

Fra toppen

På jakt etter handlingsrommene

Fakultetets vårseminar på Solstrand Bad & Hotel er nettopp avsluttet, og fokus har denne gang vært på strategiprosess og handlingsrom. Rektor Sigmund Grønmo har vært medlem av det såkalte Handlingsromutvalget, som la frem sin rapport «Handlingsrom for kvalitet» like før påske (http://www.regjeringen.no/nb/dep/kd/dok/rapporter_planer/rapporter/2010/Handlingsrom-for-kvalitet.html?id=594052).

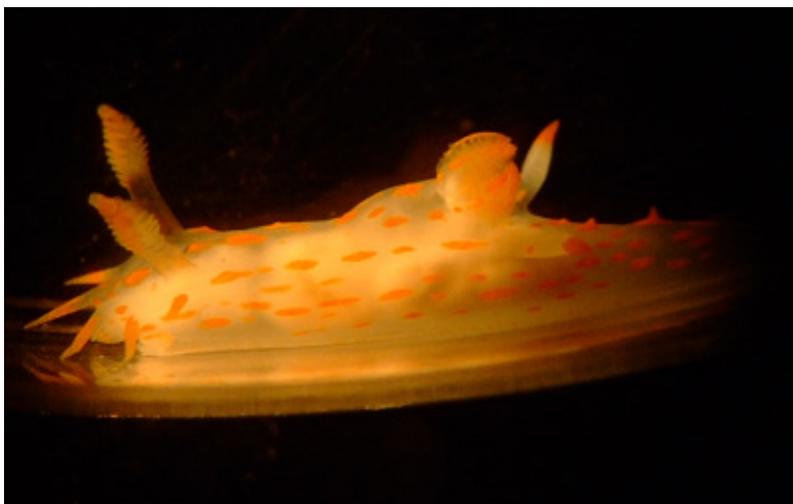
Grønmo presenterte hovedinnholdet i rapporten, og mente denne ville danne en felles autoritativ forståelse for hvilket grunnlag institusjonene har for handling innenfor dagens rammer. Analysene til utvalget viser at den tilsuynelatende store budsjettveksten fra 2006-2010 blir marginal når den er pris- og lønnsjustert, og spesielt fordi mye av veksten er bundet opp i pålagte oppgaver, som heller ikke er fullfinansierte.

Som vi har vært inne på tidligere, virker det nå som det er en erkjennelse er det to viktige og nødvendige tiltak som må til for å skape et reelt handlingsrom: Nye studieplasser må fullfinansieres, og kostnadssatsene må gjennomgås.

Andre tema som ble diskutert på Solstrand var rekrutteringsarbeidet og hvordan vi kan håndtere midlertidighetsproblematikken for de talentfulle forskerne som har vært gjennom sin postdoktorperiode og 2-3 midlertidige forskerstillinger. Kan eksterntfinansieringen gi oss et handlingsrom her?

Noen jaktet på handlingsrom i baren om kvelden, mens andre benyttet anledningen til å forsyne seg av velfylte lunsjbord. Etter to dager på Solstrand er det neppe mulig å stramme inn beltet på en stund!

Ukens bilde



Nudibranch

Photographer: Brith Bergum,
research technician at SARS

Picture of a nudibranch, possibly a
Polycera spp.

Found when collecting sponges in
Øygarden.

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](#)

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Siste nytt fra BIO

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BIO strategiseminar 6. mai

6. mai blir det oppstartsseminar for utviklingen av BIOs ny strategi. Alle grupper ansatte, PhD-studenter, masterstudenter og bachelorstudenter inviteres til å delta! Mer info kommer, men sett av datoen allerede nå!

Minneord Claus Clausen

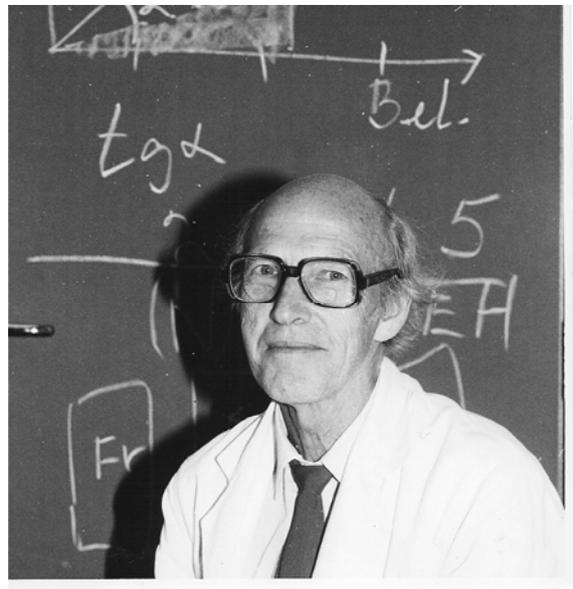
Førsteamanuensis Claus Clausen, døde i påsken, nærmere 88 år. Med det er en av Universitetets trofaste medarbeidere gått bort.

