

BIO-info 26/2011, 26. aug 2011 [BIO: sakslister og møtereferater](#) [BIO-info arkiv](#)
submission deadline to bio.info@bio.uib.no is Wednesday 16:00

Fra toppen!

HMS i valgkampen

Det går mot valg. Kommune- og fylkestingsvalg berører ikke universitetet og utdanning, tenker vi kanskje. Samtidig er Bergen by en viktig ramme rundt aktivitetene våre, både som arbeidsplass for mange og som studentby for flere. Her kommer det utvidete HMS-begrepet inn.

Her på Marineholmen er vi idyllisk plassert mellom to av valgkampens viktige bymiljøtema: Den sviende atmosfæren på Danmarks plass som får lungene til å brenne på klare vinterdager, og det stikkende rusmiljøet på toppen av Nygårdsparken, som gjør oss alle uvel når vi skal passere parken.

Kollektivtrafikk, bybaneutbygging, byluft og bymiljø er viktige for trivsel og velvære. Vi håper partiene prioriterer dette HMS-aspektet i valgkampen - og etterpå! Godt valg!

Hilsen Anders



Ukens bilde



Dykker med hai

Fotograf: **Rudolph Svensen (Stavanger)**

Pigghå (*Squalus acanthias*) med parasitt på en finne (innfelt bilde) fotografert i juli på grunt vann utenfor Jæren.

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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Siste nytt fra BIO

Om vår historie

Publikasjon om vår historie

En gruppe tidligere studenter og ansatte ved Avdeling for fiskeribiologi, Norges fiskerihøgskole, tok initiativ til å samles til et faglig seminar for å ta et tilbakeblikk og å reflektere over forskning og høyere undervisning innenfor fagdisiplinene fiskeribiologi og akvakultur. Dette resulterte i artikkelen "[Trekk fra "Høyere undervisning i fiskeribiologi og akvakultur-"](#)" gjennom de siste 150 år i Naturen 2011/ No. 4: 146-164. Forfattere: Olav Dragesund, Arne Johannessen og Gunnar Nævdal

Siste nytt fra STIM

Week-ending this Friday!

STIM's first week ending

When? Friday 29 Aug at 20:00

Where? K1/2, A-block, ground floor Bio-building

What? Quiz, drinking, social, fun

Why? Free pizza!

Refreshing beverages for sale.



Siste nytt fra verden rundt oss

Viktig melding fra IT avdelingen; Oppgradering av telefonisystem/Upgrading the phone systems

Fra IT avdelingen

Lørdag 3. september vil IT-avdelingen foreta nødvendig vedlikehold av SAN (storage area network) og servere mellom 08:00 og 21:00. Alle tjenester for ansatte og studenter må regnes som ustabil/utilgjengelig hele perioden. Vi anbefaler ingen å jobbe denne dagen.

Dette gjelder både Unix/Linux og Windows-servere.

For å bli ferdig med jobben i løpet av helgen, er det mulig at noen enkelt systemer også vil bli berørt på søndag 4. september. Dette vil i så fall bli varslet på it.uib.no

Oppgradering av systemer for fasttelefoni 25/8 /Upgrading the systems for all landline phone systems. 25 / 8

IT-avdelingen ved Universitetet i Bergen er i gang med oppgradering av alle systemer for fasttelefoni.

Om kvelden torsdag 25/8 er Telmax oppgradert. Dette er programvaren som brukes av sentralbordspedientene og IT-avdelingens faggruppe Telefoni til å administrere all fasttelefoni. Dette kan gi forstyrrelser i forhold til å nå gjennom til sentralbordet fredag 26/8, det betyr også at fra og med fredag 26/8 til og med mandag 5/9 vil det ikke være mulig å få flyttet eller endret telefoner eller telefonnumre for fasttelefoni.

Mandag 29/8 skifter vi ut undersentralen som betjener Jussbygget. Fra klokken 15:00 den dagen og to-tre timer utover vil det bli brudd i fasttelefonien for hele dette bygget.

Onsdag 31/8 skifter vi ut understentralen som betjener SV-bygget. Fra klokken 15:00 den dagen og to-tre timer utover vil det bli brudd i fasttelefonien for hele dette bygget.

