

BIO-info 22/2012, 22. juni 2012 [BIO: sakslistor og møtereferater](#) [BIO-info arkiv](#)
submission deadline to bio.info@bio.uib.no is Wednesday 16:00

Fra toppen!

God sommer!

Et langt vårsemester nærmer seg slutten og sensuren holder på å falle. For BIOs del har det vært både positive og negative elementer å ta hensyn til når karakteren skal settes. Vi har hatt flere positive opplevelser på forskningsfronten. Biofagevalueringen konkluderte med fremragende forskning i mange forskningsgrupper. Resten av forskningsgruppene har lyktes på andre fronter som også krever eksellens, som FRIMEDBIO, Fellesløft-prosjekter og som partnere i senteraktiviteter m.m. Våre forskere har publisert i fremragende tidsskrift og fått høythengende priser og tildelinger som f.eks. Meltzers Formidlingspris til Harald Kryvi og Fulbright Arctic Chair til Lise Øvreås. Dette er strålende!

I dette vårsemesteret har det nye bachelor-kullet i biologi også vært gjennom en helt ny ex. phil.-modell, og avslutter semsteret med feltkurs der hele bredden av organismebiologi blir presentert. Det blir spennende å se hvordan dette blir mottatt.

På minussiden i karakterboken står naturlig nok fortsatt instituttets økonomiske situasjon. Institutrådet vedtok i går med dyp uro et [langtidsbudsjett](#) som innebærer en nedbemanning av den vitenskapelige staben med fem stillinger, eller 10%, i den neste 4-årsperioden. Dette er en direkte konsekvens av UiBs nye dekningsbidragsmodell vedtatt i universitetsstyret i desember. Kan vi håpe at u-styret er villig til å ta en debatt rundt disse, formodentlig utilsiktede, effektene til høsten?

Uansett, takk til alle ansatte og studenter for fremragende innsats! Nyt sommeren og en velfortjent ferie!

Hilsen Anders

Ukens bilde



HOVING

Fotograf: John-Arvid Grytnes

Bildet er fra feltkurset i BIO102. Du kan se flere under «Nyheter og generell informasjon»

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

Innhold:

God sommer!	1
Ukens bilde	1
Faste lenker:	3
VIKTIG INFORMASJON	3
BIO-arrangement kommende uke	3
NYHETER OG GENERELL INFORMASJON	3
Bilder fra ukas feltkurs i BIO102; Forskningsrådets nye klimaevalueringen; News from JPI Oceans;	3
NYE UTLYSNINGER	6
NORHED; Ny database for partnersøk EØS-midler; EU 10 juli;	6
KOMMENDE MØTER OG SEMINAR	6
Foredrag Kirchman; ESOF; MASTS; Ocean Literacy;	6
LEDIGE STILLINGER	7
NYE ARTIKLER	7
Berland; Giske J.; Jakobsen P. ; Birks HH; Birks HJB; de Vareilles; Telford; Skjæråsen; Geffen, Høie; Mangel; Vestheim	7

BIO-info

Nyheter fra Institutt for biologi

Faste lenker:

[BIO-info arkiv](#) [Sakslistor & referater](#) [BIOs interne websider](#) [BIO's eksterne websider](#)
[Facebook BIO](#) [Facebook STIM](#) [Facebook UiB](#)

VIKTIG INFORMASJON

BIO-arrangement kommende uke

Dato	Handlinger, navn	Tid og sted
27.06	Avsluttende mastergradseksamen Ørjan Bredal Sørensen	10.15, Seminarrom K3, Biologen
28.06	Avsluttende mastergradseksamen Magnhild Hauge Oppedal	11.00, Seminarrom K3, Biologen
28.06	Avsluttende mastergradseksamen Kjetil S. M. Olsen	15.00, Seminarrom K1, Biologen
28.06	BIO-seminar DL Kirchman	13:15, K3-K4
29.06	Disputas Birte Topper	10:15, Stort Aud, HIB
29.06	Avsluttende mastergradseksamen Magnus Torvik	10.00, Sildetønnen, NIFES

NYHETER OG GENERELL INFORMASJON

Bilder fra ukas feltkurs i BIO102; Forskningsrådets nye klimaevalueringen; News from JPI Oceans;

Bilder fra ukas feltkurs i BIO102

Kursleder John-Arvid skryter av studentenes innsats og bildene taler vel egentlig for seg selv.....