Clausen kom opprinnelig fra Fredrikstad, og avla cand. real. eksamen i zoologi ved Universitetet i Oslo i 1955. Etter noen år som lektor i den videregående skole ble han ansatt som universitetslektor ved Zoologisk laboratorium. Til å begynne med ledet han sommerkurs for lærere, som var et populært etterutdanningstilbud. Etter at denne kursvirksomheten ble nedlagt, gikk han over i en amanuensisstilling ved laboratoriet, som senere gikk inn i Zoologisk institutt og til slutt i Institutt for biologi.

Universitetet er en mangfoldig arbeidsplass, med rom for mange forskjellige faginteresser og arbeidsformer. Clausen representerte den typiske nitide, tålmodige og nøyaktige nysgjerrighetsdrevne forskeren. Hans interessefelt var i alle år en lite kjent fauna, nemlig de små dyrene som lever mellom sandkorn på sjøbunnen, den såkalte mesopsammonfaunaen. Det krever mer enn bare fingerferdighet å stifte nærmere bekjentskap med dem, men Clausen hadde det som trengtes. Han beskrev med stor nøyaktighet en rekke nye arter, og etablerte samarbeid med fagfeller fra mange land. I tillegg til forskningen skjøttet Clausen undervisning innen mikroskopisk metodikk og mikroskopisk anatomi. Han var også i en periode instituttstyrer ved Zoologisk laboratorium. Clausen fortsatte sitt forskningsarbeid som emeritus i hele 18 år etter at han ble pensjonist – helt frem til han gikk bort.

Claus Clausen var en stillfarende mann, og det var alltid behagelig å arbeide med ham. Han viste omsorg og interesse for sine kolleger, og var begavet med en lun humor. Vi lyser fred over hans minne.

Kolleger ved Institutt for biologi



Foredrag av Victoria Braithwaite (prof-II på BIO): "Do fish feel pain?"

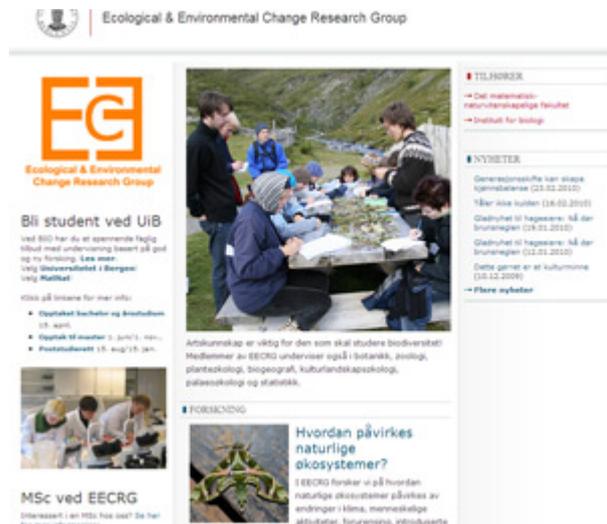
16 April, Student Centre auditorium, EGGET [Les mer](#)

The Fish Neuroscience Network (FNN) will be hosting two talks April 13&14.

The first talk "Regulation of cell division and neural plasticity in the fish brain" will be given by Christina Sørensen from UMB on Tuesday April 13 at 12.30 in the Red room "Florida (215G1)"

The second talk "Fish Cognition" will be given by **Victoria Braithwaite** from Penn State on Wednesday April 14 at 10.00 in the Red room "Florida (215G1)". [Learn more.](#)

External Web – one month to go!



15 May is the deadline for getting our external web pages up and going. This date was chosen to be before the 2 June NFR deadline, before summer and before the BIO evaluation begins next autumn. The pages reflect on each of us!

Once again I must say “hats off” to **EECRG** – and lucky for the rest of us that they have been so quick off the mark – we can use their pages as examples to make things easier for the rest of us!

Since I last checked, EECRG has worked on their [Norwegian pages](#) and has made them very attractive and informative as a recruitment tool for students. In addition, I see two new theme pages on their English site relating to very central research themes: [climate](#) and [biodiversity](#).

I also mention the **General Microbiology** group's [Norwegian page](#) – good use of left

profiling margin. It is a good beginning! A little more concrete info for students and voilà!

The process is: group discussion to determine **(1)** target groups for your Norwegian pages and for your English pages **(2)** decide what information your target groups need **(3)** delegate people to write blurbs with this information **(4)** input it to the web!!! There is an External Web working group at BIO to help. [Contact us!](#)

Siste nytt fra verden rundt oss

Toktlederkurs og medietrening for kvinnelige stipendiater med mer

Toktlederkurs

Det vil bli holdt toktlederkurs i regi av Rederiavdelingen 6.mai, 3.juni og 9.sept. Kurset holdes i akustikkklubben, 3. etasje på Nykirkekaien, kl 0900-1500. Enkel lunsj serveres. Ny HMS prosedyre vil også bli gjennomgått på kurset. Påmelding per e-post til Operasjonsoffiser Terje Hindenes, e-post: terje@imr.no <<mailto:terje@imr.no>>

Medietreningskurs for kvinnelige stipendiater.

