

# Programme

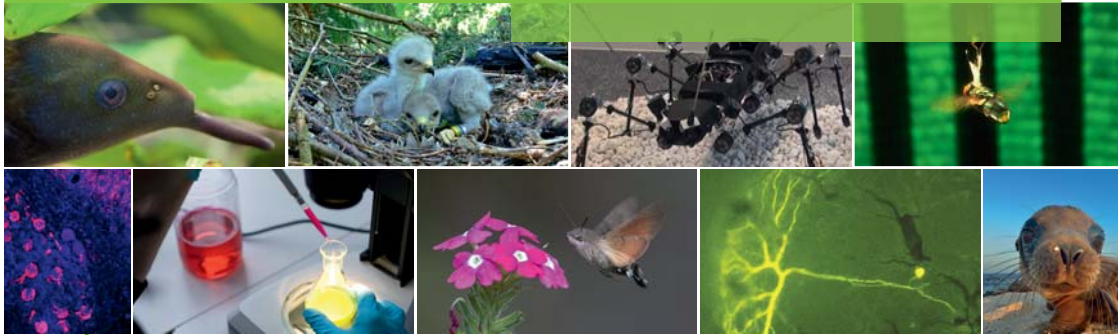


110<sup>th</sup>

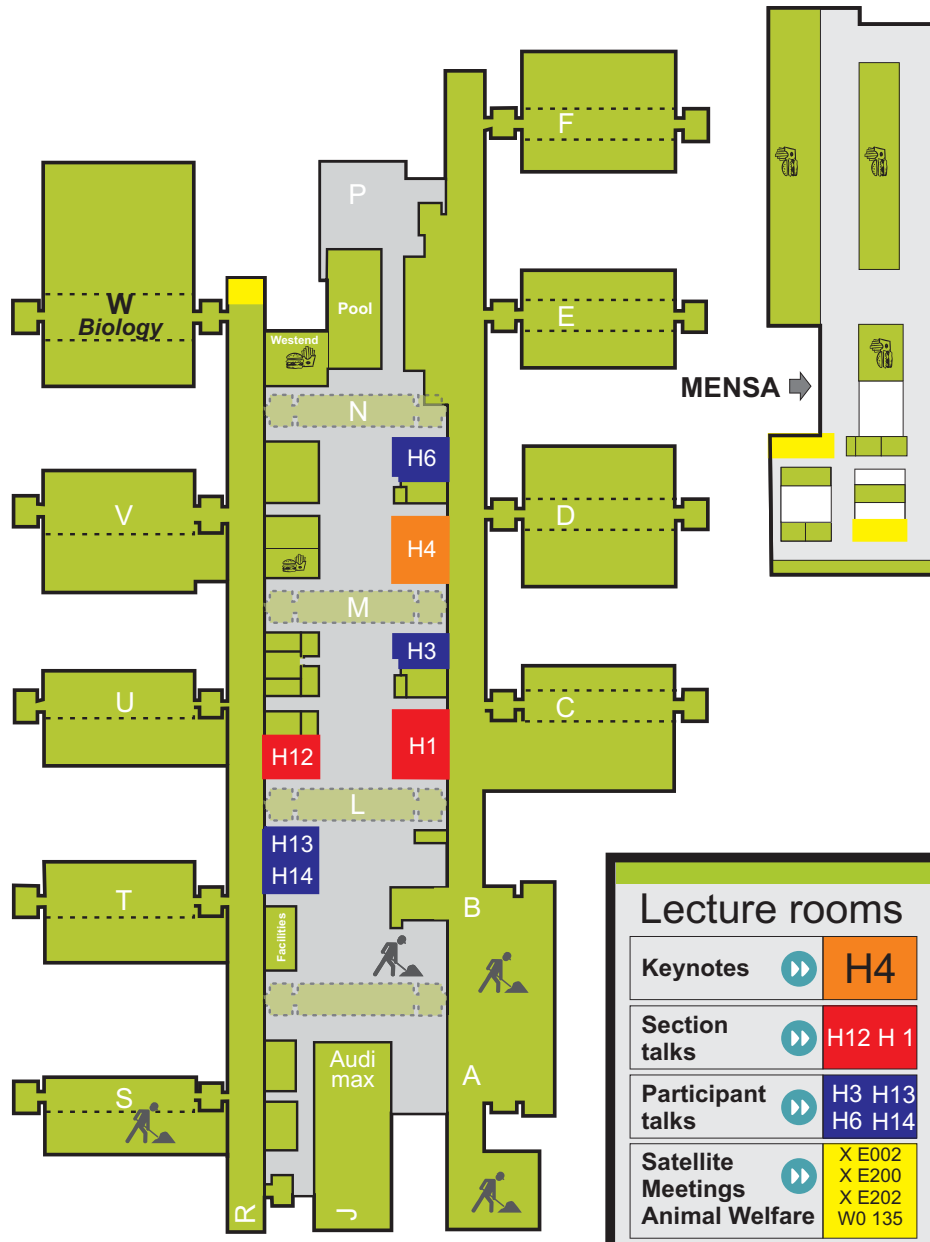
annual meeting of the

## GERMAN ZOOLOGICAL SOCIETY

12th - 15th September 2017 | Main Building Bielefeld University



→ [www.dzg-meeting.de](http://www.dzg-meeting.de)



Campus Plan	2
Welcome Notes	4-5
Programme Overview	6-9
General Information	10-13
Scientific programme	
Wednesday, 13.09.2017	15-18
Thursday, 14.09.2017	19-24
Friday, 15.09.2017	26-30
Saturday, 16.09.2017	31
Posters	
Behavioural Biology	32
Developmental Biology	37
Evolutionary Biology	39
Ecology	44
Morphology	45
Neurobiology	49
Physiology	52
Zoological Systematics	54
Imprint	55
Sponsors	59

## Welcome address

Dear Members of the German Zoological Society, attendees of the annual meeting, ladies and gentlemen,

It is my pleasure to welcome you to the 2017 annual meeting of the DZG in Bielefeld. We have an interesting programme ahead of us, made up of exciting and informative talks, and will hopefully all be party to a lot of new ideas and insights!

Older, established members and attendees will have the chance to hear about the latest happenings in the various fields of zoology, which continue to become more and more specialised. The meeting is a good opportunity to keep abreast of the latest developments, and to retain an overview of zoology today.

For younger members and attendees, the meeting provides a chance to present and discuss, perhaps for the very first (or second) time, their own scientific results. It is also an opportunity to meet colleagues, and strike up friendships that, as many of us have the privilege of knowing, can last for decades. This is the second time that the Deutsche Zoologische Gesellschaft has met in Bielefeld. The last time, in 1988, was in fact the first DZG meeting that I ever attended. I was still an undergraduate and hadn't even started my undergraduate