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Nyheter fra Institutt for biologi

Fra morgenen fredag 2/9 er fasttelefonien for UiBs ansatte ved Bryggen Museum lagt om til IP-telefoni. I forkant av dette vil det bli gjort kablings-arbeid og utskifting av telefonapparater som vil skape en del forstyrrelser både generelt og på telefonien i bygget men vi håper å unngå langvarige brudd i arbeidstiden i bygget.

Fra fredag 2/9 klokken 16:00 og hele helgen er all fasttelefoni ved UiB nede mens telefonsentralen skiftes ut. Man kan ikke påregne at telefonene virker igjen før morgenen mandag 5/9.

Helgen 23-25 september vil vi endre teknologi for ekstern telefonforbindelse. UiBs telefonforbindelse med omverden vil være nede noen timer i løpet av helgen og kan være ustabil noen dager i etterkant.

Programvaren Solidus som håndterer inngående telefonsamtaler til BRITA er allerede oppgradert. Fra og med mandag 5. september vil denne programvaren også håndtere inngående telefonsamtaler for Jussformidlingen, HFs informasjonssenter og Studieadministrativ Avdelings linjer for FS-brukerstøtte og ekstern studentkontakt. Det kan gi problemer med å nå gjennom til disse på telefon i noen dager etterpå, selv om alle fasttelefoner generelt fungerer fra denne morgenen.

Vi håper alle deler av arbeidet med ny telefonsentral skal være ferdig til oktober og ber om tålmodighet og forståelse fra brukerne i oppgraderingsperioden. Fra 2012 vil tjenestespekteret og funksjonalitet for UiBs kommunikasjonsløsninger være vesentlig utvidet og forbedret.

Når man i teksten over omtaler "brudd i fasttelefoni" for hele eller deler av UiB innebærer det at telefonapparatene er helt døde. Ingen mobiltelefoner vil påvirkes, men viderekoblinger til mobiltelefoner eller svarertjenester vil ikke være operative og kan forventes å måtte slås på igjen manuelt når telefonene fungerer igjen. Mens telefonsystemene er nede vil heller ikke direktenummeret til Securitas fungere. De kan da nås på mobiltelefon 916 60 673.

IN ENGLISH

The UIB IT Department is in the process of upgrading all landline phone systems.

On the evening of Thursday 25/8 Telmax was upgraded. This is the software used by the switchboard staff and the telephone engineers to administrate all landline phones. This upgrade may caused problems in getting through to the switchboard on Friday 26/8, it also means that from Friday 26/8 until (and including) Monday 5/9 moving or changing landline phones or phone numbers will not be possible.

On Monday 29/8 we will replace the local telephone exchange for the Law building (Jussbygget). Starting at 15:00 that day and for two-three hours afterwards all landline phones in the building will be inoperative.

On Wednesday 31/8 we will replace the local telephone exchange for the Social Sciences building (SV-bygget). Starting at 15:00 that day and for two-three hours afterwards all landline phones in the building will be inoperative.

On the morning of Friday 2/9 the landline phones for UiB staff at Bryggen Museum will have been moved over to IP-phones. In the preceding days there will be work with putting down new cables and replacing phones which will cause some disturbance both in general and for the building's phones. We hope to avoid long interruptions during work hours.

Starting Friday 2/9 at 16:00 and for that whole weekend all landline phones at UiB will be down while the main phone exchange is replaced. Do not expect phones to work again until the morning of Monday 5/9.

The weekend 23-25 September we will change the technology used for external landline connection. UiB's external landline phone connection will be down for a few hours during the weekend and may have stability problems for a few days afterwards.

Solidus, the software used to handle incoming phone calls to BRITA have already been upgraded. From Monday 5/9 this software will also handle incoming phones to Jussformidlingen, the information centre at the Faculty of Humanities and the Division of Student Affairs' lines for FS user support and external student contact. This may give problems getting through to these department for a few days afterwards even if all standard landlines are operational from that morning.

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Nyheter fra Institutt for biologi

We hope that all work with the new phone exchange will be done by October and ask for patience and understanding from our users during the transition period. From 2012 the UiB communication solutions will be significantly more functional and have a better service spectrum.

