

BIO-info 07/2012, 17. feb 2012 [BIO: sakslister og møtereferater](#) [BIO-info arkiv](#)
submission deadline to bio.info@bio.uib.no is Wednesday 16:00

Fra toppen!

Myldrende biologer

Denne uken var det Karrieredag for biologer på Høyteknologisenteret, arrangert av Biologisk fagutvalg (BFU) og andre studentforeninger. Et flott arrangement der det myldret av spirende biologistudenter på jakt etter karrieremuligheter bygget på fagutdanningen. Vi håper og tror de ble inspirert til å stå på for å gjøre seg mest mulig attraktiv på arbeidsmarkedet.

To viktige momenter her er *faglig entusiasme* og *andre interesser*. Dette kan høres ut som to motsetninger, men det er gjerne de som tar seg tid til å engasjere seg i andre ting enn bare å lese pensum, som kommer ut med den bredeste oversikten, og med nyttige erfaringer utover studenttilværelsen. Derfor er engasjement i studentorganisasjoner, idrettslag, musikk og andre fritidssysler viktige, og ofte noe arbeidsgivere ser etter som positive tilleggskvaliteter ved en nyutdannet kandidat. Stor takk til studentforeningene som arrangerte karrieredagen og de som dro lasset med å få det hele på plass!

I tillegg er det selvsagt viktig å bli en dyktig biolog, med innsikt i og oversikt over faget. Faglig entusiasme krever altså noe mer enn bare entusiasme, det krever også at man jobber med å forstå detaljene. Lykke til på veien!

Hilsen Anders



Ukens bilde



Fargerik forskning

Fotograf: **Ragnhild Aakre Jakobsen**

Plasma prøver fra rognkjeks (*Cyclopterus lumpus*) har fantastiske farger sammenlignet med andre arter som vanligvis har urinfarget plasma. Kanskje instituttets fysiologer kan forklare årsaken til de fine fargene?

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

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

NYHETER OG GENERELL INFORMASJON

Fulbright Arctic Scholarship til Lise Øvreås; ForBIO kurs; To prisvinnere

Lise Øvreås er tildelt Fulbright Arctic Scholarship for 2012



Forrige uke ble det kjent at Lise Øvreås er tildelt Fulbright Arctic Chair Scholarship for 2012. Hun reiser til California til høsten for å fortsette studiene innenfor arktisk mikrobiologi. [Read more in todays news in English, På Høyden.](#)

The Research School in Biosystematics (ForBio) extended deadline for courses

Introduction to R for biodiversity studies (15.-16.3.2012)

Biogeography for systematists - tools and sources (19.-23.3.2012)

at University of Bergen. New deadline: 17.2.2012

Course participation is free of costs to ForBio members (lunch and dinner are not covered), other participants have to come up for travel, accommodation, and meals. [More info](#)

Vurdering av risiko for import av revens dvergbendelorm til Fastlands-Norge og helseeffekter for befolkningen

Vitenskapskomiteen for mattrygghet (VKM) mener det er sannsynlig at revens dvergbendelorm (*Echinococcus multilocularis*) vil bli innført til det norske fastlandet, kanskje i løpet av kommende ti år. Den er påvist Sverige, bare 65 km fra grensen til Norge, og blir stadig mer utbredt i Europa.

Revens dvergbendelorm kan overføres fra infiserte dyr som hund og rev, forurenset drikkevann m.v., og føre til meget alvorlig sykdom hos smittede personer. Men selv i land hvor parasitten er sterkt utbredt, forårsaker den forholdsvis sjelden sykdom hos mennesker. Dette fremgår av en risikovurdering som VKM har utarbeidet. Se kort omtale og risikovurderingen på www.vkm.no.

To prisvinnere på NSFTs vintermøte på Beito

På årets vintermøte for Norsk Selskap for Farmakologi og Toksikologi (Beitostølen, 26.-28. januar) ble det delt ut en rekke priser for beste foredrag og postere i ulike kategorier. Som vanlig (!) stakk miljøtoksikologer fra BIO av med flere priser. Marta Eide vant prisen for beste poster i kategorien økotoksikologi, mens Anne Christine Knag vant prisen for beste foredrag i samme kategori. Begge er PhD-stipendiater i [miljøtoksikologi](#)-gruppen. BIO-info gratulerer!