dissertation at that point. It was my first major conference, and I remember it clearly to this day. The 1988 meeting in Bielefeld was also of significance for the future direction of the DZG. It was there that the General Meeting decided to set up the study groups (today known as Fachgruppen or sections). Some people considered that the board's influence over the content of the meetings was too great, and the establishment of the study groups did indeed lead to more varied and diverse programmes and a clear reduction in the average age of participants - in my view making it a real success story!

In the light of all this I would like to thank not just my Bielefeld-based colleagues for organising this year's meeting, but also the sections for their constant and continued hard work and commitment to the Society and to zoology!

All that remains now is to wish us all a lively, stimulating and successful annual DZG meeting!

Stefan Richter



## Welcome address



Dear Colleagues,

on behalf of the scientific committee it is my great pleasure to invite you all to the upcoming 110th Annual Meeting of the German Zoological Society (DZG). The meeting will be held from 12-15th September 2017 at Bielefeld University.

As is the tradition at the DZG, the program of the annual meeting has been determined by the organizers in collaboration with the DZG study groups (Fachgruppen). Fourteen speakers have been invited by the study groups, ten speakers by the organizing committee. Together with 98 short talks of participants this meeting will cover the full variety of zoological topics. In addition, there will also be two evening public lectures by eminent speakers; a symposium Neuronal Mechanisms in Interaction and Individuality organized by our local team that will run alongside the symposia of the study groups; as well as three satellite meetings and a workshop on animal welfare.