Visste du at menn snakker fire ganger så mye som kvinner i media? Dette vil UiB bidra til å endre, og arrangerer derfor hver vår og høst medietreningskurs for kvinnelige stipendiater. Hvert kurs går over en vanlig arbeidsdag fra kl.09.00 - 16.00. Det vil bli lagt vekt på praktisk trening, der målet er å gjøre deg bedre rustet i omgang med media. Kursdatoene i vår er 28. og 29. april Vi har plass til åtte deltakere pr dag.

Kursholder er Katrine Adair, som er utdannet journalist og har jobbet 11 år i NRK, Dagsrevyen før hun grunnla Medialoven i 1997. Mer info: www.medialoven.no.

Kursene er svært populære og vi praktiserer "først til møllen"- prinsippet ved påmelding. Send en e-post så snart som mulig til anne.skarsbo@uib.no om du ønsker å melde deg på et av disse kursene. Det er fint om du oppgir om det er det samme hvilken av dagene du blir satt opp på eller om du kun kan en av dagene. Kurset er gratis for deltakerne, men det understrekes at påmeldingen er forpliktende og at det forventes at alle er til stede og deltar aktivt under hele kurset. Spørsmål kan rettes til undertegnede eller til Geir Holen, tlf. 55 58 90 39.

BIO-info

Nyheter fra Institutt for biologi

For foreigners living in Bergen

Don't forget the next INN Club meeting at April 14 from 19.00. We invites you to Mix and Mingle with information of the Music Scene in Bergen and a Bergen Beat Concert! For [registration and more information](#) about the meeting. Read this month's [INN newsletter](#). 12 April 2009 meeting about filing Norwegian taxes [Learn more](#). [Information from the meeting](#) about the changes to Norway's immigration laws held 11 March 2010.



IMBER e-news #32 - March 2010

[Read more](#)

Changing dynamic of communication – Nature makes its news service free access:

All content hosted on the [Nature News site](#) is now freely available. This includes online news articles, and news and news features articles published in Nature. Previously, this content was free for the first four days from publication before becoming subscription-access only.

naturenews

With the rise of social media such as Twitter, Facebook and Nature's own [Connotea](#) and Nature Network, Nature decided to ensure that discussions about the news and comments can include an accessible link to the article.



~ English Matters ~



Nettportal for deg som bruker engelsk som arbeidsspråk

NTNU has a [great web site](#) with helpful links for people writing in English (native and non-native speakers!).



Time for some spring activity?

[Learn more about things to do ...](#)

Ledige stillinger for biologer

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

23.04	Professorship in plant physiology at the University of Innsbruck, Austria
30.04	PhD position developmental Biology, Villefranche, France
?	Postdoc position on biogeochemical modelling, Brest, France
various	22 PhD & 6 post-doc: GREENCYCLESII a Marie Curie Initial Training Network
mid-May – mid-Oct	Volunteer opportunity working with ARCHELON , the Sea Turtle Protection Society of Greece
Spring 2010	10 post doctoral positions at The Alexander von Humboldt Foundation and the Cluster of Excellence „The Future Ocean” at the Christian-Albrechts University in Kiel, Germany

Forskning: utlysninger, nye satsinger og prosjekter

Ny påminning Marie Curie utlysning, Utlysninger fra Forskningsrådet: KMB Matprogrammet, Forskerprosjekter Matprogrammet, Utenlandsopphold, gjesteforsker- og arrangementsstøtte fra NORKLIMA

Penger til utenlandsopphold eller gjesteforsker

For erfarne forskere er det nå utlyst stipender for opphold i et annet land. [Les mer](#)

Se mer dedaljert informasjon i forrige nummer av BIOinfo (nr. 12)



Utlysning av Kompetanseprosjekter med brukermedvirkning (KMB) for 2011 (MATPROGRAMMET)

Matprogrammet lyser ut midler til KMB-prosjekter innen to spesifiserte tema for finansiering av langsiktig, næringsrettet kunnskapsbygging i FoU-miljøene.

Søknadsfrist: 01.09.2010 [Les mer](#)

Utlysning av forskerprosjekter for 2011 (MATPROGRAMMET)

Matprogrammet lyser ut midler til forskerprosjekter for 2011 innen tre spesifiserte tema. Innenfor tema 1 og 2 finansieres langsiktig, næringsrettet kunnskapsbygging i FoU-miljøene, og innenfor tema 3 finansieres forskning som skal være forvaltningsrettet og/eller næringsrettet.

Søknadsfrist: 01.09.2010 [Les mer](#)

Utenlandsopphold, gjesteforskerstipend og arrangementsstøtte (NORKLIMA)

NORKLIMA lyser ut midler til utenlandsopphold, gjesteforskere og arrangementer som støtter oppunder NORKLIMAs faglige og strategiske mål.