BIO-info

Nyheter fra Institutt for biologi



Forskningsrådets nye klimaevaluering er ferdig

Flere av BIOs forskere deltok i fjor høst i instituttets arbeid med å levere grunnlagsmateriale til Forskningsrådets nye, store evaluering av norsk klimaforskning. Konklusjonene er nå klar. Du kan lese mer på [Forskningsrådets hjemmeside](#). Rapporten er også omtalt i "[På Høyden](#)"

Du kan laste ned hele rapporten [her](#)

News from Healthy and Productive Seas and Oceans

You can read the latest news from JPI Healthy and Productive Seas and Oceans [here](#)

Disputas Birte Tøpper: Marine bakterier påvirkes av klimarelaterte endringer

Birte Tøpper disputerer fredag 29. juni for ph.d.-graden med avhandlingen:

"Bacterial community structures in the Arctic Ocean: the effect of increased carbon load on nutrient"

Bedømmelseskomite: Professor David L. Kirchman, University of Delaware, USA, Professor Olav Vadstein, NTNU, Forsker Ida Helene Steen, Universitetet i Bergen

Leder av disputasen: Professor Vigdis Lid Torsvik, Universitetet i Bergen

Tid: Fredag 29.juni 2012 kl. 10.15, Stort auditorium,

Høyteknologisenteret, Thormøhlensgate 55

Adgang for interesserte tilhørere.



http://www.uib.no/info/dr_grad/2012/Topper_Birte.html

Mastereksamen Ørjan Bredal Sørensen: Comparative biology and population dynamics between Trondheimsfjord herring and Norwegian Spring Spawning herring -Implications for management

Ørjan Bredal Sørensen vil onsdag 27. juni holde avsluttende presentasjon av sin masteroppgave i Fiskeribiologi og forvaltning.

Veilleder: Arne Johannessen, Aril Slotte. Sensor: Geir Blom, Fiskeridirektoratet. Bisitter: Rune Rosland

Tid og Sted: Onsdag 27. juni kl. 10.15, Seminarrom K3, Biologen

Alle interesserte velkommen!

Mastereksamen Magnhild Hauge Oppedal: Effects of preconditioning on 12 °C on broodstock oysters (*Ostrea edulis*)

Magnhild Hauge Oppedal vil torsdag 28 juni holde avsluttende presentasjon av sin masteroppgave i Havbruksbiologi

Veileder: Thorolf Magnesen, Arne Duinker. Sensor: Øivind Strand, HI, Bisitter: Dag Aksnes

Tid og sted: Torsdag 28. juni kl. 11.00, Seminarrom K3, Biologen

Alle interesserte velkommen!

Mastereksamen Kjetil S. M. Olsen: Appetite regulating neuropeptides: Tissue distribution and response to fasting and re-feeding in Atlantic halibut larvae (*Hippoglossus hippoglossus* L.)

Kjetil S. M. Olsen vil torsdag 28. juni holde avsluttende presentasjon av sin masteroppgave i Havbruksbiologi:

Veilleder: Ivar Rønnestad. Sensor: Ernst Morten Hevrøy, NIFES. Bisitter: Amund Måge

Tid og Sted: Torsdag 28. juni kl. 15.00, Seminarrom K1, Biologen

Alle interesserte velkommen!

Mastereksamen Magnus Torvik: Kan fiskemelke eller DNA fra fiskemelke modulere immunresponsen hos Atlantisk laks (*Salmo salar*)? En cellestudie.

