

Date: 30.08.2019

To committee

Application for appointment as professor in biosystematics at UiT

Since May 5th 2014 I have held the position as associate professor (førsteamanuensis) in biosystematics at Tromsø University Museum (now **UM** – The Arctic University Museum of Norway). I took the position with aims to become a professor, and hence, now apply to be appointed as such. In the following, I will describe my scientific, pedagogic and administrative qualifications, see also my attached CV (**attachment 1**), ORCID ID profile and profile on Research Gate:

ORCID ID: <https://orcid.org/0000-0002-3104-073X>
[ResearchGate profile](#)

1. Education

My education has followed a natural career development for **collection-based research on insects at a university museum**. This entails focus on the various fields of **biosystematics**, i.e. faunistics, integrative taxonomy (incl. DNA-barcoding) and phylogenetics; often coupled with **community ecology**, how large assemblages of taxa live together in shared communities; and **functional morphology & sexual selection**, how the various organs of insects have evolved and how they are used in mating-systems and for species recognition. I earned my **PhD in systematic entomology** at Bergen University Museum in December 2002. From January 2004 I held a **Post. Doc.** at the Museum of Zoology, Lund University in Sweden, financed 100% externally by the Swedish Taxonomy Initiative (SLU, Uppsala University). The position was upon applications extended several times over a period of ten years, ending with a six-year 100% external contract (2008-13) as **selected associated scientist** (särskild forskartjänst) **for the Swedish Taxonomy Initiative**. At the same time, I developed my pedagogic qualifications through courses and supervision of students, and was in April 2010 appointed ([Swedish!](#)) **Docent in Integrative Zoology** at the Biology Department, Lund University, this is implying pedagogic teaching qualifications at PhD-level and position as **associate professor**. When I was offered my current position at UiT in 2014, I retained my status as associate professor, although the position was open for and aimed at a full professorship.

2. Professional affiliations

In my early student days at University of Oslo, I gained one year (1985-86) of experience with laboratory work as laboratory assistant at Dr. V. Fürst Medical laboratory. After finishing Cand. Scient. at Museum of Zoology in Bergen in autumn 1992, I directly got a three-year (1993-95) Graduate Fellowship from the

Norwegian Research Council, under the NUFU-programme ([the Norwegian Programme for Development, Research and Education](#)). The gap between this fellowship and my PhD graduation in 2002 was filled with, first some teaching assistance at Department of Biology in Bergen (1996-97), followed by seven years of non-academic work in the private sector (as economy consultant at Statoil and Animal Technician dealing with salmon breeding,). The period out of academia has given me both administrative experience (more under administrative experience) and insight in the “life on the other side of the table” that I still hold valuable and relevant to my academic career. After graduation, I held continuous positions with 100% external funding over ten years at Lund University, with a steady career enhancement as **Post. Doc.**, then **researcher**, then **selected associated scientist** and finally **docent** ([which in Sweden is an intermediate level between PhD and full professorship](#)) and **associate professor**. In 2014 I moved - without any gap - my affiliation to Tromsø University Museum (UM) and my current position. I may also mention that I was awarded a **two-month’s JSPS-grant as visiting scientist to Kanazawa University** in Japan, Feb.-March 2011.

3. Scientific production

My scientific production consists of 81 listed contributions in the attached annotated list of publications (**attachment 2**). Of these 52 are scientific papers published in international journals, 1 is currently a preprint, 10 are in the form of manuscripts or grey-published. Another 11 are more popular science publications in Norwegian or Swedish, 3 are teaching compendia, 2 are my theses, and 2 are online resources.

4. Research activities

My scientific production spans wide, both in terms of fields of science and in terms of taxa studied. I choose to present my production divided into the following three fields: **biosystematics of insects**, **functional morphology & sexual selection** and **community ecology**. The reference to publications are colour-marked and numbered corresponding to the full list of scientific production. Biosystematics of insects, being my core field, gets three times weight by number of publications submitted for evaluation, although the other two fields may be said to have on average gained much higher impact despite fewer publications (partly due to effects of *journal impact*).

