTER OG SEMINAR

Mer info om kurs, møter, seminar og arrangement etc finner du [her](#).

**Horisontforelesning Inga Berre; Genmodifiserte planter og bærekraft; Deep Ocean Cabled Observatories: towards new collaborations!**



### Horisont forelesning Inga Berre

Torsdag 3. mai 2012 kl. 15.00, Aud A, Allegt. 66

Varm energi under horisonten (lecture in Norwegian this time)

Inga Berre, Matematisk institutt og CMR

I jordskorpa ligger energimengder tilsvarende 15 millioner av dagens årsforbruk. En ørliten del av denne energien blir i dag utvunnet til produksjon av elektrisitet og varme, men hvordan kan vi hente ut mer?

Dette er et av spørsmålene Inga Berre vil ta opp i sitt foredrag, som vil belyse muligheter og hindringer i utvinning av geotermisk energi. Inga Berre fikk Meltzerprisen for yngre forskere i 2012. [Les mer](#)

### **Bioteknologinemnda og Direktoratet for naturforvaltning inviterer til åpent møte: Genmodifiserte planter og bærekraft**

Kan planter som er genmodifisert til å tåle sprøytemidler, bidra til bærekraftig utvikling?

Dato: Torsdag 10. mai 2012 kl. 10.00–13.15.

Sted: Vika konferansesenter, Dronning Mauds gate 10, Oslo. Inngang fra hjørnet av Dronning Mauds gate og Munkedamsveien.

Den norske genteknologiloven sier at en genmodifisert plante ikke må skade helse eller miljø for å bli godkjent i Norge. I vurderingen av planten skal det også legges vekt på om bruken av den bidrar til bærekraftig utvikling, er samfunnsnyttig og etisk forsvarlig. På dette møtet vil vi diskutere hva som skal til for at planter som er genmodifisert til å tåle sprøytemidler, skal bidra til bærekraftig utvikling. Møtet vil gi innspill til Bioteknologinemndas arbeid med å konkretisere bærekraftkriteriet i genteknologiloven.

Møtet er gratis og åpent for alle, men vi ber om at du melder deg på. Møtet holdes på engelsk.

[Program og påmelding](#)

### **Deep Ocean Cabled Observatories: towards new collaborations!**

Cabled observatories provide marine scientists with a large number of opportunities previously completely unavailable. In the "Deep Ocean Cabled Observatories" workshop, taking place in NIKHEF, Amsterdam (the Netherlands) on the 24th and 25th of May 2012, marine scientists (geoscientists, biologists, oceanographers, etc) and astroparticle physicists will jointly discuss current and future research options using deep ocean cabled observatories, the future of ocean research.

[More info](#)



### **6th World Fisheries Congress 2012**

We are delighted to announce that the final programme\* is now available to view online. Click [HERE](#) to see the final version of the **Programme**. Click [HERE](#) to see the **ePosters**. \*programme correct at time of print, 17<sup>th</sup> April 2012

### LEDIGE STILLINGER

Mer info finner du [her](#). Stillinger utlyst på BIO finner du nederst til høyre på instituttets [nettside](#).

### NYE ARTIKLER

\*\*\*A full listing of BIO's ISI publications can be found on BIO's internal web pages. [Click here](#)

Ray; Steen; Sandaa; Birks HH, Birks HJB; Solhøy; Ruzzin; Mennerat; Hamre; Nilsen; Skorping;

**Ray J, Dondrup M, Modha S, Steen IH, Sandaa R-A, et al. (2012) Finding a Needle in the Virus Metagenome Haystack - Micro-Metagenome Analysis Captures a Snapshot of the Diversity of a Bacteriophage Armoire. PLoS ONE 7(4): e34238. doi:10.1371/journal.pone.0034238**

**Abstract:** Viruses are ubiquitous in the oceans and critical components of marine microbial communities, regulating nutrient transfer to higher trophic levels or to the dissolved organic pool through lysis of host cells. Hydrothermal vent systems are oases of biological activity in the deep oceans, for which knowledge of biodiversity and its impact on global ocean biogeochemical cycling is still in its infancy. In order to gain biological insight into viral communities present in hydrothermal vent systems, we developed a method based on deep-sequencing of pulsed field gel electrophoretic bands representing key viral fractions present in seawater within and surrounding a hydrothermal plume derived from Loki's Castle vent field at the Arctic Mid-Ocean Ridge. The reduction in virus community complexity afforded by this novel approach enabled the near-complete reconstruction of a lambda-like phage genome from the virus fraction of the plume. Phylogenetic examination of distinct gene regions in this lambdaoid phage genome unveiled diversity at loci encoding superinfection exclusion- and integrase-like proteins. This suggests the importance of fine-tuning lysogenic conversion as a viral survival strategy, and provides insights into the nature of host-virus and virus-virus interactions, within hydrothermal plumes. By reducing the complexity of the viral community through targeted sequencing of prominent dsDNA viral fractions, this method has selectively mimicked virus dominance approaching that hitherto achieved only through culturing, thus enabling bioinformatic analysis to locate a lambdaoid viral "needle" within the greater viral community "haystack". Such targeted analyses have great potential for accelerating the extraction of biological knowledge from diverse and poorly understood environmental viral communities.