Søknadsfrist: 02.06.2010 [Les mer](#)



Norwegian development research on the offensive

Relevance, a broad thematic scope and the utility of the research results in terms of informing policy formulation are key considerations for the Research Council's major development programme, Norway – A Global Partner (NORGLOBAL). A recent NORGLOBAL seminar attended by researchers, public administrators and programme staff, confirmed that the research is on the right track. [Read more](#)



Norwegian-German exchange more popular than ever

More and more Norwegians have set their sights on studying or conducting research at German universities, and Norway is an increasingly popular destination for German students and researchers. The E.ON Ruhrgas scholarship programme provides an excellent framework for constructive exchange between the two countries. [Read more](#)

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

BIO-info

Nyheter fra Institutt for biologi

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

12. apr	POGO opportunities for early career scientists
21. apr	SFI Endelig søknad
21. apr	NATUROGNAERING (NFR)
21. apr	JOINTINDNOR (NFR) og INDOOR (NFR)
21. apr	PROREAL
21. apr	RENENERGI
30. apr	Daniel Jouvance International Prize for young researchers in Marine Biology
01. mai	Nordic Marine Academy : siste mobilitetstipend
01. mai	FORSKNINGSTERMIN (internfristen BIO) info om from MatNat og mer info
31. mai	EUROFLEETS call for multidisciplinary practical ship-based training courses
02. juni	Regionale forskingsfond
02. juni	Aurora-programmet . Forskerutveksling mellom Norge og Frankrike (IS-AUR)
02. juni	Forskningsrådets hovedsøknadsfrist for HAVKYST , MILJØ2015
02. juni	NORKLIMA utenlandsopphold, gjesteforskere og arrangementer
17. aug	Marie Curie individuelle stipend: FP7-PEOPLE-2010-IEF , FP7-People-2010-IIF , FP7-PEOPLE-2010-IOF
01. sep	MATPROGRAMMET : Forskningsprosjekter, KMB

PhD: disputaser og prøveforelesning

Laila Brunvold: Oppgitt emne

Laila Brunvold PhD forelesning

Laila Brunvold vil onsdag 14. april holde forelesning over oppgitt emne for PhD graden.

Tittel: Global warming - possible effects on the distribution and prevalence of human pathogenic vibrios

Tid: Onsdag 14. april kl. 09:15

Sted: Seminarrom K2, blokk B, Biobyggene, HIB

Bedømmelseskomite: Forsker Ida Helene Steen, Professor Il Bjørn Tore Lunestad, Forsker Gunnhild Bødtker

Møter, seminar og arrangement

EurOcean, Northern Research Forum, Villaks, Etikk med mer

Grand challenges for marine research in the next decade

The [EurOCEAN 2010 Conference](#) (Ostend, 12-13 October 2010) will provide a unique opportunity for the European marine science community to consider, discuss and respond to new policy developments and achievements since the last EurOCEAN conference (2007, Aberdeen), and to highlight new challenges and opportunities for marine research in the next decade. The [EurOCEAN 2010 Conference](#) and Ostend Declaration (October 2010) will come at a crucial time, as the research funding landscape in Europe is expected to undergo considerable changes. It will provide a timely opportunity to reinforce the importance of marine science in effective maritime policy making and the key role it will play in the path towards economic growth and recovery in Europe.

Northern Research Forum 6th Open Assembly: "Our Ice Dependent World"

Oslo and Kirkenes, Norway, 24-27 October 2010. Call for Participation from Young Researchers. Full Travel Fund. Extended Deadline – 15th of April

The 6th Open Assembly of the Northern Research Forum (NRF), Our Ice Dependent world, is to be held on October 24th - 27th, 2010 in Oslo and Kirkenes, Norway. The event is organized together with the 6th NRF Host Planning Committee. [Learn more.](#)

Information meeting about taxes

International Staff Services at the Department of Human Resources invites international researchers to an open meeting about taxation in Norway and the income tax return for 2009. [Learn more.](#)
[Information from the meeting](#) about the changes to Norway's immigration laws held 11 March 2010.

Hardangerfjordseminaret 2010 med fokus på vilkåra for laks og sjøaure i Hardangerfjord

7. - 8. mai, Hardangerfjord Hotell – Øystese

Etterkvart har utfordringane ein over tid har sett i Hardanger også blitt realitetar for store deler av norskekysten. Når vi i år for tredje gong kan invitere deg til vakre Hardanger i mai, er det difor med eit program som bør ha nasjonal interesse. Vi lovar deg eit seminar med høgst aktuelle tema, engasjerte foredragshaldarar og kanskje norges mest kompetente deltakarar. [Les mer](#) og [påmelding](#).

Conference of the European Consortium for the Barcode of Life (ECBOL2).

Deadline for abstract submission extended to the 15th of April. Conference organizers hope that this will encourage more of you to consider participating and to submit your abstracts as soon as possible on the [conference website](#).

Cardiometabolic Symposium

Symposium arrangeres i samarbeid mellom Universitetet i Bergen, forskningsnettverkene NCoE MitoHealth, CostAction og Vestnorsk Cardiologisk Forening 25-26 mai 2010. Symposiet er et ledd i nettverksbygging mellom eksperimentelle og kliniske forskergrupper innenfor ernæring/overvekt/kardiovaskulær sykdom. Programmet inkluderer også en postersesjon med postervandring. [Les mer.](#)



ETIKK TIL FROKOST: "Ethiske utfordringer i utviklingsforskning"

Sted: Studentsenteret "Egget" **Dato:** Torsdag 22. april 2010 **Tid:** 0800–1000

Redelighetsutvalget ved Universitetet i Bergen inviterer til frokostsamling om etikk som inkluderer gratis frokost! [Program og påmelding:](#)



ICES Annual Science Conference - Nantes, September 2010

The deadline for the submission of abstracts is 15 April 2010. [Learn more.](#)

Sars Seminars: 16 April 13:00

Fabien Lombard, Postdoctoral Researcher from National Institute for Aquatic Resources, Oceanography Section, Technical University of Denmark

TITLE: "Active food selection in appendicularians and the fate of their discarded houses."