Biosystematics of insects

Biosystematics is the current *in-word* describing my core fields of studies. In the 1990-ies the same thing was termed **Biodiversity** studies (hence my PhD-dissertation title, **publ. 55**). Along with the development of molecular methods. **taxonomy** became *integrative taxonomy*, **phylogenetic systematics** became *molecular phylogeny* or *phylogenomics*, and **biogeography** became *phylogeography*. I have followed all these trends in my research from the pre-molecular times (when I took my PhD) to present *high-throughput methods* currently applied by my PhD-students (**publ. 7**), with the notable exception that that I have yet to pick up on the phylogeographic methods in any publication. I have also followed, with great interest, much of the entire philosophical discourse during the developments of these methods – from Numerical Taxonomy of the early 1970-ies, through phylogenetic systematics and cladistics of the 80-ies and 90-ies, to the revival of Operational Taxonomic Units (OTUs) and phylogenomics of today’s biosystematics. I wrote an essay on the methodological development during my PhD-training (**publ. 65**), I experimented with new methods based on [fuzzy logic](#) in my own PhD and I still always take the opportunity to encourage PhD-students to examine and re-think the philosophy of their method-driven PhD-production.

My production along these lines includes by foremost a number of taxonomic, revisionary and phylogenetic works. To highlight my molecular phylogeny studies I attach a recent multigene Molecular

phylogeny of the fungus gnat tribe Exechiini (Diptera: Mycetophilidae) ([publ. 10](#)), and an early, first generation, study of the species rich genus *Boletina* (Diptera, Mycetophilidae) ([publ. 27](#)).

Even if it was only grey-published in my PhD thesis I wish also to pay attention to and attach a manuscript ([publ. 54](#)) where I experimented with fuzzy statistics and developed a new fuzzy coding method for morphological phylogenetic parsimony analyses applied on the caddisfly family Hydroptilidae. I attach it to demonstrate my insight and interest in philosophical questions concerning phylogenetic methods that are still not outdated. This work was carried out in the early 1990-ies, before the genetic revolution drastically changed the mainstream methodology for phylogenies. In today's renaissance again towards developing morphological methods further ([e.g. see works of Lars Vogt cited in publ. 10](#)), I still think the principles of [fuzzy logic](#) has relevance and potential to increase the explanatory power of the coding process. Coding of hierarchical structured, often interdependently nested, characters into a square (binary) data matrix is to the best of my knowledge a yet unresolved mathematical problem in any phylogenetic analysis. However, when I bravely presented this work at the W. Hennig Society Meeting in Washington DC back in 1997, it was ridiculed by the very dogmatic "parsimony-environment" ruling at the time ([check out #ParsimonyGate](#)), and this was my major reason for putting the manuscript in the drawers of unpublished works. I have not yet found time to follow up this more in my current position, but interestingly enough a phylogenetic tree model for fuzzy characters was independently published by Andy Auyeng, Oklahoma State University in 2005 (Auyeng, A. 2005: A new Phylogenetic Tree Model for Fuzzy Characters. – Proc. Int. Conf. Information Technology: Coding and Computing (ITCC 05)).

So far, I have contributed to the **description of one new tribe, six new genera and some 65 new species**, spanning widely across the insect orders Diptera, Trichoptera and Blattodea. As examples of this production I will highlight, among many publications, my revisions of the genus *Dhatrichia* (Trichoptera, Hydroptilidae) of the Afrotropical region ([publ. 52](#)), and the genus *Pseudexechia* (Diptera, Mycetophilidae) in Europe ([publ. 35](#)). Among the new taxa I have described I will highlight the description of *Brachyradia* (Diptera, Mycetophilidae) from the Oriental Region, with it's prized among reviewers discussion ([publ. 20](#)). To exemplify the impact of DNA-barcoding to modern integrative taxonomy, I refrain from utilizing my current PhD-students works (e.g. publ. 8 & 14), and instead submit a near ready manuscript on new Nordic records of the extremely rarely encountered (and phylogenetic interesting) relict family Canthylosceliidae ([publ. 3](#)).