Magnus Torvik holder fredag 29. juni avsluttende presentasjon av sin masteroppgave i Ernæring hos akvatiske organismer i oppdrett:

Veileder: Elisabeth Holen, (NIFES), Sensor: Line Wergeland, Helse Bergen. Bisitter: Monica Sanden

Tid og Sted: Fredag 29. juni kl. 10.00, Sildetønnen, Nasjonalt Institutt for ernærings- og

sjømatforskning(NIFES), Nordnesboder 2, Nordnes

Alle interesserte velkommen!

NYE UTLYSNINGER

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

NORHED; Ny database for partnersøk EØS-midler; EU 10 juli;

Further NORHED-delay

New information is available about NORHED on [NORAD](#) and [SIU](#) webpages which says that there has been another delay due to among other things that "a final administrative model must be approved by the Norwegian Ministry of Foreign Affairs". Tove Kvil is no longer listed as the contact person for NORHED. She is replaced by Edle Hamre (head of Section for health, education and research).

Embassy funding enhances research cooperation with India

The Research Council of Norway will now be administering most of the funding for research cooperation with India that is provided by the Norwegian embassy in India. [Read more](#)

Meld interesse gjennom ny database for partnersøk



Norges forskningsråd koordinerer den norske deltakelsen i alle programmer for forskningssamarbeid finansiert av EØS-midlene. En database for partnersøk er nå opprettet for å hjelpe forskningsinstitusjoner til å finne samarbeidspartnere. [Les mer](#)

Nye EU-utlysninger 10. juli

De siste utlysningene i EUs sjuende rammeprogram er ventet rundt den 10. juli. Til gjengjeld er det den største pengepotten noensinne. [Les mer](#)
Utlysningene vil bli lagt ut på [Europakommisjonens deltakerportal](#).

MAROFF

MAROFF Kompetanseprosjekter for 2013 (MAROFF)

MAROFF inviterer forskningsmiljøer til å fremme forslag til Kompetanseprosjekter for næringslivet. Prioriterte områder er beskrevet i MAROFF's programplan som er revidert i 2012.

Søknadsfrist: 05.09.2012 13:00 CET [Les mer](#)

MAROFF Innovasjonsprosjekter for 2013 (MAROFF)

MAROFF inviterer bedrifter til å fremme forslag til Innovasjonsprosjekter i næringslivet. Prioriterte områder er beskrevet i MAROFF's programplan som er revidert i 2012.

Søknadsfrist: 17.10.2012 13:00 CET [Les mer](#)

KOMMENDE MØTER OG SEMINAR

Foredrag Kirchman; ESOF; MASTS; Ocean Literacy;

Fordrag av DL Kirchman,

En av opponentene til Birte Töpper, David L. Kirchman, vil gi oss følgende foredrag neste torsdag 28.06. kl 13:15 i K3/K4

Tittel: Abundance, activity, and energetics of photoheterotrophic bacteria in coastal oceans.

BiO kontaktperson: Ruth-Anne Sandaa

Various Marine Board Notices

1. Marine Programme at ESOF, Dublin, 11-15 July

The prestigious European Science Open Forum (ESOF) 2012, the largest convergence of the Sciences, Humanities and Culture in Europe in 2012, will be hosted by Dublin, Ireland, Europe's City of Science, from 11th to 15th July 2012. [More info](#)

2. MASTS Annual Science Meeting

MASTS (Marine Alliance for Science and Technology for Scotland) was welcomed as a new Marine Board member at the spring plenary in Southampton. The MASTS Annual Science Meeting will take place at the Heriot Watt University Conference Centre, Edinburgh, from 11-13 September 2012. [More info](#)

3. First Conference on Ocean Literacy in Europe, Bruges, Belgium, 12 October 2012.

Please find attached an invitation to attend the 1st Conference on Ocean Literacy in Europe, to take place in the historic city of Bruges on 12 October. [More info](#)

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](#)

Berland; Giske J.; Jakobsen P. ; Birks HH; Birks HJB; de Vareilles; Telford; Skjæråsen; Geffen, Høie; Mangel; Vestheim

Berland, B. Kan en parasitt være en positiv gjest? *Biolog*, nr.1:8-10, 2012.