We are looking forward to welcoming you in September.

Klaus Reinhold

Monday 11.09

**12.00 Registration opens**

Please find us at the registration desk in the main hall. Have your tickets prepared.

From Molecule to Function E0 002	Neuroethology E0 202	Genomic Systematics E0 200
<b>13:15 Welcome</b> <i>Bettina Zeis</i>		
<b>13.30</b> <i>I. Steinebrunner</i> <i>Dresden, GER</i> CRISPR-CAS9: Perspectives for zoological research.	<b>13.55 Welcome</b> <i>B. Chagnaud &amp; K. Pfeiffer</i>	<b>13.55 Welcome</b> <i>S. Bradler &amp; T. H. Struck</i>
<b>14.15</b> <i>K. Helfenrath</i> <i>Hamburg, GER</i> Fishing for Globin-Knockouts: CRISPR-CAS9 in Zebrafish.	<b>14.00</b> <i>B. Fritzsche</i> <i>Iowa, USA</i> Eyes, ears, noses and the lateral line system.	<b>14.00</b> <i>C. Bleidorn</i> <i>Madrid, SPA</i> State of the art of phylogenomics: promise and pitfalls.

**15.00 Coffee**

<b>15.30</b> <i>E. Liebau</i> <i>Münster, GER</i> CRISPR-CAS9 in the functional dissection of the Ufm1-cascade in <i>C. elegans</i> .	<b>15.30</b> <i>V. Schlüssel</i> <i>Bonn, GER</i>
<b>16.00</b> <i>S. Jung</i> <i>Bielefeld, GER</i>	
<b>16.30</b> <i>J. Ondracek</i> <i>München, GER</i>	

**16.15 Short Talks**

**break**

**17.15** *S. Wegener*  
*Janelia RC, USA*

**16.45 Poster**

**17.45** *O. Bertrand*  
*Bielefeld, GER*

**18.15**  
*M. MacIver*  
*Evanston, USA*  
Understanding animals through sensory evolution and robotics.

Keynotes	▶
Participant talks	▶

For details, refer to web/printed program

Tuesday 12.09

From Molecule to Function E0 002	Neuroethology E0 202	Genomic Systematics E0 200
<b>09.00 Short Talks</b>	<b>08.30</b> <i>A. Straw</i> <i>Freiburg, GER</i> Quantifying multiple visual pathways in fly behavior with VR & genetics.	<b>09.00</b> <i>S. Simon</i> <i>Wageningen, NLD</i> Transcriptomics.
	<b>09.30</b> <i>P. Szyszka</i> <i>Konstanz, GER</i>	
	<b>10.00</b> <i>B. Geurten</i> <i>Göttingen, GER</i>	

**Poster**

**11.00** *T. Kohl*  
*München, GER*

**Lunch**

<b>13.00</b> <i>H. Goerlitz</i> <i>Seewiesen, GER</i>	<b>13.00</b> <i>A. Suh</i> <i>Uppsala, SWE</i>
<b>13.30</b> <i>T. Weihmann</i> <i>Köln, GER</i>	Retrosponds for phylogeny reconstructions.
<b>14.00</b> <i>R. Nagel</i> <i>Potsdam, GER</i>	
<b>14.30</b> <i>U. Homberg</i> <i>Marburg, GER</i> Knowing where to go - the neural basis of the sky compass in insects.	

**End of Symposia**

**Meeting of the Section Speakers** | Main Building: **W2 127**

**Meeting of the DZG Board** | Main Building: **W0 135**

**Advisory Board Meeting** | Main Building: **W0 135**

**Welcome Address | S. Richter**

**Short History of Biology in Bielefeld | K. Reinhold** H4

**Opening Lecture | B. Misof**  
Bonn, ZFMK, GER

**The evolution of insects: A phylogenomic approach.**

**Reception**

Wednesday 13.09

**09.00 Helmut Hillebrand** ▶ H4  
*Oldenburg, GER*  
Ecological stoichiometry – a framework to understand trophic interactions and species coexistence.