To glade prisvinnere: Anne Christine Knag og Marta Eide (foto: Anders Goksøyr)



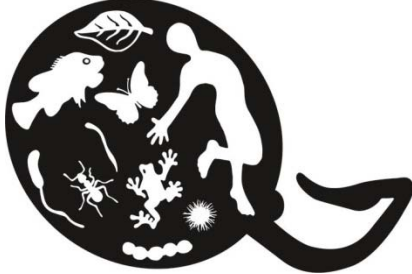
BIO-info

Nyheter fra Institutt for biologi

Studie

Biologisk karrieredag, Havbruksstudenter vil bli sett av næringen

Biologisk karrieredag var en stor suksess!



I går, 16. februar, arrangerte Biologisk fagutvalg, Linjeforeningen for havbruk og fiskehelse, STIM og Naturviterne Biologisk karrieredag. Her hadde mange ulike bedrifter og organisasjoner stands og møtte interesserte studenter på jobb jakt. Bilder og reportasje fra Biologisk karrieredag kommer i neste ukes BIO-info.

Havbruksstudenter vil bli sett av næringen

Havbruksstudentene ved universitetet i Bergen har følt seg oversett av næringen. Derfor har de nå stiftet en linjeforening som skal gi dem både et ansikt utad og et samhold innad. – Næringen sier de behøver flinke folk. Vel, her er vi, sier studentene Carl-Johan Arnesen Sandberg og Stein Johannessen. [Les artikkelen](#) på Kyst.no og se [Linjeforeningens hjemmeside](#).

NYE UTLYSNINGER

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

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

Midler til utveksling med Nordamerika; BIOTEK2021

SIU, Partnerskapsprogrammet med Nord-Amerika 2012-2015

Utlysningen av midler gjennom partnerskapsprogrammet med Nord-Amerika 2012-2015. Vennligst se vedlagt utlysningstekst på norsk og engelsk.

Partnerskapsprogrammet for Nord-Amerika er et program for samarbeid innen høyere utdanning med USA og Canada. Programmet er en del av Kunnskapsdepartementets Strategi for høyere utdanningssamarbeid med Nord-Amerika (2012-2015). **Søknadsfrist er torsdag 29. mars 2012 klokken 15.00.** [Mer info](#)

BIOTEK2021

BIOTEK2021 er et nytt NFR program som skal bidra til implementering av Regjeringens nasjonale strategi for bioteknologi. Denne strategien peker på at bioteknologi er en muliggjørende teknologi som er viktig for utviklingen av de fire sektorene: Landbruk, Marin, Industri og Helse. Frist for innsendelse av OBLIGATORISK SKISSE er 15 mars. [Les mer](#)

KOMMENDE MØTER OG SEMINAR

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

Naturmangfoldloven; PhD-evaluering; MilPalHel forelesning; Verdikt konferansen; HELIXKONFERANSEN

Seminar om naturmangfoldloven "Naturvern anno 2012 – ny lov – nye verktøy – ny giv"

Lørdag 24. mars kl 9.00-18.00 + Søndag 25. mars kl 9.00 - 15.00

Scandic Bergen City, Håkonsgaten 2 Påmeldingsfrist 8. mars.

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Nyheter fra Institutt for biologi

Hvordan kan vi best bruke naturmangfoldloven til å hindre at verdifull natur ødelegges? Seminaret vil fokusere på handling og gi deltakerne god innsikt i loven og bruken av denne. [Les mer](#)

Internasjonal konferanse om PhD-evaluering i Bergen

[Mer info](#)

16.03-16.03

Forelesning: Miljøbettinget epigenetikk og sykdomsutvikling

Programmet Miljøpåvirkning og helse inviterer til en forelesning av professor Michael Skinner fra Washington State University.