Canellas-Bolta N, Rull V, Saez, A, Margalef O, Giralt S, Pueyo JJ, **Birks HH, Birks HJB**, Pla-Rabes S. (2012) Macrofossils in Raraku Lake (Easter Island) integrated with sedimentary and geochemical records: towards a palaeoecological synthesis for the last 34,000 years. Quaternary Science Reviews 34:113-126

**Abstract:** Macrofossil analysis of a composite 19 m long sediment core from Rano Raraku Lake (Easter Island) was related to litho-sedimentary and geochemical features of the sediment. Strong stratigraphical patterns are shown by indirect gradient analyses of the data. The good correspondence between the stratigraphical patterns derived from macrofossil (Correspondence Analysis) and sedimentary and geochemical data (Principal Component Analysis) shows that macrofossil associations provide sound palaeolimnological information in conjunction with sedimentary data. The main taphonomic factors influencing the macrofossil assemblages are run-off from the catchment, the littoral plant belt, and the depositional environment within the basin. Five main stages during the last 34,000 calibrated years BP (cal yr BP) are characterised from the lithological, geochemical, and macrofossil data. From 34 to 14.6 cal kyr BP (last glacial period) the sediments were largely derived from the catchment, indicating a high energy lake environment with much erosion and run-off bringing abundant plant trichomes, lichens, and mosses into the centre of Raraku lake. During the early Holocene the infilling of the lake basin and warmer conditions favoured the growth of a littoral plant belt that obstructed terrigenous input. Cladoceran remains and Solanaceae seeds are indicative of reduced run-off and higher values of N and organic C indicate increased aquatic and catchment

productivity. From 8.7 to 4.5 cal kyr BP a swamp occupied the entire basin. The increase of Cyperaceae seeds reflects this swamp development and, with oribatid mites and coleopteran remains, indicates a peaty environment and more anoxic conditions in Raraku. At around 4.5 cal kyr BP dry conditions prevented peat growth and there is a sedimentary hiatus. About 800 cal yr BP, peat deposition resumed. Finally, in the last few centuries, a small lake formed within the surrounding swamp. Evidence of human activity is recorded in these uppermost sediments.

Gwiazdowicz DJ, **Solhoy T**, Coulson SJ, Lebedeva NV, Melekhina EN (2012) First record of *Vulgarogamasus immanis* (Acari, Mesostigmata) in Svalbard. *Polish Polar Research* 33:35-39

**Abstract:** The inesostigmatid mite *Vulgarogamasus immanis* (Berlese, 1904) is reported in Svalbard for the first time. The gamasid mite community of Svalbard is amongst the best known of invertebrate groups of the archipelago due to recent revisions based on fresh sampling campaigns. Nonetheless, a hitherto unrecorded species of gamasid mite was recently found along the strandline in Barentsburg. This record brings the total gamasid mite inventory of Svalbard to 23 species. The current inventory of Svalbard is bedeviled with synonyms and misidentifications. Nevertheless, resolving these confusions and maintaining an accurate and updated species inventory is of prime importance in understanding the ecology of this region. Especially in a period of rapid environmental change.

**Ruzzin J.** Public health concern behind the exposure to persistent organic pollutants and the risk of metabolic diseases. [BMC Public Health](#). 2012 Apr 20;12(1):298. [Epub ahead of print]

### **Abstract**

#### **BACKGROUND:**

Persistent organic pollutants (POPs) are hazardous chemicals omnipresent in our food chain, which have been internationally regulated to ensure public health. Initially described for their potency to affect reproduction and promote cancer, recent studies have highlighted an unexpected implication of POPs in the development of metabolic diseases like type 2 diabetes and obesity. Based on this novel knowledge, this article aims at stimulating discussion and evaluating the effectiveness of current POP legislation to protect humans against the risk of metabolic diseases. Furthermore, the regulation of POPs in animal food products in the European Union (EU) is addressed, with a special focus on marine food since it may represent a major source of POP exposure to humans.

#### **DISCUSSION:**

There is mounting scientific evidence showing that current POP risk assessment and regulation cannot effectively protect humans against metabolic disorders. Better regulatory control of POPs in dietary products should be of high public health priority.

#### **SUMMARY:**

The general population is exposed to sufficient POPs, both in term of concentration and diversity, to induce metabolic disorders. This situation should attract the greatest attention from the public health and governmental authorities.

**A. MENNERAT, L. HAMRE, D. EBERT, F. NILSEN, M. DA´VIDOVA & A. SKORPING.** Life history and virulence are linked in the ectoparasitic salmon louse *Lepeophtheirus salmonis*. *Journal of Evolutionary Biology*. doi: 10.1111/j.1420-9101.2012.02474.x

**Abstract:** Models of virulence evolution for horizontally transmitted parasites often assume that transmission rate (the probability that an infected host infects a susceptible host) and virulence (the increase in host mortality due to infection) are positively correlated, because higher rates of production of propagules may cause more damages to the host. However, empirical support for this assumption is scant and limited to microparasites. To fill this gap, we explored the relationships between parasite life history and virulence in the salmon louse, *Lepeophtheirus salmonis*, a horizontally transmitted copepod ectoparasite on Atlantic salmon *Salmo salar*. In the laboratory, we infected juvenile salmon hosts with equal doses of infective *L. salmonis* larvae and monitored parasite age at first reproduction, parasite fecundity, area of damage caused on the skin of the host, and host weight and length gain. We found that earlier onset of parasite reproduction was associated with higher parasite fecundity. Moreover, higher parasite fecundity (a proxy for transmission rate, as infection probability increases with higher numbers of parasite larvae released to the water) was associated with lower host weight



gain (correlated with lower survival in juvenile salmon), supporting the presence of a virulence–transmission trade-off. Our results are relevant in the context of increasing intensive farming, where frequent anti-parasite drug use and increased host density may have selected for faster production of parasite transmission stages, via earlier reproduction and increased early fecundity. Our study highlights that salmon lice, therefore, are a good model for studying how human activity may affect the evolution of parasite virulence.