When the term "inoperative" or "down" is used about landline phones for all or parts of UiB, this means that all landline phones are dead. Mobile phones will not be affected, but call transfers to mobile phones and answering services will not be operational and must be reenabled manually when the phones are back up. While phone systems are down the local landline number to the guard company Securitas will also be down, during such times they can be reached on mobile phone 916 60 673.

Høringssaker kommet til Institutt for biologi

BIO mottar fra tid til annen saker til høring. Vi vil legge ut disse gjennom BIO-INFO. Hvis du ser saker her du ønsker å uttale deg om som vitenskapelig ansatt på BIO, ta kontakt med forskningskoordinator [Anne Fjellbirkeland](#).

Ledige stillinger for biologer

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

3 Postdoc positions offered at KAUST University:

Postdoc: Genomics based analysis of marine planktonic communities

KAUST University seeks to hire a post-doc researcher to carry on analysis of planktonic diversity using 16S environmental tag sequencing. The goal of the project is to understand which factors determine biodiversity and betadiversity in planktonic systems in particular using molecular tools to determine the species present in the system. A secondary objective is to analyse gene expression under specific conditions (metatranscriptomics). [More info](#)

Forskning: utlysninger, nye satsinger og prosjekter

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)

WUN Research Development Fund; 2012 EOL Rubenstein Fellows competition

Utlysning av midler for initiering av nye WUN forskningsprosjekter

Universitetet i Bergen er medlem av Worldwide Universities Network (WUN). Vedlagt oversendes utlysning av midler gjennom WUN Research Development Fund ordningen for initiering av nye WUN forskningsprosjekter. Som medlemsuniversitet i WUN, har forskere ved UiB anledning til å søke om midler fra WUN Research Development Fund til initiering av nye WUN forskningsprosjekter.

Søknad om midler til initiering av nye WUN forskningsprosjekter må falle inn under et av de fire tematiske *Global Challenge* områder som prioriteres for WUN samarbeid. De fire områdene er:

1. Adapting to Climate Change
2. Global Public Health: Non-Communicable Disease (NCD) control
3. Globalisation of Higher Education and Research
4. Understanding Cultures

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Nyheter fra Institutt for biologi

En søknad må ha deltakelse av forskere fra minst tre forskjellige WUN medlemsuniversiteter der UiB forskeren er "principal investigator" og koordinator for prosjektet. Frist: **fredag 21 oktober 2011**.

[Mer info](#)

[WUN søknadsskjema](#)

The Encyclopedia of Life (EOL): applications for 2012 EOL Rubenstein Fellows competition.

This international program seeks to support and extend the impact of original biodiversity research by postgraduates, graduate students, and other scientists, and to tap into the knowledge and expertise of late career and retired scientists. EOL Rubenstein Fellows funds provide partial support for up to one year so that biodiversity research, databases, and media can be effectively translated into rich, online resources available through the Encyclopedia of Life. Fellows are encouraged to engage in collaborative and synthetic work with a community of colleagues. EOL Rubenstein Fellows also help EOL develop effective strategies for engaging and supporting the scientific community.

Please note that in the 2012 program, research mentors are not required, and the program is not limited to early-career applicants. Applications must be submitted via the online submission form no later than 16 September 2011 [Read more](#)

PhD: disputas og prøveforelesning

Disputas Fabian Zimmermann

Fabian Zimmermann: The value of Size. Bioeconomic consequences of size-dependent pricing and fishing-induced evolution

Fabian Zimmermann disputerer fredag 2. September for ph.d.-graden ved Universitetet i Bergen.

Veiledere: Mikko Heino, Christian Jørgensen, Stein Ivar Steinshamn

Bedømmelseskomite: Veijo Kaitala, Department of Biosciences, University of Helsinki, Professor Claire W. Armstrong, Norwegian College of Fishery Science, University of Tromsø, Professor Arne Johannessen. BIO

Leder av disputasen: Professor Dag L. Aksnes, Universitetet i Bergen

Tid: Fredag 2. september 2011, kl. 10.15

Sted: Stort Auditorium, Datablokken, Høyteknologisenteret, Thormøhlens gt. 55

Alle interesserte er velkommen.

