BIO-info

Nyheter fra Institutt for biologi

BIO-info 23/2010, 25. juni 2010 BIO: sakslister og møtereferater BIO-info arkiv

Submission deadline to bio.info@bio.uib.no is Wednesdav 16:00

Fra toppen!

Sommer på BIO

Så går vi inn i sommerferiemåneden for de fleste. Det blir sommerstille på laboratoriene, det stilner i korridorene, og de fleste har fått ryddet unna det viktigste arbeidet før ferien. For andre er det nå aktivitetene begynner. Med sol og sommer blomstrer feltsesongen og viktig materiale skal samles inn og observasjoner gjøres.

For undertegnete har dette halvåret vært en eneste sammenhengende feltsesong i form av både observasjoner og materialinnsamling, som nytilsatt instituttleder fra 1. januar og med begrenset innsikt i hva som foregikk innenfor BIOs nye vegger.

Det har vært mange spennende saker å ta tak i, noen tyngre, men mange lette; usedvanlig hyggelige og effektive mennesker å forholde seg til og samarbeide med, og svært lærerikt å komme inn i et stort og variert fagmiljø. Her snakker vi virkelig om BIOdiversitet!

Men etter en hektisk vår skal det bli godt å puste ut i noen uker, og dermed blir det også en pause i utsendelsen av BIO-info. Neste utgave vil komme fredag 6. august.

God sommer til alle sammen!

Hilsen Anders

Ukens bilde

Bybanen er åpen!

Photographers: **Ivar Rønnestad** (left), **Harald Kryvi** (right)

Stemningen var usedvanlig god under åpningen av bybanen tirsdag 22. juni, BIO var representert ved bybane-entusiastene Ivar Rønnestad, **Geir Totland** og Harald Kryvi. Vi ser at vognen med dronningen akkurat har passert.

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 Elinor Bartle

Innhold:

Siste nytt fra BIO

Margunn er pensjonist,

Margunn er pensjonist

BIOs økonomileder siden mars 2008, Margunn Jensen Soltvedt, går over i pensjonistenes rekker fra 1. august, men i går var siste dag hun var å finne på kontoret, for før pensjonisttilværelsen skal hun nyte ferielivets gleder. Vi takker Margunn for tiden hun har vært på BIO og arbeidet hun har gjort for å holde rede på instituttets inntekter og utgifter – og ønsker henne lykke til som pensjonist! Hennes etterfølger, Solfrid Sture som kommer fra Institutt for fysikk og teknologi, er på plass 1. september.

Undervisningsnytt

Vi har fått en forespørsel fra koordinator ved VU Universitet i Amsterdam og de ønsker å utvide sitt samarbeid med UiB. Spesielt på fagområdene biologi, økologi, biomolekylær vitenskap og biomedisinsk vitenskap. UIB har som prinsipp at alle samarbeidsavtaler skal være forankret i forskningssamarbeid og vi ønsker derfor å vite om det er noen som ønsker å opprette et slikt samarbeid.

Informasjon om programmer ved VU Universitet i Amsterdam;
http://www.falw.vu.nl/en/prospective-students/Masters-programmes/index.asp
Og kurs;
http://www.falw.vu.nl/en/prospective-students/exchange-students/course-list/index.asp

Ta kontakt med Studie om det er noen spørsmål.

Siste nytt fra verden rundt oss

EU, havenergi, mer EU

Forenkling av EUs rammeprogram

Europakommisjonen har varslet en rekke endringer og endringsforslag for å forenkle og forbedre prosedyrene i EUS rammeprogram. Her er oversikten over de viktigste endringene. Les mer

Tettere samarbeid om havenergi

Norge og Frankrike har i mange år samarbeidet om utnyttelse av olje og gass offshore. Nå ønsker de to landene et tettere samarbeid om forskning og utvikling på de fornybare ressursene til havs. Les mer