Abstrakt: Verden er full av parasitter, som per definisjon er skadelig for sine verter. Men for dyr som fanger og svelger byttedyr hele, uten å tygge/knuse dem, kan store nematoder i vertens mage «skru» seg inn i hele byttedyr og «åpne dem» slik at fordøyelsesvæsker trenger inn og øker farten på fordøyelsen. Derved gjør de nyttig arbeid for verten.

Giske, J., Jakobsen P. og Jørgensen C. Fra natur til kultur. *Biolog* nr. 1:12-19, 2012

Brooks SJ, Matthews IP, **Birks HH, Birks HJB** (2012) High resolution Lateglacial and early-Holocene summer air temperature records from Scotland inferred from chironomid assemblages. *Quaternary Science Reviews* 41:67-82

Abstract: Lateglacial and early-Holocene mean July air temperatures have been reconstructed, using a chironomid-based inference model, from lake-sediment sequences from Abernethy Forest, in the eastern Highlands of Scotland, and Loch Ashik, on the Isle of Skye in north-west Scotland. Chronology for Abernethy Forest was derived from radiocarbon dates of terrestrial plant macrofossils deposited in the lake sediments. Chronology for Loch Ashik was derived from tephra layers of known ages, the first age-depth model of this kind. Chironomid-inferred temperatures peak early in the Lateglacial Interstadial and then gradually decline by about 1 degrees C to the beginning of the Younger Dryas (YD). At Abernethy Forest, the Lateglacial Interstadial is punctuated by three centennial-scale cold oscillations which appear to be synchronous with the Greenland Interstadial events GI-1d, when temperatures at Abernethy fell by 5.9 degrees C, GI-1c, when temperatures fell by 2.3 degrees C, and GI-1b, when temperatures fell by 2.8 degrees C. At Loch Ashik only the oscillation correlated with GI-1d is clearly defined, when temperatures fell by 3.8 degrees C. The start of the YD is clearly marked at both sites when temperatures fell by 5.5 degrees C at Abernethy Forest and 2.8 degrees C at Loch Ashik. A warming trend is apparent during the late-YD at Abernethy Forest but at Loch Ashik late-YD temperatures became very cold, possibly influenced by its close proximity to the Skye ice-field. The rapidly rising temperatures at the YD - Holocene transition occur about 300 years earlier at both sites than changes in sediment lithology and loss-on-ignition. The temperature trends at both sites are broadly similar, although between-site differences may result from the influence of local factors. Similar climate trends are found at other sites in the northern British Isles. However, the British summer temperature records differ in detail from trends in the oxygen-isotope records from the

Greenland ice-cores and from other chironomid-inferred temperature records available from Scandinavia, north-west Europe and central Europe, which suggest important differences in the influence of climatic forcing at regional scales.

de Vareilles M, Richard, N. Gavaia, P.J. Silva, TS, Cordeiro, O. Guerreiro, I. Yufera, M. Batista, I. Pires, C. Pousao-Ferreira, P. Rodrigues, P. M. **Rønnestad, I.** Fladmark, KE. Conceicao, LEC (2012) Impact of dietary protein hydrolysates on skeleton quality and proteome in *Diplodus sargus* larvae. *Journal of Applied Ichthyology* 28:477-487

Abstract: In order to investigate the effects of dietary protein hydrolysates (PH) on larval growth performance, skeleton quality and proteome expression, triplicate groups of white seabream (*Diplodus sargus*) larvae were co-fed from first-feeding with live feed and three microencapsulated diets differing in the molecular weight of their PH fraction (Control inclusion of CPSP-90; H inclusion of a high amount in 0.530 kDa hydrolysates; L inclusion of a high amount in <0.5 kDa hydrolysates). At 15 days after hatching (DAH), proteome expression changes were assessed in entire larvae by two-dimensional gel electrophoresis and the quality of larval skeleton was analysed at 28 DAH through double staining of cartilage and bone. Dietary PH fractions tested affected growth, the larvae fed diet L being significantly larger than those fed diet H, but it did not affect the incidence of deformed larvae, nor the number of deformities per fish. Two-dimensional analysis of larvae proteome allowed the detection and the comparative quantification of a total of 709 protein spots having a pI between 4 and 7, around half of which had an expression significantly affected by dietary treatment, the main difference being between proteome of Control larvae with those of both groups L and H. From these spots, 52 proteins involved in diverse processes such as cytoskeletal dynamics, energetic, lipoprotein, amino acid (AA), and nucleotide metabolisms, protein chaperoning and degradation, and signal transduction, were identified. This study revealed that the molecular weight of the dietary protein hydrolysate fraction had a minor impact on skeletal deformities in white seabream larvae, but affected growth performance and had a strong impact on larvae whole body proteome.