Avsluttende mastergradseksamen

Christine Elgen

Utsatt eksamen

Siri Elisabeth Skoglund's mastereksamen er utsatt pga. sykdom.

Christine R. Elgen: Changes in gill Na⁺K⁺ATPase α subunit isoform expression during smoltification and in maturing male Atlantic salmon

Christine R. Elgen holder onsdag 31. august avsluttende presentasjon av sin masteroppgave i marinbiologi – fiskebiologi.

Tittel på oppgaven: Changes in gill Na⁺K⁺ATPase α subunit isoform expression during smoltification and in maturing male Atlantic salmon

Veiledere: Sigurd Stefansson, Tom Ole Nilsen, Geir Lasse Taranger og Eva Andersson. Sensor: Pål Olsvik. Bisitter: Ivar Hordvik.

Tid og sted: Onsdag 31. august, kl. 10:15, Seminarrom K1, A-blokk, Bio-byggene

Kurs, møter, seminar og arrangement

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

Speed3 Protein Workshop 2011; PhD course "The basics of taxonomy";

Speed3 Protein Workshop 2011

Innovations for Fast Protein Electrophoresis, Blotting and Imaging

Would you like your protein electrophoresis and blotting to be fast, reproducible and easy to use?

Then join our workshop and take a look at Bio-Rad's protein electrophoresis and blotting innovations in practice.

Date **30. August 2011** Time/Duration Workflow followed by discussion 09:30 – 11:00

Workflow followed by discussion 13:30 – 15:00 Addresss Thormøhlensgt. 53B (Bio-bygget), 5 etg.

Room Store Puddefjorden (5G01)

[More info](#)

AVLYST! Guest lecture by Professor James Marden, Penn State University

~~Dr. James Marden, entomologist with interests in the areas of physiological ecology, functional genomics, evolutionary ecology, and behaviour, is visiting Department of Biology on Thursday 1st September. Prof. Marden will give a guest lecture entitled: "Intraspecific variation in hypoxia signaling: a hot-spot for life history variation including tracheogenesis, mitochondrial health, dispersal and metapopulation dynamics in an ecological model insect".~~

~~Time and place: **Thursday 1st September**, 14.30 p.m. in room K1/K2 in Bio block A.~~

PhD course "The basics of taxonomy" - first announcement

Natural History Museum, Stockholm October 17-21, 2011

The course aims to present the basics of taxonomy and species description. It will include lectures and practical sessions on biological nomenclature, illustration techniques, electronic databases, scientific collections, etc.

More information on practical issues and a detailed program will be available soon on the [ForBio website](#)

Workshop on Marine By-products "By-products with new potentials"

7th September 2011

Venue: Humber Seafood Institute, Grimsby, UK

The catching and processing of fish generates a significant amount of waste. Increasingly, regulation makes disposal of this material more difficult. Yet fish waste is rich in potentially valuable oils, minerals, enzymes, pigments and flavours etc. that have many alternative uses in food, pharmaceutical, agricultural, aquacultural and industrial applications. Biotechnology offers the opportunity to turn fish waste into valuable by-products. For instance, Shrimp Alkaline Phosphatase is marketed by Norwegian company Arcticzymes, which had £2m of sales in 2010. The total Norwegian marine by-products market was estimated to be £200m in 2009.

The workshop in Grimsby on the 7th of September is organised in tandem with the Humber Seafood Summit the following day. It is part of a series of partnering events to support the Memorandum of Understanding between Technology Strategy Board and Innovation Norway. [More info](#)

Sikkerhetsdagene 2011, Trondheim 10. - 11. oktober

Sikkerhet må skapes og gjenskapes hver dag på ulike nivåer i alle sektorer. Vi lever i et sårbart samfunn, hendelser som terrorangrep, jordskjelv, flom, ras og bortfall av kritisk infrastruktur har preget nyhetsbildet i år. Samtidig må vi fortsatt unngå ulykker i vegtransporten, i helsevesenet og i næringslivet. Sikkerhetsdagene 2011 byr på et dagsaktuelt og variert program for erfaringsoverføring på tvers av sektorer som et bidrag for å skape og gjenskape sikkerhet i samfunnet, på bedriftsnivå og på individnivå. [Les mer](#)

The 25th International Congress for Conservation Biology

takes place *December 5th – 9th this year in Auckland.