– EU-forskningen skaper merverdi

Den årlige utlysningsdagen for EUs 7. rammeprogram nærmer seg. EUs forskningssamarbeid er så viktig for Norge at forskningsministeren vil gjøre det enda mer attraktivt å delta i rammeprogrammet. Les mer

Seeking stronger Norwegian participation in FP7

The annual date for publication of calls for proposals under the EU Seventh Framework Programme (FP7) is approaching. Norwegian Minister of Research and Higher Education Tora Aasland is seeking ways to make participation in FP7 even more attractive for Norwegian actors. Read more

BIO-info

Nyheter fra Institutt for biologi

Unntak for statlig sektor i styrket arbeidsmiljølov

Stortinget går inn for å styrke arbeidsmiljøloven, men de viktigste endringene gjelder ikke for offentlig sektor hvor problemene rundt midlertidighet er størst. Les mer fra På Høyden.

Ledige stillinger for biologer

Stillinger utlyst på UiB (herunder stillinger på BIO) finner du her.

now	PhD position from September 2010, UNIVERSITE BLAISE PASCAL, CLERMONT-FERRAND, FRANCE
28.06	POST DOC POSITION SCHOOL OF NATURAL SCIENCES, TRINITY COLLEGE, DUBLIN
01.07	PhD student in Molecular Ecotoxicology, Eawag - Swiss Federal Institute for Aquatic Science and Technology
10.07	Post Doctoral position: Modeling genetic interactions between wild and farmed fish
16.08	Science Officer ICSU, Paris
30. aug	Post doc stipends, the European school of Molecular Medicine in Milan, Italy

Forskning: utlysninger, nye satsinger og prosjekter

Artsprosjektet, utlysninger

Utlysing av kartleggingsmidler

Artprosjektet åpner nå for søknader knyttet til kartlegging av dårlig kjente arter og artsgrupper. Budsjettet for denne utlysningen er på 16 millioner kroner. Søknads-fristen er 25. august. Les mer.

Mer info om følgende utlysninger og mange flere (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)

01. sept, 15. nov	Prosjektetableringsmidler for 2010 fra Norges forskningsråd/ Universitetet i Bergen – kontinuerlig utlysning. For mer informasjon se brev fra Forskningsavdelingen og søknadsskjema.
15. aug	European Molecular Biology organization: long term and short term proposals *short-term open deadline
17.aug	Marie Curie individuelle stipend: FP7-PEOPLE-2010-IEF, FP7-People-2010-IIF, FP7-PEOPLE-2010-IOF
25. aug	Utlysing av kartleggingsmidler fra Artsdatabanken
31. aug	EMBL Interdisciplinary Postdocs (EIPOD)
01.sep	MATPROGRAMMET: Forskningsprosjekter, KMB
01. sep	Brukerstyrte innovasjonsprosjekter (MAROFF)
01.sep	NORKLIMA: Virkemidler og politikk for utslippsreduksjoner
01. sep	Prosjekt Støtte under arbejdsgruppen for Mikrobiologi, Dyrehelse og Dyrevelfærd (NMDD) (Instruks for utfylling av søknadsskjema)
13.10	Forskningsinfrastruktur (INFRASTRUKTUR)

PhD: disputas og prøveforelesning

Marianne Presthus Heggen PhD Forelesning

Marianne Presthus Heggen PhD Forelesning

Marianne Presthus Heggen vil fredag 2. juli holde forelesning over oppgitt emne for PhD graden.
Tittel: ”Nature types” – help or hinder for understanding biodiversity and natural prosesses?
Tid: Fredag 2. juli kl. 13:15
Sted: Seminarrom K1, Thormøhlensgt 53, Biobyggene
Bedømmelseskomite: Louise Lindblom, Gaute Velle, Endre Willassen
Alle interesserte er velkommen

Avsluttende mastergradseksamen

Marianne Stordal Klinge, Henrik Hallaråker Røsvik, Ingeborg Helvik og Lars Otto Paust