**10.00 Simone Immler** ▶ H4  
*Uppsala, SWE*  
The evolutionary consequences of selection at the genetic level.

**Coffee**

**11.30 Irina Ruf** H1  
*Frankfurt, GER*  
Evolution and functional morphology of the mammalian inner ear.

**Timo Thünken** H12  
*Bonn, GER*  
Functions and mechanisms of kin discrimination in a cichlid fish.

**12.00 Poster primer** H1

**12.15 Lunch**

**13.15 Wiebke Herzog** H1  
*Münster, GER*  
A live view on endothelial cell migration in zebrafish.

**Michael Metzén** H12  
*Montreal, CAD*  
SK channel modulation promotes adaptive coding of natural stimuli.

EVO ▶ H13	BEH ▶ H14	PHY&DEV ▶ H6	Org ▶ H3
<b>13.50</b> <i>A. López</i> <i>(München)</i> Convergent evolution of raptorial appendages in arthropods: first steps towards a quantitative approach.	<b>S. Göllike</b> <i>(Bielefeld)</i> Disentangling the mechanism of kin recognition in zebra finches.	<b>L. Chen</b> <i>(Bochum)</i> Cellular activity levels and cytoskeletal reorganization during diapause in <i>Daphnia</i> .	<b>Jan Benda</b> <i>(Tübingen)</i> Communication in the wild at the limits of sensation

<b>14.05</b> <i>G. Petschenka</i> <i>(Gießen)</i> Does defense, not food, drive specialized associations between insects and plants?	<b>A.-L. Cory</b> <i>(Hamburg)</i> Mate availability does not influence male complexity in sexual cannibalism in the spider <i>Argiope bruennichi</i> .	<b>G. Bucher</b> <i>(Göttingen)</i> A morphological novelty based on a modified wing gene regulatory network.
--	---	---

<b>14.20</b> <i>J. Sauer</i> <i>(Bielefeld)</i> The skin microbiomes of 3 estrildid finch species reveal individual and species-specific differences.	<b>A. Guenther</b> <i>(Groningen)</i> Effects of early cortisol elevation on personality in wild cavies.	<b>U. Bickmeyer</b> <i>(Bremen)</i> Sponge metabolite absorbs UV/blue light & increases O <sub>2</sub> concentrations in cultures of microalgae.
---	--	--

<b>14.35</b> <i>R. Nagel</i> <i>(Potsdam)</i> Genetic & behavioral investigations into African weakly electric fish signal evolution.	<b>H. Goerlitz</b> <i>(Seewiesen)</i> Environmental acoustic cues guide the biosonar attention of a highly specialised echolocator.	<b>C. Helm</b> <i>(Bergen)</i> The development of neuronal & neurological elements in the annelid <i>Malacoceros fuliginosus</i> (Annelida, Sponidae).	<b>S. Kraus</b> <i>(Bielefeld)</i> Born to be aggressive, curious or fearless? – Heritability of personality.
---	---	--	---

<b>14.50</b> <i>J. Kurtz</i> <i>(Münster)</i> HSP90 as a capacitor for rapid evolution in the red flour beetle <i>Tribolium castaneum</i> .	<b>M. Fröhlich</b> <i>(Zürich)</i> The ontogeny of intentional signaling in chimpanzees of two neurogenesis communities in the wild.	<b>G. Brenneis</b> <i>(Wellesley)</i> First insights into the gene network underlying adult procambriid crayfish.	<b>A. Fernandez</b> <i>(Berlin)</i> Babbling bats – how pups of the sac-winged bat, <i>Saccopteryx bilineata</i> , acquire their vocal repertoire.
---	--	---	--