All these taxonomic publications would not have been possible without a **substantial investment into collecting efforts to build up scientific museum collections and document the largely unknown insect fauna**. This regards both in the Nordic Region where my focus is now (Lund University and UM), and in tropical rainforests where my focus laid earlier (Bergen University Museum). To highlight and exemplify results of the many labour-intensive (faunistic) inventories that I have conducted all through my career I choose to submit the preprint of collaborative efforts to **complete Linnaeus's Inventory of the Swedish Insect Fauna** ([publ. 9](#)). I also, intentionally, add the manuscript of a very voluminous dataset paper, where we update the Norwegian checklist of family Mycetophilidae by presenting an (over the last five years) intensively curated data set of **no less than 3.500 DNA-barcode vouchers** ([publ. 1](#)). This data set presents no less than **some 100 species recorded for the first time in Norway and the data indicates the presence of another 100+ species new to science among the barcoded vouchers, most of them carefully pinned and stored in the UM collections**.

Not surprisingly, my foremost cited and high impact publications are not in the field of biosystematics, but results from sidesteps into the area of functional morphology and sexual selection. This all started with my involvement as supervisor for PhD student Ekaterina Shevtsova at Lund University, where we explored a totally new and unexplored functional character system for all small Diptera and Hymenoptera: their **Wing Interference Patterns (WIPs)**. I was the foremost pusher and heavily involved in writing the first **PNAS paper**, where I largely alone covered Diptera while the co-authors covered Hymenoptera (**publ. 29**). This cover paper attracted lots of interests in the media, with radio and TV interviews, blogs (see eg.: <http://whyevolutionistrue.wordpress.com/2011/01/07/how-extremely-stupid-not-to-have-thought-of-that/>), and coverage in popular science journals like Der Spiegel. Our cover image from PNAS was even awarded among the **top ten images of the year in Nature** (see image no. 6 in Cressey, D. 2011: 365 days: Images of the year – *Nature* 480, 430–435 doi:10.1038/480430a).

Three years later we followed up with a second **PNAS paper** (**publ. 19**), where we for the first time documented sexual selection on WIPs through mating studies of different laboratory strains of the model organism *Drosophila melanogaster*. The second study was lead by my personally invited visiting Post. Doc. from Japan, Natsu Katayama. Our studies were again featured in *Nature* (see: Maxmen, Amy 2015. **Animal bahaviour: Come mate with me.** – *Nature* 526, S8–S10,

[https://www.nature.com/articles/526S8a?WT.ec_id=NATURE-](https://www.nature.com/articles/526S8a?WT.ec_id=NATURE-20151008&spMailingID=49722261&spUserID=MTI4MTQ2MDA5MTU1S0&spJobID=780989504&spReportId=NzgwOTg5NTA0S0)

[20151008&spMailingID=49722261&spUserID=MTI4MTQ2MDA5MTU1S0&spJobID=780989504&spReportId=NzgwOTg5NTA0S0](https://www.nature.com/articles/526S8a?WT.ec_id=NATURE-20151008&spMailingID=49722261&spUserID=MTI4MTQ2MDA5MTU1S0&spJobID=780989504&spReportId=NzgwOTg5NTA0S0).

I feel tempted to cite from page 9-10 of this publication: "*And, while peering at a common fruit fly at the University of Tromsø in Norway, entomologist Jostein Kjørandsen, discovered a form of beauty that Darwin never suspected, and that seems to come with a pay-off. He noticed that the *Drosophila melanogaster*'s wings reflected a purplish hue against a black background. The wings of other flies from the same species reflected different colours. Soon after, he and his colleagues demonstrated that female fruit flies mated more often with males that reflected magenta, as opposed to yellow or blue, sheens. The colours varied depending on the thickness of the wing, the team found, prompting the researchers to speculate that the sheen subtly indicates how well the wings allow flies to control flight. That is a genetically controlled trait that females would find advantageous to endow to their offspring, says Kjørandsen's colleague Erik Svensson at Lunds University in Sweden. *D. melanogaster* is particularly amenable to advanced genetic manipulation, giving Svensson the opportunity to test the hypothesis. "If we can identify one or several genes that alter characteristics of wings, we could use gene-silencing techniques to manipulate those characteristics and look at the effect on female choice," Svensson says.*"

These two papers are cited 95 and 22 times, respectively, and other research groups are now repeating and confirming our results, see e.g. this new paper: Hawkes MF, et al.. 2019 Sexual selection drives the evolution of male wing interference patterns. *Proc. R. Soc. B* 286: 20182850.

<https://royalsocietypublishing.org/doi/pdf/10.1098/rspb.2018.2850>.