Marianne Stordal Klinge: Effects on thyroid hormones in zebrafish, *Danio rerio*, fed diets differing in macronutrients

Marianne Stordal Klinge holder mandag 28. juni avsluttende presentasjon av sin masteroppgave i Ernæring hos akvatiske organismer i oppdrett.
Tittel på oppgaven: Effects on thyroid hormones in zebrafish, *Danio rerio*, fed diets differing in macronutrients.
Veiledere: Mari Moren, Øystein Sæle og Rune Waagbø. Sensor: Anders Mangor-Jensen. Bisitter: Karin Pittman
Tid og sted: **Mandag 28. juni, kl. 10:00, Sildetønnen, NIFES**

Alle interesserte velkommen!

Henrik Hallaråker Røsvik: Karakterisering av MGAT og DGAT i torskelarvar (*Gadus morhua* L.)

Henrik Hallaråker Røsvik holder tirsdag 29. juni avsluttende presentasjon av sin masteroppgave i Ernæring hos akvatiske organismer i oppdrett.
Tittel på oppgaven: Karakterisering av MGAT og DGAT i torskelarvar (*Gadus morhua* L.)
Veiledere: Øystein Sæle og Rune Waagbø. Sensor: Sussie Dalvin. Bisitter: Ivar Hordvik
Tid og sted: **Tirsdag 29. juni, kl. 10:00, Sildetønnen, NIFES**

Alle interesserte velkommen!

Ingeborg Helvik: The *Fagus sylvatica* (beech) forests in the Larvik region, south-east Norway - their origin and history

Ingerborg Helvik holder tirsdag 29. juni avsluttende presentasjon av sin masteroppgave i Biologi – biodiversitet, evolusjon og økologi.
Titttel på oppgaven: The *Fagus sylvatica* (beech) forests in the Larvik region, south-east Norway - their origin and history
Veiledere: Anne Bjune og John Birks. Sensor: Matts Lindbladh. Bisitter: Kjersti Sjøtun
Tid og sted: **Tirsdag 29. juni, kl. 10:15, Seminarrom K1, A-blokk, BIO-byggene**

Alle interesserte velkommen!

Lars Otto Paust: Effects of chronic and periodic exposure to ammonia on growth, food conversion efficiency and blood physiology in juvenile Atlantic halibut (*Hippoglossus hippoglossus* L.)

Lars Otto Paust holder fredag 02. juli avsluttende presentasjon av sin masteroppgave i Havbruk. Titttel på oppgaven: Effects of chronic and periodic exposure to ammonia on growth, food conversion efficiency and blood physiology in juvenile Atlantic halibut (*Hippoglossus hippoglossus* L.)
Veiledere: Albert Imsland, Atle Foss og Karin Pittman. Sensor: Anders Mangor-Jensen. Bisitter: Amund Måge.
Tid og sted: **Fredag 02. juli, kl. 10:15, Seminarrom K1, A-blokk, BIO-byggene**

Alle interesserte velkommen!

Kurs, møter, seminar og arrangement

Arctic Frontiers 2011

Arctic Frontiers 2011 – call for papers

Arctic Frontiers (AFT) holds its 5th annual conference in Tromsø from 23-29 January 2011, Norway, with the title “Arctic Tipping Points”. The scientific section of AFT 2011 takes place from 26-28 January 2011, and is given the title: “The Arctic in the Earth System perspective: the role of tipping points “

The scientific section is divided into 3 parts:
1. A joint and multi disciplinary first day with 10 invited speakers ending with a panel and plenum debate;
2. Four parallel sessions (included a poster session) on the second and third day;
3. A summary session ending with a plenum debate

The parallel sessions address 4 connected, interwoven and interdisciplinary themes:
• Sea ice and oceanographic perspectives
• Marine ecosystems and fisheries
• Socioeconomic and institutional perspectives
• People of the North

Interested scientists are invited to submit abstracts to one of these four sessions for both oral and poster presentations. Deadline for submission of abstracts: 25 October 2010. For more information download the complete Call for Papers and the abstract submission form on the AFT homepage www.arcticfrontiers.com.