**15.05 Coffee**

EVO ▶ H13	BE ▶ H14	PHY ▶ H6	Org ▶ H3
<b>D. Vendrami</b> <i>(Bielefeld)</i> ddRAD sequencing resolves population structure in a benthic invertebrate. Implications for phenotypic plasticity.	<b>C. Dittrich</b> <i>(Berlin)</i> Size assortative mating is influenced by temporal migration & male mating tactic in <i>F. temporaria</i> .	<b>J. Bossen</b> <i>(Kiel)</i> Rescue of a <i>Drosophila</i> EGFR lung cancer-like phenotype by treatment with specific inhibitors.	<b>B. de Bivort</b> <i>(Harvard)</i> The neurobiology of individuality.
<b>M. Stoffel</b> <i>(Bielefeld)</i> A genetic study on the demographic histories of Pinnipeds: The consequences of the big hunt for fur and blubber.	<b>J. Ecard</b> <i>(Potsdam)</i> Reproductive behaviours in a risky world: are mothers trading-off offspring safety for future fitness?	<b>R. Dölling</b> <i>(Münster)</i> Food quality and low cadmium doses alter life history and gene expression in the nematode <i>C. elegans</i> .	
<b>E. Humble</b> <i>(Bielefeld)</i> Measuring inbreeding in Antarctic fur seals.	<b>N.C. Wulff</b> <i>(Berlin)</i> First comparative study on male genitalia reveals a species-specific functioning of titillators.	<b>A. Gruhl</b> <i>(Bremen)</i> It takes two to tango: Two respiratory proteins with different functions in an animal-microbe.	
<b>V. Moris</b> <i>(Freiburg)</i> Elongases, key for cuticular hydrocarbon (CHC) diversity?	<b>M. Scheumann</b> <i>(Hannover)</i> Getting insight into the evolutionary roots of vocal greeting: the importance of mother-infant	<b>A. Wiesenthal</b> <i>(Greifswald)</i> Survival and salinity tolerance limits in the snail <i>Theodoxus fluviatilis</i> : freshwater vs. brackish water lineages.	<b>C. Dallmann</b> <i>(Bielefeld)</i> Inter-leg coordination in insects: A mechanism based on local load feedback.
<b>L. Böttinger</b> <i>(Gießen)</i> Chemical ecology and pheromone evolution in <i>Leptopilina</i> , a parasitoid of <i>Drosophila</i> .	<b>S. Kalberer</b> <i>(Bielefeld)</i> Unpredictable life history in an unpredictable habitat?	<b>F. Wahab</b> <i>(Göttingen)</i> Irisin is a spermatogonial stem cell regulator in the primate testis.	<b>F. Pedraja</b> <i>(Bielefeld)</i> Learning to behave: shaping sensory flow to enable and enhance active electrolocation.

**Meeting of Sections**

EVO ▶ H13 MOR ▶ H14 ECO ▶ H6 NB ▶ H3

**Even posters: beer & wine**

**Rathmayer-Price Ceremony**

**Odd posters: beer & wine**

**All posters: beer & wine**



Thursday 14.09

09.00 **Hanna Kokko**  
*Zürich, CH*  
Males exist. Does it matter? **H4**

10.00 **Adam Kepecs**  
*Cold Spring Harbour, USA*  
Confidence in rats, humans and mathematics. **H4**

Coffee

11.30 **Philine Feulner** **H1** **Violetta Pilorz** **H12**  
*Kastanienbaum, CH* *Manchester, UK*  
Economics of ecological speciation across the Swiss Alpine whitefish radiation.

12.00 **Young DFG** **H1** **Team DFG** **H12**

Lunch

13.45 **Katja Heubel** **H1** **Ingrid Ehrlich** **H12**  
*Köln, GER* *Tübingen, GER*  
Ecological divergence and context-dependent reproductive decisions along a salinity gradient.

14.15 **Carolin Haug** **H1** **Wiebke Schütt** **H12**  
*München, GER* *Hamburg, GER*  
Evolution of body organisation in arthropods and its implications on systematics and character transformation.

EVO **H13** MOR **H14** SYS **H6** NB **H3**

14.50 **G. Verhaegen** **M. Heethoff** **de Sena Oliveira** **R. Rosner**  
*(Greifswald)* *(Darmstadt)* *(Kasse)* *(Newcastle UT)*  
Morphological adaptation in a clonal invasive aquatic snail. Exploring the third dimension of insects - A novel approach using focus stacking and photogrammetry. 3 new Tasmania onychophoran species shed light on the origin of New Zealand velvet worms. Discovering neurons for stereoscopic vision in the praying mantis.