Early Registration is now Open! Join us in Auckland, New Zealand this year as we celebrate 25 years of groundbreaking research, premier networking opportunities, and dynamic discussions among the leading minds in conservation biology. [Read more](#)

Nye artikler

Finn; Skjæråsen; Meager; Fernö; Urtizberea; Fiksen; Thompson; Klanderud; Zimmermann; Heino; Grotmol; Bristow;

Finn RN and Cerdà J (2011) Aquaporin evolution in fishes. *Front. Physio.* 2:44.
doi: 10.3389/fphys.2011.00044

Abstract: Aquaporins represent a primordial group of transmembrane solvent channels that have been documented throughout the living biota. This facet alone emphasizes the positive selection pressure for proteins associated with intracellular fluid homeostasis. Amongst extant Eukaryota the highest gene copy number can be found in plants and teleosts, a feature that reflects the genomic duplication history in both groups. In this minireview we discuss the discovery, structure, duplication, and diversification of the aquaporin superfamily. We focus on teleosts as the main models, but include data available for other organisms to provide a broader perspective.

Skjæråsen, J. E., Meager, J. J., Karlsen, Ø., Hutchings, J. A., and **Fernö, A.** 2011. Extreme spawning-site fidelity in Atlantic cod. *ICES Journal of Marine Science*, 68: 1472-1477.

Abstract: Based on a 3-year mark-recapture study, evidence is provided of spawning-site fidelity in Atlantic cod (*Gadus morhua*) at a scale (<1 km) smaller than documented previously. Coastal regions where barriers to dispersal exist may allow for local population dynamics and adaptation to develop in broadcast-spawning marine fish at extremely fine spatial scales.

P. Reglero, **A. Urtizberea**, A. P. Torres, F. Alemany, Ø. **Fiksen** Cannibalism among size classes of larvae may be a substantial mortality component in tuna

ABSTRACT: Cannibalism among size classes may reduce starvation and improve survival of larval tuna in oligotrophic ocean areas, but it may also be a substantial mortality component depending on the availability of alternative prey. Here, we combine laboratory and field data on tuna larvae with a model of larval foraging and bioenergetics to explore the role of cannibalism in cohort development at different temperatures, durations of hatching period, hatching larval densities and natural mortality rates. Prey fields (zooplankton densities and co-occurrence of different larval stages of 3 species of tuna) were established from cruises in a main tuna spawning area around the Balearic Islands (Mediterranean Sea). Results suggest that a pure zooplankton diet is frequently insufficient to sustain larval growth. Piscivory can be a major source of larval mortality among tuna species and larvae hatched early can feed on abundant larvae of smaller size and have fewer predators themselves. We show how the intensity of cannibalism depends on the temperature dependent growth rate and the resulting relative size distribution when eggs are released continuously over a period of a few weeks. The predator-prey size distribution and the relative densities of these voracious larvae may produce overcompensation in recruitment under some environmental conditions.

Moosmann, A. Campsteijn, C. Jansen, Pwtc, Nasrallah, C., Raasholm, M., Stunnenberg, H. G., **Thompson, E. M.** (2011) Histone variant innovation in a rapidly evolving chordate lineage. *BMC Evolutionary Biology* 11

Abstract: Background: Histone variants alter the composition of nucleosomes and play crucial roles in transcription, chromosome segregation, DNA repair, and sperm compaction. Modification of metazoan histone variant lineages occurs on a background of genome architecture that shows global similarities from sponges to vertebrates, but the urochordate, *Oikopleura dioica*, a member of the sister group to

vertebrates, exhibits profound modification of this ancestral architecture. Results: We show that a histone complement of 47 gene loci encodes 31 histone variants, grouped in distinct sets of developmental expression profiles throughout the life cycle. A particularly diverse array of 15 male-specific histone variants was uncovered, including a testes-specific H4t, the first metazoan H4 sequence variant reported. Universal histone variants H3.3, CenH3, and H2A.Z are present but *O. dioica* lacks homologs of macroH2A and H2AX. The genome encodes many H2A and H2B variants and the repertoire of H2A.Z isoforms is expanded through alternative splicing, incrementally regulating the number of acetyltable lysine residues in the functionally important N-terminal "charge patch". Mass spectrometry identified 40 acetylation, methylation and ubiquitylation posttranslational modifications (PTMs) and showed that hallmark PTMs of "active" and "repressive" chromatin were present in *O. dioica*. No obvious reduction in silent heterochromatic marks was observed despite high gene density in this extraordinarily compacted chordate genome. Conclusions: These results show that histone gene complements and their organization differ considerably even over modest phylogenetic distances. Substantial innovation among all core and linker histone variants has evolved in concert with adaptation of specific life history traits in this rapidly evolving chordate lineage