Payne, R.J. **Telford, R.J.** Blackford, JJ. Blundell, A. Booth, RK. Charman, DJ. Lamentowicz, L. Lamentowicz, M. Mitchell, EAD. Potts G. Swindles, GT. Warner, BG. Woodland, W.

Abstract: Transfer functions are widely used in palaeoecology to infer past environmental conditions from fossil remains of many groups of organisms. In contrast to traditional training-set design with one observation per site, some training-sets, including those for peatland testate amoeba-hydrology transfer functions, have a clustered structure with many observations from each site. Here we show that this clustered design causes standard performance statistics to be overly optimistic. Model performance when applied to independent data sets is considerably weaker than suggested by statistical cross-validation. We discuss the reasons for these problems and describe leave-one-site-out cross-validation and the cluster bootstrap as appropriate methods for clustered training-sets. Using these methods we show that the performance of most testate amoeba-hydrology transfer functions is worse than previously assumed and reconstructions are more uncertain.

Skjærraasen JE, Nash, RDM. Korsbrekke, K. Fonn, M. Nilsen, T. Kennedy, J. Nedreaas, KH. Thorsen A. Witthames, PR. **Geffen, AJ. Hoie, H.** Kjesbu, OS. (2012) Frequent skipped spawning in the world's largest cod population. *Proceedings of the National Academy of Sciences of the United States of America* 109:8995-8999

Abstract: Life-history theory suggests that animals may skip reproductive events after initial maturation to maximize lifetime fitness. In iteroparous teleosts, verifying past spawning history is particularly difficult; the degree of skipped spawning at the population level therefore remains unknown. We unequivocally show frequent skipped spawning in Northeast Arctic cod (NEAC) in a massive field and laboratory effort from 2006 to 2008. This was verified by postovulatory follicles in temporarily arrested ovaries close to the putative spawning period. At the population level, "skippers" were estimated to be approximately equally abundant as spawning females in 2008, constituting similar to 24% of the females 60-100 cm. These females never truly started vitellogenesis and principally remained on the feeding grounds when spawners migrated southward, avoiding any migration costs. The proximate cause of skipping seems to be insufficient energy to initiate oocyte development, indicating that skipped spawning may partly be a density-dependent response important

in population regulation. Our data also indicate more skipping among smaller females and potential tradeoffs between current and future reproductive effort. We propose that skipped spawning is an integral life-history component for NEAC, likely varying annually, and it could therefore be an underlying factor causing some of the currently unexplained large NEAC recruitment variation. The same may hold for other teleosts.

Helama S, Seppa H, Bjune AE, **Birks HJB** (2012) Fusing pollen-stratigraphic and dendroclimatic proxy data to reconstruct summer temperature variability during the past 7.5 ka in subarctic Fennoscandia. *Journal of Paleolimnology* 48:275-286