Nye artikler

Arne Johannessen, Arild Folkvord, Karin Pittman, Sigurd Stefansson, Albert Imsland, Paco Cárdenas, Ole Brix, Tore Høisæter, John Birks, Stella Bergen and Tron Frede Thingstad

Arne Johannessen

Hilkka O.N. Ndjaula Richard D.M. Nash, Aril Slotte, **Arne Johannessen**, Olav Sigurd Kjesbu.

Long-term changes in the total egg production of Norwegian spring-spawning herring Clupea harengus (L.)—Implications of variations in population structure and condition factor.

Fisheries Research 104 (2010) 19–26

Abstract: The reproductive potential of Norwegian spring-spawning herring (Clupea harengus) was estimated in terms of total egg production (TEP) for the period 1935–2005, using a model where spawning stock numbers (SSN)-, weight- and length-at-age were combined with fecundity–weight

relationships. In general, the modelled TEP was closely related to SSN. However, larger positive and negative deviations from this relationship were found in periods with high SSN in combination with increasing proportions of either recruit or repeat spawners and condition factor (K) below 0.73 or above 0.8. When relating the current estimated TEP to similar type of figures based on earlier data (including fecundity observations in 1951–1983), deviations were less pronounced, but they still tended to occur in periods of high SSN. These results suggest that at stable high stock levels, the population structure and its condition in terms of K, can have implications for the reproductive output. Hence, quantification of the reproductive potential as TEP has the potential to strengthen the stock–recruitment models, because it captures both the stock population structure and reproductive dynamics.

Arild Folkvord, Karin Pittman, Sigurd Stefansson, and Albert Imsland

R. M. Koedijk, **A. Folkvord**, A. Foss, **K. Pittman**, **S. O. Stefansson**, S. Handeland and **A. K. Imsland**. The influence of first-feeding diet on the Atlantic cod Gadus morhua phenotype: survival, development and long-term consequences for growth. Journal of Fish Biology (2010)

doi:10.1111/j.1095-8649.2010.02652.x

Abstract: Atlantic cod Gadus morhua larvae reached four-fold (at low larval density) to 11 fold higher body mass (high larval density) at 50 days post hatch (dph) when fed zooplankton rather than enriched rotifers. A short period (22–36 dph) of dietary change affected larval growth positively if changed from enriched rotifers to natural zooplankton and negatively if prey type changed vice versa. Overall survival did not differ between the two larval groups at low larval density, but at high density the rotifer group had a higher overall survival (10 · 8% v. 8 · 9%). Long-term growth was affected significantly by larval diet in favour of the zooplankton diet; juveniles reached a 23% higher mass in a 12 week growth period. No difference in growth performance was found between juveniles fed natural zooplankton during the larval period for 36, 22 or 14 days, but all these juveniles performed significantly better compared with the rotifer-fed group. These findings suggest that optimal diet during a short period in the larval period can result in improved growth in both the larval and juvenile period. Improved rotifer quality may, therefore, hold a large potential for growth improvement in this species.

Paco Cárdenas

Reveillaud, J., **Cárdenas, P**., Vanreusel, A., et al. (2010) Species boundaries and phylogenetic relationships between Atlanto-Mediterranean shallow-water and deep-sea coral associated Hexadella species (Porifera, Ianthellidae). Molecular Phylogenetics and Evolution, 56, 104-114.