Another field of functional morphology/ecology where I have invested interest is how, previously largely unrecognized, pollinator life style modes by fungus gnats has shaped their morphology and even introduced very specialized and complex life cycles. Together with botanist colleagues in Japan we presented a study in **Ecology** (**publ. 13**) on how Bryophytes facilitate outcrossing of the plant genus *Mitella* by functioning as larval food for such highly specialized, pollinating fungus gnats. This type of tripartite evolutionary interplay has rarely been documented before.

Ecology of insect communities

A third question that engage me is how species-rich groups live together in communities. One way to approach these questions is to go beyond model organisms and look at patterns in entire taxa and their interactions in ecosystems. For species rich insect taxa like caddis flies and fungus gnats, hundreds of

species may live together (sympatrically on a geographic scale, **see e.g. publ. 40**), but have a wide range of microhabitat and life mode adaptations, many yet to be uncovered, that will make them attractive for community studies dealing with everything from decomposition and pollination to effects of climate change. For Nordic fungus gnats, this question may be addressed from an array of different angles once we have a solid reference library of DNA-barcodes established on BOLD, an endeavour soon within reach that I have long strived for (**see publ. 1**).

During my PhD I dwelled at length into such detailed community studies of the caddisfly fauna along a 5 km stretch of the Wli-Agumatsa waterfalls and stream, situated on the border between Ghana and Togo. A multitude of multivariate statistical methods applied resulted in two publications (**publ. 51** and **publ. 58**) submitted for evaluation, where an unparalleled species richness was documented and shown to be distributed along environmental gradients and ecotones from pristine rainforest to plantations.

Together with a colleague from Japan, I was also, for a while, engaged in ecological malaria-vector studies in Africa. I joined a research team in Kenya and Ghana (2007-2008), where I got insight into how they studied the intricate interactions between human and cattle settlements and prevalence of malaria mosquitoes (**publ. 32**).

5. Pedagogic qualifications

During and after my graduate fellowship at Museum of Zoology in Bergen I was assisting and later teaching alone several courses at bachelor and master level, with titles as: **Introduction to Zoology, Terrestrial and Aquatic Taxonomy, Evolution and Phylogeny**. During our NUFU-engagement in Ghana, I was further teaching at courses in **Aquatic entomology** and **Biogeography in Africa** at the University of Ghana, Accra in 1993, to which I also wrote three compendia (**publ. 70, 71 and 72**). During my ten years with external funds at Lund University, I had no teaching obligations in my research position. Still, **I voluntarily, engaged myself in the successful supervision** of one bachelor & master student (S. Martinsson), one PhD-student (E. Shevtsova) and one Post. Doc. (N. Katayama). In early 2010 I took a two-months pedagogic course and held an official approved **docent-lecture** before being appointed **Swedish docent in integrative zoology**, judged by a scientific committee by April 2010 (**attachment 3**). I also, the same year, attended a two-day's **seminar for supervisor** held by the Department of Biology in Lund. The current position held at **UM neither has teaching responsibilities in the form of teaching courses, but I continue to supervise PhD-students** and have now responsibilities for one PhD student (J.P. Lindemann) locally at UM and act as external supervisor for another PhD student (T. Magnussen) at the Natural History Museum in Oslo. More informally, I further act to assist one PhD-student (N. Burdikova) at Ostrava University, The Czech Republic. I recently (2018/19) took the **new course for PhD-supervision held at Tromsø University (attachment 4)**. I also upon invitation engage myself in **teaching some PhD-courses held by ForBio**, i.e. I held a field course in entomology at Kevo Research Station, Finland, in 2014, and assisted teaching at a course in DNA-barcoding in 2016. A new field course planned for this summer was, unfortunately cancelled due to too few students attending. To enhance my qualifications as supervisor I also attended some PhD-courses: i.e. “*Applications of Bayesian Phylogenetic Inference*”, Göteborg University 2008, and “*Next generation sequencing: potentials and problems*”, Lund University 2010 (see CV).

Over the last decade I have also **contributed to in all eight defences, acting at every level from member of examination committee, to leader of examination committee, and have three times been opponent** (see CV). I attach a copy of my resent PhD-thesis review for Ostrava University as an example of this work (**attachment 5**).