[more on Sars seminars](#)

Summer school programmes

Date	Location	Course title	application deadline
May 3-7	Centre for Ecological & Evolutionary Synthesis Institute of Biology, University of Oslo	NEW COURSE IN OBSERVATION/MEASUREMENT ERROR IN ANALYSING BIOLOGICAL DATA	Contact jaynel@bio.uio.no
28 June – 3 July	Pieve Tesino (Italian Alps).	CAREX summer school : ecosystem based approach to research on life in extreme	21 April

		environments.	
28 June – 9 July	Rimini , Polo Didattico-Scientifico, University of Bologna	Interfacing Sciences and Humanities - Nutrition Between Nature and Nurture: An Interdisciplinary Approach Info1 - info 2 - application	28 May
17 July - 1 August	Island of Madeira	3rd EDIT Summer School of Taxonomy	31 May
August 23-27	Brest, France	ClimECO2 Oceans, Marine Ecosystems, and Society facing Climate Change	15 April
Sept 5-14	Peyresq, France	Alter-Net Summer Schools: Biodiversity & Ecosystem Services	15 April

Nye artikler

New Vietnamese species identified, electricity effects on salmon muscle, More on archeal viruses, Structural plasticity of the vertebral column in Atlantic salmon, A modern pollen–climate calibration set, Holocene climate and environmental history of Brurskardstjørni, Overwintering of terrestrial Arctic arthropods, Primary production and plankton dynamics in a Chilean fjord, The acoustic properties of *Salpa thompsoni*, Seasonal plankton-fish interactions .

Schander and Bristow: publication of more Vietnamese taxonomy work

Binh T. Dang, Arne Levsen, Christoffer Schander , and Glenn A. Bristow, SOME HALIOTREMA (MONOGENEA: DACTYLOGYRIDAE) FROM CULTURED GROUPER (EPINEPHELUS SPP.) WITH EMPHASIS ON THE PHYLOGENETIC POSITION OF HALIOTREMA CROMILEPTIS, J. Parasitol., 96(1), 2010, pp. 30–39 F American Society of Parasitologists 2010

ABSTRACT: Three *Haliotrema* spp. are reported from the Vietnamese grouper. Morphological and morphometric characters show minor deviations from original descriptions of *H. cromileptis* Young, 1968 and *H. epinepheli* Young, 1968. The third encountered species (*Haliotrema* sp.) appears to be new to science. Genetically, *H. cromileptis* clusters with *Bravohollisia*, *Pseudohaliotrema*, and *Haliotrema*. The group is well supported by partial large subunit rDNA (LSU), complete small subunit rDNA (SSU), and partial SSU + ITS1 rDNA analyses. Ingroup phylogenetic relationships are not well resolved. *Haliotrema cromileptis*, *H. fleti* Young, 1968, and *Pseudohaliotrema sphincteroporos* Yamaguti, 1953 are closely related to a monophyletic group of 5 *Haliotrema* spp. characterized by bell- or horn-shaped bases of the male copulatory organ (MCO), which contains an accessory piece. Based on SSU rDNA, *H. cromileptis* is a sister species to *P. sphincteroporos* and, together, they form a clade to 3 other *Haliotrema* spp. characterized by a bellshape based MCO with an accessory piece. Data analysis conducted on partial SSU + ITS1 rDNA confirms the close phylogenetic relationship of *H. cromileptis*, *H. fleti*, *H. chenhsintaoi* Zhang, 2001 (possessing a horn-shaped base of the MCO), and *Bravohollisia rosetta* Lin, 1995. However, because major differences in diagnostic characters exist, this genetic relationship needs further elucidation.

Ragnar Nortvedt and Endre Grimsbø: electricity effects on salmon muscle

Bjorn Roth, Ragnar Nortvedt, Erik Slinde, Atle Foss, Endre Grimsbø and Lars Helge Stien, Electrical stimulation of Atlantic salmon muscle and the effect on flesh quality, Aquaculture, Volume 301, Issues 1-4, 23 March 2010, Pages 85-90

Abstract: The duration of an electrical stimulation and subsequent effect on quality was investigated to determine favourable durations for stunning Atlantic salmon (*Salmo salar*). A total of 78 fish were killed at the cage by a percussive blow to the head where one fillet was used as a control, while the other was stimulated with electricity for 6, 12 or 180 s. Fillets from 16 fish, were placed in a cold room under ip-cameras and pictures were taken every 5 min to measure fillet shrinkage during rigor. The

fillets from the 62 other fish were after pH, weight and colour measurements wrapped in aluminum foil and stored on ice. At days 8 and 16 of storage the fillets were taken out for pH, drip loss, water holding capacity (WHC) and texture profile (TPA) measurements. Results show that a prolonged electrical current causes initially the fillet pH to drop, paler fillet colour and increased and accelerated fillet shrinkage compared to control fillets. Fillets exposed for 12 or 180 s of electricity had higher drip loss and lower WHC than their respective control fillets, but not until after 16 days of storage, while colour and TPA remained more or less unaffected by treatment for the entire storage period. We conclude that a 6 s current duration is a favorable duration for stunning fish as pre rigor times and other quality attributes are slightly changed.