Abstract: Coral reefs constitute the most diverse ecosystem of the marine realm and an increasing number of studies are focusing on coral species boundaries, distribution, and on processes that control species ranges. However, less attention has been paid to coral associated species. Deep-sea sponges dominate cold-water coral ecosystems, but virtually nothing is known about their molecular diversity. Moreover, species boundaries based on morphology may sometimes be inadequate, since sponges have few diagnostic characters. In this study, we investigated the molecular diversity within the genus Hexadella (Porifera, Demospongiae, Verongida, Ianthellidae) from the European shallow-water environment to the deep-sea coral ecosystems. Three molecular markers were used: one mitochondrial (COI) and two nuclear gene fragments (28S rDNA and the ATPS intron). Phylogenetic analyses revealed deeply divergent deep-sea clades congruent across the mitochondrial and nuclear markers. One clade contained specimens from the Irish, the Scottish, and the Norwegian margins and the Greenland Sea (Hexadella dedritifera) while another clade contained specimens from the Ionian Sea, the Bay of Biscay, and the Irish margin (H. cf. dedritifera). Moreover, these deeply divergent deep-sea clades showed a wide distribution suggesting a connection between the reefs. The results also point to the existence of a new deep-sea species (Hexadella sp.) in the Mediterranean Sea and of a cryptic shallow-water species (Hexadella cf. pruvoti) in the Gorringe Bank. In contrast, low genetic differentiation between H. cf. dedritifera and H. pruvoti from the Mediterranean Sea was observed. All Hexadella racovitzai specimens from the Mediterranean Sea (shallow and deep) to the Atlantic formed a monophyletic group.

Ole Brix

Mauro Colafranceschi, **Ole Brix**, Alfredo Colosimo, et al.. Hydrophobicity Patterns and Biological Adaptation: An Exemplary Case from Fish Hemoglobins. OMICS: A Journal of Integrative Biology. June 2010, 14(3): 275-281. doi:10.1089/omi.2010.0007.

Abstract: The dissection of phylogenetic and environmental components in biological evolution is one of the main themes of general biology. Here we propose an approach to this theme relying upon the comparison between a phylogenetic oriented metrics spanning the hemoglobin β chains of different fishes and a more physiologically oriented metrics defining the same sequences in terms of the dynamical features of their hydrophobic distributions. By analyzing the set of sequences more similar to the Gadus morhua (Atlantic cod) hemoglobin β chain, we were able to give a proof of concept of the possibility to discriminate the phylogenetic and environmental (evolutive convergence) components by the comparative analysis of the Clustal W (phylogenetics first) and Recurrence Quantification Analysis (physiology first) metrics in which the sequences were embedded. The use of a molecular system like hemoglobin playing a crucial role in fishes adaptation to environmental cues allowed us to span different levels of biological variability by means of the same paradigm. Starting from the reconstruction of the general taxonomy of vertebrate groups we went down to the exploitation of the peculiar role played by Met55Val and Lys62Ala polymorphisms in the β1 hemoglobin chain of the Atlantic cod able to influence the geographical distribution of its various stocks.

Tore Høisæter

Tore Høisæter. The genus Eumetula (Gastropoda:Caenogastropoda: Cerithiopsidae)in North European waters, with the description of a new species from the upper continental slope off Norway Journal of Molluscan Studies. Advance Access published 23 June 2010

ABSTRACT: Eumetula vitrea, a new species of Cerithiopsidae, is described from the upper continental slope outside western Norway. The taxonomic status of the Eumetula species complex is discussed. While Eumetula arctica is a shelf species rarely found in sub-zero waters, E. vitrea is one of a group of species supposedly found only in negative temperature or water fluctuating between negative and positive temperatures (below ~570 m) in the bathyal around the Norwegian Sea.