Since I have never had, and still **do not have typical class-teaching portfolio as a part of any of my post-graduate positions**, I have not put much efforts into developing a typical online record of pedagogic

qualifications in the form of “*pedagogisk mappe*”, as usually warranted for appointment as professor. Instead, I attach an **updated form for the documentation of my teaching qualifications and outreach activities**, in the same format as I submitted when applying for my current position (**attachment 6**). Taken together with my presentation here, I hope it is apparent that I do have a thorough engagement into teaching, mostly in the form of supervision, as well as a clear, critical and philosophic attitude towards my teaching. Above all, I try to give my students freedom to develop their own projects, develop a critical attitude towards established methods (including my own views), **ask why-questions** and being **creative and out-of-box** in their science. This, which may be termed **academic freedom**, I cherish very high as a strong intellectual resistance to our increasingly top-down, finance-driven, student-factory and excellence ([as opposed to genius](#), [check the dictionary](#)) universities.

6. Building and curation of scientific collections

Scientific staff at UM (and the other university museums in Norway) has a clear **responsibility, required by the [university law](#), for maintaining, curating and expanding the museum’s scientific collections**. This duty usually largely replaces the typical class-teaching portfolio held by scientific staff at the rest of the university. **I see scientific collections as a natural integral part of any research into biosystematics**. I view an insect on a pin or stored in alcohol as extremely important holomorphological voucher documentation for any scientific research publishing insect names. Museum collections are and should be viewed as equivalent obligatory depositories as is GenBank and BOLD for DNA sequences. A well curated insect – whether being type or not – is an invaluable source for testability. **Unlike a gene-sequence, a specimen can be resampled, restudied and reclassified to fulfil the criterion of falsification of scientific hypotheses**. Name bearing types have an even more important role.

During my years at the museum in Bergen I digitized and deposited some 20.000 identified fungus gnats to the collections there (see publ. 69 & 75). **The PhD work on Trichoptera resulted in some 50.000 curated specimens (see publ. 63)**. During my years at the museum in Lund I **digitized and deposited 110.000 identified fungus gnats belonging to 1.200 species (see e.g. publ. 39, 40 & 41)**. More than half of this collection was migrated to UM when I moved my affiliation here. Including this, I have over six years approximately doubled the insect collections at UM from some 100.000 to **about 200.000 identified and curated specimens**. **Nearly 5.000 pinned specimens are now barcode vouchers for some 1.500 species in my efforts to build the reference library of Holarctic fungus gnats (see publ. 1 & 15)**.

7. Administrative experiences

In the years 2010-12 I served as **board member for the Department of Biology, Lund University**. This department had **in excess of 300 employees, and went through a difficult restructuring** during my service time, including the merging of the department with the Museum of Zoology. At Tromsø Museum I served first as **board member for Tromsø University Museum (Museumsstyret, 2015-18)**, and now continue as **board member of the interim board for UMAK – The Arctic University Museum of Norway and Academy of Arts**. Again, I have witnessed a difficult restructuring into larger administrative units at UiT. Currently, I am **nominated to serve as member of the - yet to be erected - new administrative council for UM**. As mentioned above, I also gained valuable administrative qualifications when reporting budget-calculations to the Statoil board at Aker-Kverner during the construction of the FSPO-vessel “Åsgard A” (see **attachment 7**), and for five years I was responsible for administration and practical work (lokalitetsansvarlig) at a salmon breeding facility at Bømlo (see CV).

During 15 years of continuous external grants I have served as PI and administrator for my own research projects, in recent years this also involves **leadership of technicians and arranging and leading field work with up to three assistants**. At UM I have further served the interview committee during several recruitments, both for technicians (my own), PhD-students (my own), short-term contracts (ForBio-

coordinator) and permanent positions (professor/førsteamanuensis). At congresses I have been appointed as **chair for sessions** ([ICD9, Namibia](#)), and am currently engaged as **organizer of a symposium on Bibionomorpha at the next XXVI International Congress of Entomology (ICE 2020)** to be held in Helsinki, Finland in July next year.