15.05 **A. Edme** **T. van de Kamp** **L. Shou-Wang** **C. Doussout**  
*(Olomouc)* *(Karsruhe)* *(Greifswald)* *(Bielefeld)*  
Environmental vs. genetic sources of variation in avian sperm dimensions - estimates from a natural songbird population. Fast X-ray imaging of fossil insects from Paleogene fissure fillings. 14 new species of *Shaanxinus* *Tanaevitch* from Taiwan and Vietnam. Knocking trees, spiders fall: 14 new species deal with conflicting visual cues when flying back home?

15.20 **U. Knief** **A. Kumerics** **S. Winter** **U. Pegel**  
*(München)* *(Kassel)* *(Frankfurt)* *(Marburg)*  
Heterotic effects of a sex chromosome inversion on sperm characteristics and siring success in zebra finches. Three-dimensional reconstruction and functional morphology of leg musculature in Onychophora (velvet worms). Are there really four species of giraffe? Compass-like representation of the locust central complex.

15.35 **R. Castillo** **H. Leck** **T. Struck** **V. Hofmann**  
*(Würzburg)* *(Zürich)* *(Oslo)* *(Montreal)*  
Sexual dimorphism of cuticular hydrocarbons in cuckoo wasps. Morphological disparity & developmental shape changes in domesticated horses. What are cryptic species? A process-driven perspective. Stimulus dependent neural correlations in electric sensing: origins & function.

Coffee

EVO **H13** MOR **H14** ECO **H6** NB **H3**

**R. Fokkema** **P. Arnold** **L. Pötter** **G. Lepreux**  
*(Groningen)* *(Leipzig)* *(Bochum)* *(Bielefeld)*  
Individual reproductive behaviour in a social context. Extant tree sloths: evolution of divergent musculo-skeletal organization to cope with inverted locomotion? pC2Z dependent effects on freshwater zooplankton. Passive vs active sensing: modulation of background activity in an identified descending interneuron in the stick insect.

16.30 **C. Küpper** **J. Sartori** **C. Held** **P. Kalke**  
*(Seewiesen)* *(Jena)* *(Bremerhaven)* *(Rostock)*  
Alternative reproductive tactics and a sexually antagonistic inversion. 3D imaging of the tensile deformation of a mouse (*Mus musculus*) Achilles tendon enthesis. Beating the competition: Filter-feeding isopods conquer a habitat devoid of life on the underside of the Antarctic shelf ice. Nervous system development in the barnacle. The importance of the peripheral nervous system.

16.45 **D. Wells** **J. Haug** **S. Schmelze** **S. Fischer**  
*(Bielefeld)* *(München)* *(Darmstadt)* *(Tübingen)*  
Does inbreeding increase or decrease cooperative care? Super-sized crustacean larvae in oceans of today and in the past: the forgotten part of the plankton? Holistic defense - morphological and chemical traits combined in the ptychoid oribatid mite *Euphytracarus reticulatus*. From 2D to 3D: evaluating the limits to neuronal miniaturization in insects using 3D image information.

17.00 **C. Bauch** **P. Steinhoff** **E. Reim** **B. Trebels**  
*(Groningen)* *(Greifswald)* *(Greifswald)* *(Marburg)*  
Parental effort and telomere dynamics comparative morphological analysis of the central nervous system in *Pinelema* spiders. Living in caves: A comparative morphological analysis of the mushroom bodies of the red flour beetle. Postmetamorphic neurogenesis in the mushroom bodies of the red flour beetle.

17.20 Meeting of Sections  
PHY **H13** BEH **H14** SYS **H6** DEV **H3**

18.30 Horst-Wiehe Price **H4**

19.15 Public Lecture **H4**  
**Joachim Ruther**  
*Regensburg, GER*  
Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen

Meet DFG @ DZG

„Starting your research career – DFG funding programmes and application procedures“ by Dr. Limbach with Dr. Reinhold as member of the Fachkollegium.

„Teaming-up for research – DFG funding in coordinated research programmes“ by Dr. Ihle with Dr. Richter as member of the Fachkollegium.