John Birks

Herzschuh U, **Birks HJB**. Evaluating the indicator value of Tibetan pollen taxa for modern vegetation and climate. REVIEW OF PALAEOBOTANY AND PALYNOLOGY 160**(**3-4)**:** 197-208 2010

Abstract: Pollen taxa of known indicator value are of great potential in the qualitative interpretation of pollen diagrams. Here we apply several numerical approaches to a lake-sediment based pollen data-set from the eastern and central Tibetan Plateau (112 samples) to assess the indicator value of Tibetan pollen taxa for modem vegetation types and for modern climate. Results from Multi-Response Permutation Procedures indicate that the differences between groups of pollen spectra originating from the same vegetation type (temperate desert, temperate steppe, alpine desert, alpine steppe, high-alpine meadow, subalpine shrub, and patchy forest) are statistically significant. Indicator Species Analyses identify several indicator taxa for most vegetation types. Multivariate regression tree analysis indicates that about 390 mm of annual precipitation is the most critical threshold for the modern pollen spectra. This roughly separates desert and steppe vegetation from high-alpine meadow, subalpine shrub, and patchy forest vegetation. A strong pollen-climate relationship on the Tibetan Plateau is confirmed by the large number of statistically significant pollen taxa-climate (annual precipitation or/and annual temperature) relationships as evaluated by statistical response-modelling, involving generalised linear models.

Stella Berger

Berger SA, Diehl S, Stibor H, et al. Water temperature and stratification depth independently shift cardinal events during plankton spring succession. GLOBAL CHANGE BIOLOGY 16**(**7)**:** 1954-1965 2010

Abstract: In deep temperate lakes, the beginning of the growing season is triggered by thermal stratification, which alleviates light limitation of planktonic producers in the surface layer and prevents heat loss to deeper strata. The sequence of subsequent phenological events (phytoplankton spring bloom, grazer peak, clearwater phase) results in part from coupled phytoplankton-grazer interactions. Disentangling the separate, direct effects of correlated climatic drivers (stratification-dependent underwater light climate vs. water temperature) from their indirect effects mediated through trophic feedbacks is impossible using observational field data, which challenges our understanding of global warming effects on seasonal plankton dynamics. We therefore manipulated water temperature and stratification depth independently in experimental field mesocosms containing ambient

microplankton and inocula of the resident grazer Daphnia hyalina. Higher light availability in shallower surface layers accelerated primary production, warming accelerated consumption and growth of Daphnia, and both factors speeded up successional dynamics driven by trophic feedbacks. Specifically, phytoplankton peaked and decreased earlier and Daphnia populations increased and peaked earlier at both shallower stratification and higher temperature. The timing of ciliate dynamics was unrelated to both factors. Volumetric peak densities of phytoplankton, ciliates and Daphnia in the surface layer were also unaffected by temperature but declined with stratification depth in parallel with light availability. The latter relationship vanished, however, when population sizes were integrated over the entire water column. Overall our results suggest that, integrated over the entire water column of a deep lake, surface warming and shallower stratification independently speed up spring successional events, whereas the magnitudes of phytoplankton and zooplankton spring peaks are less sensitive to these factors. Therefore, accelerated dynamics under warming need not lead to a trophic mismatch (given similar grazer inocula at the time of stratification). We emphasize that entire water column dynamics must be studied to estimate global warming effects on lake ecosystems.

Tron Frede Thingstad

Rodriguez-Brito B, **Tron Frede Thingstad**, Wegley L, et al. Viral and microbial community dynamics in four aquatic environments. ISME JOURNAL 4(6)**:** 739-751 2010

Abstract: The species composition and metabolic potential of microbial and viral communities are predictable and stable for most ecosystems. This apparent stability contradicts theoretical models as well as the viral-microbial dynamics observed in simple ecosystems, both of which show Kill-the-Winner behavior causing cycling of the dominant taxa. Microbial and viral metagenomes were obtained from four human-controlled aquatic environments at various time points separated by one day to >1 year. These environments were maintained within narrow geochemical bounds and had characteristic species composition and metabolic potentials at all time points. However, underlying this stability were rapid changes at the fine-grained level of viral genotypes and microbial strains. These results suggest a model wherein functionally redundant microbial and viral taxa are cycling at the level of viral genotypes and virus-sensitive microbial strains. Microbial taxa, viral taxa, and metabolic function persist over time in stable ecosystems and both communities fluctuate in a Kill-the-Winner manner at the level of viral genotypes and microbial strains.