8. Outreach

Outreach at many levels is an integrated & obligatory part of my position at UM. Much more so as with my previous pure research affiliations at Lund University. Outreach at a museum comes in many forms, spanning from almost daily (during summer months) contact with visitors who wants help with identifying insects they came across, to engagement in popular seminars arranged by the museum and elsewhere, to attending congresses and give scientific presentations and invited talks, to creating exhibitions at the museum, to portrait in media (see two examples here from [forskning.no](#) and [YouTube](#)), and to being editor for our house journal [OTTAR](#). I have engaged in all of these activities at UM. Every year **from 2014 to 2017 I have arranged stands about insects and insect research at the museums popular Desembernatt**, usually visited by 5-800 people including many children. In 2017 I was **responsible for the outdoor, on-wall, polar night slide-exhibition GLIMT**. In connection with the opening of the exhibition my stepson played live music, and I also held a **public seminar about colouration in birds and insects**. In the period 2015-2017 I was **editor for all natural science papers submitted to OTTAR**. My outreach to the scientific community spans **some 25 presentations and posters, as well as 7 invited talks** (see CV). In all, **11 of my publications can be considered as popular science outreach**, written in Norwegian and Swedish. A number of additional outreach activities are listed in the attached form of pedagogic qualifications.

9. Self-evaluation

During my early career I was heavily influenced by two mentors: first the late prof. [Ole Sæther](#) at Bergen University and later the late prof. [Sven-Axel Bengtson](#) at Lund University. They have profoundly shaped my critical thinking around philosophy of science and the important role of university museums, their scientific collections and exhibitions. Later on, my source for mentorship has moved towards the entire international community of dipterists (I have since 2006 attended all four international congresses of dipterology, see CV) and influences gained through constantly reading methodological papers, often spread by colleagues through social media. As examples of such I follow critical thinkers like prof. [Jerry Coyne](#) (Univ. of Chicago) on evolutionary genetics and speciation, dr. [Kirk Fitzhugh](#) (Univ. of Southern California) on the philosophy of systematics, dr. [Neal Evenhuis](#) (Bishop Museum, Hawaii) on nomenclature and collection management, prof. [Eric Svensson](#) (Lund University) on evolutionary ecology, and dr. [Eric Weinstein](#) on science and society at large. To document my personality and some external judgement of my academic career I attach a collection of personal reference letters (**attachment 7**). Already in 2005 I was, by the head of entomology at the Natural History in London, dr. [Q. Wheeler](#), ranked as top candidate for a professorship at the Natural History Museum in Stockholm (**attachment 8**). Last year I was offered position as senior researcher (Forsker II, equivalent to professor) at NINA in Trondheim (**attachment 9**). In conclusion, through my production and teaching coupled with all this ballast, I think I have long **earned my share of knowledge, output and awareness of critical thinking in science required for a professorship**.

10. List of scientific production to be evaluated

Biosystematics of insects

- Publ. 01** **Kjærandsen, J. & Søli GEE. *In prep.*** Updated checklist of Norwegian Mycetophilidae (Diptera) supported by 3500 BOLD vouchers: 100 species recorded for the first time and indications of another 100+ species new to science — Manuscript intended for publication in *Biodiversity Data Journal*, some 757 pp. + supplementary materials.
- Publ. 09** Ronquist, F, Forshage, M, Häggqvist, S, Karlsson, D, Hovmöller, R, Bergsten, J, Holston, K, Britton, T, Abenius, J, Andersson, B, Neerup Buhl, P, Coulianos, CC, Fjellberg, A, Gertsson, C-A, Hellqvist, S, Jaschhof, M, **Kjærandsen, J**, Klopstein, S, Kobro, S, Liston, A, Meier, R, Pollet, M, Prous, M, Riedel, M, Roháček, J, Schuppenhauer, M, Stigenberg, J, Struwe, I, Taeger, A, Ulefors, S-O, Varga, O, Withers, P, & Gärdenfors, U, ***In press.*** Completing Linnaeus's Inventory of the Swedish Insect Fauna: Only 5000 species left. — *Submitted to PLOS Biology, June 2019*. Preprint available at: <https://www.biorxiv.org/content/10.1101/687392v1>
- Publ. 10** Burdíkova, N, **Kjærandsen, J**, Lindemann, JP, Kasprák, D, Tóthová, A, Ševčík, J. **2019**. Molecular phylogeny of the Paleogene fungus gnat tribe Exechiini (Diptera: Mycetophilidae) revisited: Monophyly of genera established and rapid radiation confirmed. *J Zool Syst Evol Res.* 2019; 00: 1–16. <https://doi.org/10.1111/jzs.12287>
- Publ. 54** **Kjærandsen, J. 2002.** Phylogenetic analyses of the microcaddisflies using a fuzzy coding method and adaptation weighting (Trichoptera: Hydroptilidae). — (MS, 78 pp. from PhD thesis)
- Publ. 03** **Kjærandsen, J & Jaschhof, M. *In prep.*** New records and first DNA-barcodes of the family Canthyloscelidae (Diptera) in Fennoscandia — Manuscript, 22 pp. intended for publication in *Norwegian Journal of Entomology*.
- Publ. 20** Ševčík, J. & **Kjærandsen, J. 2012:** *Brachyradia*, a new genus of the tribe Exechiini (Diptera: Mycetophilidae) from the Oriental and Australasian regions — *The Raffles Bulletin of Zoology* 60: 117-127.
- Publ. 27** Martinsson, S., **Kjærandsen, J.** & Sundberg, P. **2011:** Towards a molecular phylogeny of the fungus gnat genus *Boletina* (Diptera: Mycetophilidae). — *Zoologica Scripta* 40: 272-281.
- Publ. 35** **Kjærandsen, J. 2009:** The genus *Pseudexechia* Tuomikoski re-characterized, with a review of European species (Diptera, Mycetophilidae) — *Zootaxa* 2056: 1-45.
- Publ. 52** **Kjærandsen, J. 2004.** A revision of the Afrotropical genus *Dhatrichia* Mosely, 1948 (Trichoptera, Hydroptilidae). — *Zoologica Scripta* 33: 131-185.