Individual Appointments! 14:00 - 17:30  
Appointments with DFG representatives for individual consultation. Please sign in on site: **W2-127 S. Ihle** **V3-146 C. Limbach**

Young & Team DFG

Friday 15.09

09.00 **Barbara Taborsky**  
*Bern, CH*  
Proximate and ultimate causes of developmental plasticity. **H4**

10.00 **Susanne Fritz**  
*Frankfurt, GER*  
Macroevolution meets macroecology: diversity in space and time. **H4**

Coffee

11.30 **Stefan Geisen** **H1** **Karen Meusemann** **H12**  
*Wageningen, NLD* *Freiburg, GER*  
Soil biodiversity beyond animals, bacteria and fungi: A decade of cutting edge insect phylogenomics. A consensus on the highly diverse and functionally important Protists (Protozoa).

12.00

Lunch

13.00 **Jan Oettler** **H1** **Andy Sombke** **H12**  
*Regensburg, GER* *Greifswald, GER*  
From conceptual to mechanistic analyses: Eco-evo-devo of social insect morphology and evolution of sensory and processing systems in mandibulate arthropods.

EVO **H13** BEH **H14** PHY **H3** MOR **H6**

13.30 **P. Gienapp** **A. Junghanns** **N. Erdsack** **H. Herzog**  
*(Wageningen)* *(Greifswald)* *(Sarosota)* *(Bonn)*  
Exploring the power of 'genomic' quantitative genetics for understanding & predicting adaptation. Extreme allomateral care by unmated females in a cooperatively breeding spider. Heat flux in manatees: A new approach to estimate metabolic rates in Florida Manatees. Fish functional morphology based on 3D reconstructions and numerical modelling.

13.45 **M. Hasselmann** **Eberhart-Phillips** **M. Beaulieu** **J. Wölfler**  
*(Hohenheim)* *(Seewiesen)* *(Greifswald)* *(Berlin)*  
Two chromosomal regions govern local adaptation to high altitude in honey bees. Evolution of sex roles: the significance of sex-biased social environments. Seasonal telomere dynamics in a free-ranging primate. Adaptive convergence in the femoral shape of sciuriform rodents depends on locomotor behavior.

14.00 **M. Runge** **C. von Beeren** **H. Marco** **M. Grams**  
*(Zürich)* *(Darmstadt)* *(Rondebosch)* *(Rostock)*  
The 1 haplotype: A selfish genetic element that manipulates migration propensity in its carrier? Sheep in wolves' clothing & wolves' smell: anatomical & chemical mimicry in army ant-associated staphylinids. Adipokinetic hormones: receptor-ligand studies in the desert locust, *Schistocerca gregaria*. Serial and special: comparison of podomeres and muscles in tactile vs walking legs of whip scorpions.

14.15 **M. Gerth** **J. Scharsack** **C. Fink** **T. Büscher**  
*(Liverpool)* *(Münster)* *(Kiel)*  
Experimental evolution of *Spiroplasma* symbionts in *Drosophila*. Sticklebacks become bolder in the presence of parasite manipulated conspecifics. The influence of OPMDL over-expression on the gut homeostasis in *Drosophila melanogaster* symbiosis. Morphology, microstructure and evolution of tarsal attachment pads in Phasmatodea (Hexapoda).

14.30

Coffee

ECO **H13** BEH **H14** NB **H3** MOR **H6**

**R. Jakobs** **D. Schmidtke** **U. Mayer** **B. Eggs**  
*(Bielefeld)* *(Hannover)* *(Rovereto)* *(Tübingen)*  
Aphid feeding can increase nutritional value of the phloem. Visual object-location paired-associates learning: A first comparative approach in humans and a non-human primate. Different structure same function: avian hippocampus and spatial memory. Ovipositor system in parasitoid hymenopterans.

15.15 **P. d'Alvise** **D. Lewanzik** **J. Goulet** **M. Kenning**  
*(Hohenheim)* *(Seewiesen)* *(München)* *(Greifswald)*  
Understanding honeybee pathogen dynamics through high-throughput qPCR analysis. Ahead in the arms race: low-intensity echolocation & intensity compensation in bats. Aquatic imaging: Neuronal map formation through the lateral-line system. Terminal legs of Chilopoda (Myriapoda) - A prime example of morphological disparity and functional diversity.