Laila Reigsad: Familial relationships in archeal viruses

Happonen LJ, Redder P, Peng X, Reigstad LJ, Prangishvili D, Butcher SJ. Familial Relationships in Hyperthermo- and Acidophilic Archaeal Viruses. *Journal of Virology*, 2010; 84: 4747-4754

Abstract: Archaea often live in extreme, harsh environments such as acidic, hot springs and hypersaline waters. To date, only two icosahedrally-symmetric, membrane-containing archaeal viruses, SH1 and Sulfolobus Turreted Icosahedral Virus (STIV), have been described in detail. We report the sequence and three-dimensional structure of a third such virus isolated from a hyperthermo-acidophilic crenarchaeon Sulfolobus sp. G4ST-2. Characterization of this new isolate revealed it to be similar to STIV on the level of genome and structural organization. The genome organisation indicates that these two viruses have diverged from a common ancestor. Interestingly, the prominent surface turrets of these two viruses are strikingly different. By mass spectrometry, we mapped several large insertions and deletions in the known structural proteins that could account for these differences, and showed that both viruses can infect the same host. A combination of genomic and proteomic analyses revealed important new insights into the structural organization of these viruses and adds to our limited knowledge of archaeal virus life cycles and host-cell interactions.

Sindre Grotmol, C Krossøy og Geir Totland: Collagen type XI alpha 1 may be involved in the structural plasticity of the vertebral column in Atlantic salmon (*Salmo salar* L.)

Wargelius, A., Fjellidal, P. G, Nordgarden, U, Grini, A., Krossoy, C., Grotmol, S., Totland, G. K., Hansen, T. *Journal of Experimental Biology* 2010, 213: 1207-1216

Abstract: Atlantic salmon (*Salmo salar* L.) vertebral bone displays plasticity in structure, osteoid secretion and mineralization in response to photoperiod. Other properties of the vertebral bone, such as mineral content and mechanical strength, are also associated with common malformations in farmed Atlantic salmon. The biological mechanisms that underlie these changes in bone physiology are unknown, and in order to elucidate which factors might be involved in this process, microarray assays were performed on vertebral bone of Atlantic salmon reared under natural or continuous light. Eight genes were upregulated in response to continuous light treatment, whereas only one of them was upregulated in a duplicate experiment. The transcriptionally regulated gene was predicted to code for collagen type XI alpha 1, a protein known to be involved in controlling the diameter of fibrillar collagens in mammals. Furthermore, the gene was highly expressed in the vertebrae, where spatial expression was found in trabecular and compact bone osteoblasts and in the chondroblasts of the notochordal sheath. When we measured the expression level of the gene in the tissue compartments of the vertebrae, the collagen turned out to be 150 and 25 times more highly expressed in the notochord and compact bone respectively, relative to the expression in the trabecular bone. Gene expression was induced in response to continuous light, and reduced in compressed vertebrae. The downregulation in compressed vertebrae was due to reduced expression in the compact bone, while expression in the trabecular bone and the notochord was unaffected. These data support the hypothesis that this gene codes for a presumptive collagen type XI alpha 1, which may be involved in the regulatory pathway leading to structural adaptation of the vertebral architecture.

John Birks: A modern pollen–climate calibration set based on lake sediments from the Tibetan Plateau and its application to a Late Quaternary pollen record from the Qilian Mountains

Ulrike Herzschuh, H. J. B. Birks, Steffen Mischke, Chengjun Zhang and Jürgen Böhner [Journal of Biogeography](#) 2010 Volume 37:752 - 766

Abstract: Aim: Fossil pollen spectra from lake sediments on the Tibetan Plateau have been used for qualitative climate reconstruction, but no modern pollen-climate calibration set based on lake sediments is available to infer past climate quantitatively. This study aims to develop such a dataset and apply it to fossil data.

Location: The Tibetan Plateau, between 30 and 40 degrees N and 87 and 103 degrees E.

Methods: We collected surface sediments from 112 lakes and analysed them palynologically. The lakes span a wide range of mean annual precipitation (P-ann; 31-1022 mm), mean annual temperature (T-ann; -6.5 to 1 degrees C), and mean July temperature (T-July; 2.6-19.7 degrees C). Redundancy analysis showed that the modern pollen spectra are characteristic of their respective vegetation types and local climate. Transfer functions for P-ann, T-ann and T-July were developed with weighted averaging partial least squares. Model performance was assessed by leave-one-out cross-validation.