Sted: Forskningsrådet, Stensbergsgaten 27, 0170 Oslo

Tid: 19.03.2012 10:00 – 12:00 [Les mer](#)

Velkommen til VERDIKT-konferansen 2012

Konferansen for landets fremste IKT-forskning går av stabelen i Oslo-Gardermoen 25.-26. april 2012.

Den 5. VERDIKT-konferansen gir deg oversikt og ny kunnskap om norsk forskning og internasjonale trender innen IKT. Påmelding på: [Verdikt-konferanse](#)

HELIXKONFERANSEN

Helix konferansen finner sted i Bergen 22-23 mars. Tema for fagkonferansen er maktforhold, verdiskapning og fornuft i marin sektor Vestlandet/Norge. [Mer info](#)

NYE ARTIKLER

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

Telford; Jacobsen; Magnesen; Rapp; Wergeland; Erga

Austin WEN, **Telford, R.J.**, Ninnemann, US. Brown, L. Wilson, L.J. Small, DP. Bryant CL. (2011) North Atlantic reservoir ages linked to high Younger Dryas atmospheric radiocarbon concentrations. *Global and Planetary Change* 79:226-233

Abstract: Records of changing atmospheric radiocarbon concentration ($\Delta(14)\text{C}(\text{atm})$) from the last deglaciation suggest that an anomaly during the Younger Dryas (YD) cold phase is the largest of the last 15,000 y. However, the relative influences of the variable $(14)\text{C}$ production rate and changes in the flux and storage of the carbon cycle on $\Delta(14)\text{C}(\text{atm})$ during the YD is uncertain. The latter is strongly influenced by carbon exchange between the atmosphere and other reservoirs, such as the deep ocean. In particular, reorganisation of the North Atlantic's overturning circulation, widely associated with intervals of abrupt climate change such as the YD, may have a significant effect on ocean-atmosphere carbon exchange. Here we reconstruct apparent surface water $(14)\text{C}$ ages (reservoir ages $R(t)$) in the Atlantic Ocean north of 50 degrees N through the YD interval. Within less than 500 calendar years of the start of the YD cold phase, $R(t)$ increased dramatically, reaching values of up to 1000 y. After 12,300 y BP, $R(t)$ gradually decreased, approaching modern North Atlantic surface ocean values of 400 y by the end of the YD. The method employed here to reconstruct North Atlantic surface ocean $R(t)$ depends on a number of assumptions, most significant of which is the synchronicity of the events in the NGRIP ice chronology and the St Kilda isotope record which were used for correlation. Despite these uncertainties, the calculations of $R(t)$ in this study are in good agreement with previously reported marine-terrestrial $(14)\text{C}$ data linked by the widespread YD Vedde Ash isochrone. The $(14)\text{C}$ concentration of the surface North Atlantic changed in opposition to $\Delta(14)\text{C}(\text{atm})$, throughout the YD, suggesting that extensive sea-ice cover limited air-sea exchange and that a direct link exists between the strength of Atlantic overturning circulation and the $(14)\text{C}$ ventilation rate of the deep ocean on sub-centennial timescales.

Jacobsen A, Grahl-Nielsen O, **Magnesen T** (2012) Effects of reduced diameter of bag cultures on content of essential fatty acids and cell density in a continuous algal production system. *Journal of Applied Phycology* 24:109-116