Nybakken L, Sandvik SM, **Klanderud K** (2011) Experimental warming had little effect on carbon-based secondary compounds, carbon and nitrogen in selected alpine plants and lichens. *Environmental and Experimental Botany* 72:368-376

Abstract: Global warming is expected to change plant defence through its influence on plant primary resources. Increased temperature (T) will increase photosynthesis, and thus carbon (C) availability, but may also increase soil mineralization and availability of nitrogen (N). More access to C and N is expected to mainly increase plant growth, and, according to hypotheses on resource based defence, this could lower plant concentrations of carbon-based secondary compounds (CBSCs). We used two already established warming experiment with open top chambers (OTCs) and control plots in alpine south-western Norway, one on a ridge (8 years' treatment) and a one in a leaside (3 years' treatment), to study the effects of warming on plant and lichen defensive compound concentrations. The study included five vascular plant and six lichen species. One vascular plant species had lower concentration of CBSCs under elevated T, while the others did not respond to the treatment. In lichens there were no effects of warming on CBSCs, but a tendency to reduced total C concentrations. However, there were effects of warming on nitrogen, as the concentration decreased inside OTCs for three species, while it increased for one lichen species. Lichens generally had higher CBSC and total C concentrations on the ridge than in the leaside, but no such pattern were seen for vascular plants. No elevated temperature effect on CBSCs is most probably a result of high constitutive defence under the limiting alpine conditions, suggesting that chemical defence is little subject to change under climate warming, at least on a short-term basis. We suggest that the driving forces of plant defence in the arctic-alpine should be tested individually under controlled conditions, and suggest that competition from other plants may be a greater threat under climate warming than increased herbivory or disease attacks.

Zimmermann F, Steinshamn SI, **Heino M** (2011) OPTIMAL HARVEST FEEDBACK RULE ACCOUNTING FOR THE FISHING-UP EFFECT AND SIZE-DEPENDENT PRICING. *Natural Resource Modeling* 24:365-382

Abstract: Fishing leads to truncation of a population's age and size structure. However, large-sized fish are usually more valuable per unit weight than small ones. Nevertheless, these size-related factors have mostly been ignored in bioeconomic modeling. Here, we present a simple extension to the Gordon-Schaefer model that accounts for variations in mean individual catch weight, and derive the feedback rule for optimal harvest in this setting. As the Gordon-Schaefer model has no population structure, size effects have to be accounted for indirectly. Here we assume a simple negative relationship between fishing effort and mean individual weight, and a positive relationship between mean catch weight and price. The aim is to emulate alterations of size structure in fish populations due to fishing and the influence of size on price per weight unit and eventually, net revenues. This demonstrates, on a general level, how such size-dependent effects change the patterns of optimal harvest paths and sustainable revenue in single fish stocks. The model shows clear shifts toward

lower levels of optimal effort and yield compared to classical models without size effects. This suggests that ignoring body size could lead to misleading assumptions and policies, potentially causing rent dissipation and suboptimal utilization of renewable resources.

Long, J.H., Jr., Koob, T., Schaefer, J., Summers, A., Bantilan, K., **Grotmol, S.** and M.E. Porter (2011). Inspired by sharks: a biomimetic skeleton for the flapping, propulsive tail of an aquatic robot. *Marine Technology Society Journal* 45(4), 119-129

K. Bagdonas, N. Nika, **G. Bristow**, R. Jankauskien, A. Salyt and A. Kontautas. First record of *Dicentrarchus labrax* (Linnaeus, 1758) from the southeastern Baltic Sea (Lithuania). [J. Appl. Ichthyol.](#) (2011), 1–2