Results: The root mean square errors of prediction (RMSEP) were 104 mm (P-ann), 1.18 degrees C (T-ann) and 1.17 degrees C (T-July). The RMSEPs, when expressed as percentages of the gradient sampled, were 10.6% (P-ann), 15.7% (T-ann) and 11.9% (T-July). These low values indicate the good performance of our models. An application of the models to fossil pollen spectra covering the last c. 50 kyr yielded realistic results for Luanhaizi Lake in the Qilian Mountains on the north-eastern Tibetan Plateau (modern P-ann 480 mm; T-ann-1 degrees C). T-ann and P-ann values similar to present ones were reconstructed for late Marine Isotope Stage 3, with minimum values for the Last Glacial Maximum (c. 300 mm and 2 degrees C below present), and maximum values for the early Holocene (c. 70 mm and 0.5 degrees C greater than present).

Main conclusions: The modern pollen-climate calibration set will potentially be useful for quantitative climate reconstructions from lake-sediment pollen spectra from the Tibetan Plateau, an area of considerable climatic and biogeographical importance.

Gaute Velle, Anne Bjune, Jorunn Larsen og John Birks: Holocene climate and environmental history of Brurskardstjørni, a lake in the catchment of Øvre Heimdalsvatn, south-central Norway Gaute Velle, Anne E. Bjune, Jorunn Larsen, H. John B. Birks: *Hydrobiologia* (2010) 642:13–34. Holocene climate and environmental history of Brurskardstjørni, a lake in the catchment of Øvre Heimdalsvatn, south-central Norway

Abstract: The Holocene lake history, vegetation history and climate history of Brurskardstjørni, an alpine lake in the Jotunheimen Mountains of south-central Norway, are reconstructed. The reconstructions are based on fossil pollen, plant macrofossils, diatoms, chironomids and sediment characteristics. Subsequent to deglaciation, the lake was formed at about 11,000 cal years BP. A diverse chironomid assemblage quickly colonised the lake, whereas the first diatoms were found about 400 years later. At that time, the lake water was turbid with a high pH. The surrounding soils were immature and unstable and dominated by open pioneer vegetation. Compared to the present, summer temperatures were warmer and there was less winter precipitation. From about 10,000 cal years BP, local organic production increased rapidly and from about 9,500 cal years BP a few macrofossils and a high pollen influx of birch suggest that the tree-line was close to the lake. Pine most likely reached its highest tree-line altitude around 9,000 cal years BP and has receded since that time. From about 5,000 cal years BP, the total amount of trees and shrubs decreased and the landscape became more open, probably due to decreasing temperatures and increasing effective moisture lowering the birch tree-line. Coinciding with a cooling during the last 3,000 years, lake-water pH decreased. There is large incongruence between the Holocene July temperatures inferred from pollen and chironomids. The biological proxies responded to a combined effect of environmental change and biotic interactions. This response is interpreted with reference to taxon-environment relationships in the modern calibration data sets and with reference to the latent structure and ecological demands of the fossil assemblages.

Torstein Solhøy: Overwintering of terrestrial Arctic arthropods: the fauna of Svalbard now and in the future

María Luisa Ávila-Jiménez, Stephen J. Coulson, Torstein Solhøy & Anna Sjöblom: Overwintering of terrestrial Arctic arthropods: the fauna of Svalbard now and in the future. [Polar Research](#) (2010)29:

127 – 137.

Abstract: There are over 500 species of arthropods recorded from Svalbard. These animals overwinter either within the soil or on the ground surface, and have to tolerate an environment where the ground is frozen for over 9 months each year. Three cold-tolerance strategies have been described from Svalbard invertebrates: freeze avoidance, freeze tolerance and desiccation. Once in a cold-tolerant state the animals can be extremely cold tolerant in terms of both minimum exposure temperature and period of exposure. How the overwintering capabilities of these animals will be affected by climate changes during the next 100 years, as predicted by climate models, is not yet known. Four principle factors with an impact on overwintering of the terrestrial arthropod fauna are outlined here: (1) warmer winter temperatures, with an increased frequency of extreme events such as freeze–thaw cycles and surface icing; (2) changes in snow fall and snow lie; (3) pollutant load; and (4) dispersal of invertebrates to Svalbard. Finally, areas where further research is required are highlighted: including the development of controlled multi-season field experiments; effect of freeze–thaw cycles; changes in thickness and distribution of snow lie, with the subsequent effects on duration of the summer period; chill susceptibility of soil arthropods; assessing potential colonizing species and the likelihood of these species becoming established; assessing the effect of gene flow from surrounding populations; interactions between pollution and cold tolerance; anoxia stress; and the genetics of cold tolerance.

Antonio Cuevas: Primary production and plankton dynamics in the Reloncavi Fjord and the Interior Sea of Chiloe, Northern Patagonia, Chile

Gonzalez, H. E., Calderon, M. J., Castro, L., Clement, A., Cuevas, L. A., Daneri, G., Iriarte, J. L., Lizarraga, L., Martinez, R., Menschel, E., Silva, N., Carrasco, C., Valenzuela, C., Vargas, C. A., Molinet, C. Primary production and plankton dynamics in the Reloncavi Fjord and the Interior Sea of Chiloe, Northern Patagonia, Chile *MARINE ECOLOGY-PROGRESS SERIES* (2010) 402:13-30.