Abstract: Cell density and fatty acid (FA) content of *Pavlova lutheri* and *Chaetoceros muelleri* were analysed in a continuous algal production system (250-L bags) with reduced diameter. The cell density and FA content and composition in the algal production system were determined in replicate bags over a period of 5 weeks. The results showed that the cell density and essential FAs increased during the experiment for both species. After 5 weeks the mean cell numbers had increased to $6.0 \pm 0.3 \times 10^6$ cells mL⁻¹ in the *P. lutheri* bags and $6.0 \pm 0.4 \times 10^6$ cells mL⁻¹ in the *C. muelleri* bags. The content of total FAs increased significantly ($p < 0.05$) in all of the bags during the experiment. At the end of the experiment the mean total FA content were 2.7 ± 0.3 pg cell⁻¹ in the *P. lutheri* bags and 1.8 ± 0.1 pg cell⁻¹ in the *C. muelleri* bags. Maximum total FA content registered was 3.0 pg cell⁻¹ in one of the *P. lutheri* bags. The content of the essential FAs (ARA, EPA, DHA) increased over time in both of the species. At the end of the experiment the content of EPA (0.6 ± 0.1 pg cell⁻¹) and DHA (0.3 ± 0.0 pg cell⁻¹) were highest in the *P. lutheri* bags, while ARA (0.1 ± 0.0 pg cell⁻¹) was highest in *C. muelleri*. EPA and DHA constituted 22% and 11%, respectively, of total FA content in *P. lutheri*, while ARA constituted 6% of total FA content in *C. muelleri*. The results from this experiment indicate that flagellates such as *P. lutheri* perform better in narrow bags with improved light conditions, while diatoms like *C. muelleri* perform better in wider bags under light limitation. Implications for bivalve hatcheries are discussed.

Kongsrud JA, **Rapp HT** (2012) *Nicomache* (*Loxochona*) *lokii* sp nov (Annelida: Polychaeta: Maldanidae) from the Loki's Castle vent field: an important structure builder in an Arctic vent system. *Polar Biology* 35:161-170

Abstract: The discovery of the Loki's Castle vent field at 2,350 m depth on the Arctic mid-ocean ridge in 2008 represents the first known black smoker vent system in the Arctic region. Preliminary results on the benthic invertebrates collected at Loki's Castle indicate the presence of an endemic fauna dominated by tube-building polychaetes, melitid amphipods and gastropods. Here, we formally describe and investigate the ecological role of a new maldanid species, *Nicomache* (*Loxochona*) *lokii* sp. nov., a species found to be particularly common and regarded as a keystone species in this vent system. The description of the new species is supplemented with a DNA barcode. The subgenus *N.* (*Loxochona*) includes at present six nominal species, and the new species described herein is the fourth species associated with reducing habitats. A table with diagnostic characters for all species referred to the subgenus is provided. The new species builds tubes up to a length of 20 cm or more, tightly fastened to the substratum. Together with other tube-building species, *N. (L.) lokii* sp. nov. form a complex three-dimensional habitat for a number of free-living invertebrates. Based on the morphology of the foregut, the microbial community in the gut and the stable isotope values found for this species, it is concluded that it acts as a grazer in this vent system.

Magnesen T, Redmond KJ (2012) Potential predation rates by the sea stars *Asterias rubens* and *Marthasterias glacialis*, on juvenile scallops, *Pecten maximus*, ready for sea ranching. *Aquaculture International* 20:189-199

Abstract: The potential for predation by the sea stars *Asterias rubens* and *Marthasterias glacialis* on seed-size (41 ± 3 mm shell height) juvenile scallops (*Pecten maximus*), ready for seeding in sea ranching areas, was investigated in a 30-day laboratory predation experiment. There was no significant difference ($P > 0.05$) in predation rate of large *A. rubens* (95-115 mm radius) and large *M. glacialis* (120-164 mm radius), which averaged 0.88 and 0.71 scallops individual⁻¹ day⁻¹, respectively. Maximum rates of predation were 2.44 scallops individual⁻¹ day⁻¹ for large *A. rubens* and 3.00 scallops individual⁻¹ day⁻¹ for large *M. glacialis*. Small *M. glacialis* (76-87 mm radius) had a significantly lower predation rate than large individuals of either species (average 0.13 scallops individual⁻¹ day⁻¹, $P < 0.05$). Small *A. rubens* (50-80 mm radius) only began to prey on scallops when average scallop size was reduced to 35 mm. Based on estimated density of sea stars at a Norwegian sea ranching site and average predation rates, a population of scallops seeded at 10 m^{-2} would be reduced by between 0.5 and 11% in 1 month. Furthermore, using the highest observed

predation rate, the degree of loss of scallops indicated that scallop culture via sea ranching would not be economically viable and thus methods for reducing scallop predation by sea stars are necessary.