Abstract: A new palaeoclimatic reconstruction of mid-summer (July) temperatures for the last 7.5 ka in northern Fennoscandia is presented. It is based on two botanical proxies: spectra of fossil pollen and tree rings of Scots pine logs recovered from lacustrine sediments in the Arctic tree-line region. A newly developed method of proxy fusion is used to integrate the proxy-specific reconstructions of past summer temperature variability based on the pollen-stratigraphic and dendroclimatic data. The rationale behind the method is that the two proxies are likely to be connected to climate variability in a timescale-dependent fashion and, accordingly, the new reconstruction makes use of the low- and high-frequencies from pollen-stratigraphic and tree-ring data, respectively. The most prominent features of the new reconstruction are: (1) the long-term decline of temperatures by 2.0 degrees C over the past 7.5 ka, (2) the mid-Holocene warmth culminating between 5 and 4 ka as a deviation from the cooling trend, (3) the Little Ice Age cool phase between 0.7 and 0.1 ka, and (4) the subsequent warming during the past century. These periods are superimposed on year-to-year variations in climate as dated to calendar-year accuracy by dendrochronology. Within the modern period, the years 1934 and 1937 are among the warmest, and the years 1903 and 1910 are among the coldest summers in the context of the past 7.5 ka. On average, the reconstructed Holocene climate was approximately 0.85 degrees C warmer than the twentieth century.

Satterthwaite WH, Kitaysky AS, **Mangel M** (2012) Linking climate variability, productivity and stress to demography in a long-lived seabird. *Marine Ecology-Progress Series* 454:221-+

Abstract: We examined the reproductive ecology of black-legged kittiwakes *Rissa tridactyla* in several breeding colonies in the North Pacific to test if inter-annual changes in the Pacific Decadal Oscillation (PDO), Winter Ice Cover (ICI), or local sea-surface temperature (SST) predict changes in productivity (fledglings per nest) or nutritional stress (corticosterone). We explored the implications of the observed variation in productivity and stress for projected population dynamics based on a previously demonstrated corticosterone-survival relationship. Although productivity was highly variable (0 to 0.9 fledglings nest⁻¹), the relationships between productivity and environmental indices were weak, with local SST providing slightly more explanatory power than PDO or ICI, suggesting that local factors rather than large-scale climate variability may determine variation in productivity. The relationships between stress and environmental indices were stronger than the relationship between productivity and environment. The measured response of stress to environment showed opposite signs between the southern and northern colonies, and typically implied annual mortality rates varying from 11 to 17%. The observed relationships between climate and stress indicate that anticipated warming might bring at least short-term demographic benefits for kittiwakes in the Bering shelf region, while having negative impacts on birds breeding in the Gulf of Alaska and western Aleutians. We predict decline (without immigration) for colonies with the lowest productivity and conclude that climate variability is likely to affect survival of North Pacific kittiwakes on a region-specific basis. Longevity of these birds may not always be sufficient to buffer their populations from low reproductive performance.

Vestheim H, Langford K, Hylland K (2012) Lack of response in a marine pelagic community to short-term oil and contaminant exposure. *Journal of Experimental Marine Biology and Ecology* 416:110-114

Abstract: Oil and contaminant inputs are co-occurring features of most estuaries and harbours in industrialised countries. However, there is limited knowledge as to how these different pressures interact. Oil may modulate the accumulation and effects of contaminants, and community response to contaminant stress would be expected to be coupled to food web structure. We performed an outdoor land-based 100-L microcosm experiments using natural coastal sea water in order to address these

questions.

Either mineral oil, emamectin (EMA: a pharmaceutical used in aquaculture and agriculture), or a combination was dosed to three replicate tanks for each treatment. Samples were taken at the start and each day of a four-day exposure period. For each sample, algal production and nutrients were quantified. Bacterial abundance was assessed by flow cytometry and the fate of emamectin investigated by filtration followed by extraction and LC/MS/MS analysis. Mesozooplankton were counted in samples taken at the end of the experiment.

There were clear changes in chlorophyll a and bacterial numbers over the time course of the experiment in all treatments, but addition of oil, EMA or their combination did not alter nutrient concentrations, ecosystem components or the community structure compared to the control. There was however an unexplained apparent positive effect of low concentrations of acetone (0.005%) used as solvent in the mesocosms. Emamectin was predominantly found in the water phase at the end of the experiment with higher concentrations in both fractions of EMA-oil treatments compared to treatments with EMA only. The study shows that even high concentrations of the environmental stressors oil and emamectin may not have dramatic effects in a dynamic pelagic system over a four-day period, presumably indicating that longer exposure will be required for any effects through top-down processes to become evident.