Abstract: Seasonal variability in freshwater discharge and solar radiation directly affects the structure and functioning of the pelagic community in Chile's northern Patagonian fjords. The input of fresh water loaded with silicate from the top and marine water enriched with nitrate and orthophosphate from the bottom results in overlapping limnetic and marine characteristics. Two research cruises (CIMAR 12) were conducted in the area of Reloncavi Fjord and the Interior Sea of Chiloe (42 to 44 degrees S) during austral winter and spring 2006, in order to assess the spatial/temporal variability in biological, physical, and chemical oceanographic characteristics, and to quantify the carbon budget of the pelagic trophic webs in Reloncavi Fjord. Vertical flux of particulate organic carbon (POC) and primary production (PP) increased 2-fold (334 vs. 725 mgC m⁻² d⁻¹) and 2 orders of magnitude (42 vs. 1893 mgC m⁻² d⁻¹), respectively, from winter to spring. In addition, the bacterial Secondary production to primary production (BSP:PP) ratio decreased from 3.7 to 0.2 in Reloncavi Fjord, suggesting a transition from microbial to classical pelagic food webs. The higher solar radiation and extended photoperiod of springtime promoted the growth of diatoms in a nutrient-replete water column. Allochthonous (river discharge) and autochthonous (phytoplankton exudates) organic matter maintained high year-round bacteria biomass and secondary production. In spring, grazing pressure from zooplankton on the microplankton (largely diatoms) resulted in the relative dominance of the classical food web, with increased export production of zooplankton faecal pellets and ungrazed diatoms. Conversely, in winter, zooplankton grazing, mainly on nanoplankton, resulted in a relative dominance of the microbial loop with lower export production than found in spring. Carbon fluxes and fjord-system functioning are highly variable on a seasonal basis, and both the multivorous trophic webs and the carbon export were more uncoupled from local PP than coastal areas.

Stein Kaartvedt: The acoustic properties of *Salpa thompsoni*

Wiebe, Peter H., Chu, Dezhang, Kaartvedt, Stein, Hundt, Anna, Melle, Webjorn, Ona, Egil, Batta-Lona, Paola: The acoustic properties of *Salpa thompsoni*. *ICES Journal Of Marine Science* (2010) 67: 583-593.

Abstract: Aggregations of the salp *Salpa thompsoni* were encountered during the Antarctic krill and ecosystem-studies cruise on the RV "G.O. Sars" from 19 February to 27 March 2008. The salp's in situ target strength (TS), size, number of individuals in aggregate chains, and chain angle of orientation were determined. Shipboard measurements were made of *Salpa thompsoni*'s material properties. Individual aggregates were mostly 45.5-60.6 mm in mean length; relatively rare solitaries were similar to 100 mm. Chains ranged from 3 to at least 121 individuals, and in surface waters (<20 m), they showed no preferred angle of orientation. Sound-speed contrast (h) ranged from 1.0060 to

1.0201 and density contrast (g) estimates between 1.0000 and 1.0039. The in situ TS distributions peaked between 275 and 276 dB at 38 kHz, with a secondary peak at approximately 265 dB. TS ranged between 285 and 265 dB at 120 and 200 kHz and peaked around 274 dB. The measured in situ TS of salps reasonably matched the theoretical scattering-model predictions based on multi-individual chains. The backscattering from aggregate salps gives rise to TS values that can be similar to krill and other zooplankton with higher density and sound-speed contrasts.

Øystein Varpe & Øyvind Fiksen: Seasonal plankton-fish interactions: light regime, prey phenology, and herring foraging.

Varpe, Oystein, Fiksen, Oyvind: Seasonal plankton-fish interactions: light regime, prey phenology, and herring foraging. *ECOLOGY* (2010) 91: 311-318.

Abstract: When prey and predator are seasonal migrants, encounters depend on migration phenologies and environmental constraints on predation. Here we investigate the relative contribution of seasonality in irradiance and prey abundance in shaping the rapid seasonal body condition increase of a migrating predator searching visually for its prey: the Norwegian spring-spawning herring, *Clupea harengus*, feeding on the copepod *Calanus finmarchicus*. Two main seasonal pulses of prey are available to herring: (1) the parent generation of *C. finmarchicus*, with peak abundance in March-April, which appear too early to cause the main increase in herring condition; and (2) the abundant offspring generation of *C. finmarchicus*, with peak abundance in June-July, too late to explain the main increase in body condition. However, a mechanistic model of ingestion rate, including both solar irradiance and prey abundance, predicted seasonal food intake in good accordance with observed herring body condition. This suggests that the seasonality in herring foraging and energy storage is closely linked to the return of longer days in spring, and less dependent on a match or mismatch with seasonal peaks in abundance of their zooplankton prey. Consequently, light related constraints on foraging may make visually searching predators at high latitudes resilient to changes and fluctuations in prey phenology and abundance, but vulnerable to changes in the light regime, such as water clarity.