Martens, LG. Fjellidal, PG; Lock, EJ. Wargelius, A. **Wergeland, H.** Witten, PE. Hansen, T. Waagbo, R. Ornsrud, R. (2012) Dietary phosphorus does not reduce the risk for spinal deformities in a model of adjuvant-induced inflammation in Atlantic salmon (*Salmo salar*) postsmolts. *Aquaculture Nutrition* 18:12-20

Abstract. Inflammation is a non-specific protective mechanism towards injury known to affect bone remodelling. This study aimed to investigate the effect of Freund's complete adjuvant (FCA) induced-inflammation on the prevalence of spinal deformities of Atlantic salmon postsmolts fed with two different dietary P levels. Sextuple groups of salmon postsmolts were fed with either a low-phosphorous (6 g kg⁻¹ available P, LP) or a high-phosphorous (9 g kg⁻¹ available P) diet for a period of 101 days. On Day 102, individually tagged fish were subjected to (i) single injection with FCA (0.125 mg kg⁻¹ BW) dissolved in phosphate-buffered saline (PBS) (ii) placebo injection with PBS or (iii) sham injection (insertion of needle only) or (iv) remained untreated. On Day 103, fish were given a common diet for 174 days in seawater. No significant differences in body weight were observed. Injected fish, particularly the FCA group, had more compressions in the injection site than untreated fish. No effect of diet and no interaction between treatment and diet were observed. Severe scoliosis was observed in similar to 7% of FCA-injected individuals, corresponding to a mixture of bone malformations in the tail region. In conclusion, experimentally induced inflammation may be an independent risk factor for bone deformities in Atlantic salmon.

Svein Rune Erga, Nicolausi Ssebiyonga, Øyvind Frette, Børge Hamre, Jan Aure, Øivind Strand, Tore Strohmeier (2012) Dynamics of phytoplankton distribution and photosynthetic capacity in a western Norwegian fjord during coastal upwelling: Effects on optical properties. *Estuarine, Coastal and Shelf Science*, 97, 20 January 2012, Pages 91–103

Abstract: The present study describes the coupling between optical properties and the dynamics of phytoplankton distribution and photosynthetic capacity in the Lysefjord during an exceptional coastal upwelling. At the mouth of the fjord, transparent Coastal water was "piled up" against the sill, while more turbid Fjord water from the outer fjord system was flowing over the sill, creating the intermediate layer which extended further into the fjord. This was reflected by high spectral attenuation coefficients in the upper 10 m of the fjord. Outside the sill, clear water with low spectral attenuation coefficients were found below sill depth down to at least 30 m, while the attenuation coefficients inside the sill were significantly higher between 10 and 20 m. About 4–7 km outwards from the head of the fjord clearer deep basin water was entering the upper layer due to the upwelling which could be traced up to 7 m, bounded by the 7.5 °C and the 31 salinity isolines. In the outer part of the fjord waters with a high chl *a* content and photosynthetic capacity were observed below the outflowing surface layer containing "old water" from the inner part of the fjord, which was characterized by low nutrient and chl *a* concentrations. Maximum quantum efficiencies (0.5) were encountered within this subsurface layer. Quantum efficiencies exceeded 0.3 when nitrate and silicate concentrations increased above 2 mmol m⁻³. About 50% of the PAR light attenuation (0–30 m) was caused by chl *a*, and the 1% light depth varied between 27 and 35 m along the transect. Due to the influence of freshwater outlets, non-pigmented particles were more abundant in the inner part of the fjord than in the outer part. Colored dissolved organic matter (CDOM) contributed strongly to absorption within the upper 10 m at wavelengths below 470 nm while scattering was the major attenuation contributor for wavelengths above 600 nm. With respect to possible climate change effects on the growth of phytoplankton in Norwegian fjords, our results indicate that the alteration of coastal wind patterns due to its impact on coastal – fjord water exchanges, is probably more important than increased temperature and/or increased precipitation.