Functional morphology & sexual selection

- Publ. 29** Shevtsova, E., Hansson, C., Janzen, DH. & **Kjærandsen, J. 2011:** Stable structural color patterns displayed on transparent insect wings. — *Proceedings of the National Academy of Sciences* 108(2): 668-673.
- Publ. 19** Katayama, N., Abbott, JK., **Kjærandsen, J.**, Takahashi, Y. & Svensson, EI. **2014.** Sexual selection on wing interference patterns in *Drosophila melanogaster*. — *Proceedings of the National Academy of Sciences* 111(42): 15144-15148; published ahead of print October 7, 2014, doi:[10.1073/pnas.1407595111](https://doi.org/10.1073/pnas.1407595111)
- Publ. 13** Okuyama, Y., Okamoto, T., **Kjærandsen, J.** and Kato, M. **2018.** Bryophytes facilitate outcrossing of *Mitella* by functioning as larval food for pollinating fungus gnats. *Ecology* 99: 1890-1893. <https://doi.org/10.1002/ecy.2364>

Ecology of insect communities

- Publ. 51** **Kjærandsen, J. 2005.** Species assemblages and community structure of adult caddisflies along a headwater stream in south-eastern Ghana (Insecta: Trichoptera). — *Biodiversity and Conservation* 14: 1-43.
- Publ. 58** Andersen, T. and **Kjærandsen, J. 2001.** Adult caddisfly diversity along a headwater stream in southeastern Ghana (Insecta: Trichoptera). — *Verhandlungen für die Internationale Vereinigung für Theoretische und Angewandte Limnologie* 27: 3613-3618.
- Publ. 32** Tuno, N., **Kjærandsen, J.**, Badu, K. & Kruppa, T. **2010:** Blood feeding behaviour of *Anopheles gambiae* Giles and *Anopheles melas* Theobald in Ghana, western Africa — *Journal of Medical Entomology* 47: 28-31.

11. List of attachments

1. Attachment 1 – CV.
2. Attachment 2 – List of scientific production.
3. Attachment 3 – Documentation of pedagogic courses and appointment as Swedish Docent.
4. Attachment 4 – Documentation of fulfilled course in PhD-supervision at UiT.
5. Attachment 5 – Recent (August 2019) PhD-thesis review report for Ostrava University.
6. Attachment 6 – Annotated list of pedagogic qualifications and outreach (in Norwegian), with some included diplomas.
7. Attachment 7 – Collection of letters of reference.
8. Attachment 8 – Ranking of applicants for position at the Natural History Museum in Stockholm in 2008 (in Swedish).
9. Attachment 9 – Permanent position offer as Forsker II at NINA, Trondheim in 2018.

Sincerely,



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