15.30 **P. Piedrahita** **H. Wolf** **T. Frase** **P. Rühr**  
*(Guayaquil)* *(Ulm)* *(Rostock)* *(Bonn)*  
Food habits of Galapagos Owls: a preliminary study. Interaction of two distance memories in desert ants. The protocerebral architecture and corresponding sense organs in calanoid copepods. Head Biomechanics of a Springtail.

15.45 **V. Nehring** **T. Weihmann** **S. Kaul-Ströhlow** **P. Wagner**  
*(Freiburg)* *(Köln)* *(Wien)* *(München)*  
A geographic mosaic of coevolution between mites and burying beetles. Body dynamics and gait choice in animals. The neuromuscular junction in a onidarian and its evolutionary implications. Morphological diversity of mants shrimps: ontogeny in focus.

16.05 Presentation VBIO **H4**

16.20 General Assembly **H4**



18<sup>09</sup> → direction Rathaus, get off at Jahnplatz

18<sup>19</sup> **4** → walk, or take the bus **25, 26** or **369** with direction Heepen get off at Kesselbrink

19.00 Social Evening „Alte Hechelei“

Parkstr. 6, Ravensberger Park

## Posters

The posters will be located in the Main Hall. All posters should be put up on Wednesday and removed on Friday before 16:00.

## Awards

There are three poster prizes selected by the conference participants. Please make sure you vote! In 2017 these **DZG-awards** are kindly supported by the NRW section of the **VBIO**. Each Studygroup in addition selects their best poster contribution. The Marzipanherzen procedure will be part of the Studygroup selection process this year!

All awardees will receive a book, sponsored by **Springer**.

Awards will be handed over during the **Social Evening** and all awardees are invited to participate!

## Die richtige Optik für jede Anwendung

Mikroskope, Lupen, Ferngläser, Spektive, und Teleskope



- Verkauf
- Wartung
- Reparatur

**Jülich**  
Optische und elektronische Geräte

Optische und elektronische Geräte Jülich GmbH  
Rheingasse 8-10, 53113 Bonn Mail: info@juelich-bonn.com  
Tel.: 0228 / 98386-0 Web: www.juelich-bonn.com

Seit 35 Jahren Ihr Fachhändler mit eigener Werkstatt.

## Tuesday, 12.09.2017

- 17:15 **Opening Ceremony | Lecturehall 4**  
Opening of Meeting | Stefan Richter (Rostock, DE)
- 17:30 Welcome & Introduction | Klaus Reinhold (Bielefeld, DE)
- 17:45-18:30 **Bernhard Misof (ZFMK, Bonn, DE)**  
The evolution of insects: A phylogenomic approach.
- 18:30 Reception in the Main Hall

## Wednesday, 13.09.2017

- 18:00-19:00 **Even poster numbers**
- 19:00-19:30 **Werner-Rathmayer Award | Lecturehall 4**  
**Stefan Kemmerich (Lindlar, DE)** | Laudatio W. Traunspurger
- 19:30-20:30 **Odd poster numbers**

## Thursday, 14.09.2017

- 18:30-19:00 **Horst-Wiehe Award | Lecturehall 4**  
**Markus Lambertz (Bonn, DE)** | Laudatio S. Perry
- 19:05 **Public Evening Lecture | Lecturehall 4**  
Introduction | Caroline Müller (Bielefeld, DE)
- 19:15-20:00 **Joachim Ruther (Regensburg, DE)**  
Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen.

## Friday, 15.09.2017

- 16:00-16:15 **VBIO & DZG | Karl-Josef Dietz (Bielefeld, DE)**
- 16:20 **General Assembly for all DZG attendees**
- 19:00 **Social Evening „Alte Hechelei“, Parkstr. 6, Ravensberger Park**

## Studygroup Symposia

## Overview

	DAY		ROOM	
<b>B</b> Behaviour	13.9.	15.9.	H14	H14
<b>D</b> Developmental Biology	13.9.		H6	
<b>E</b> Evolutionary Biology	13.9.	14.9.   15.9.	H13	H13   H13
<b>EC</b> Ecology		14.9.   15.9.		H6   H13
<b>M</b> Morphology		14.9.   15.9.		H14   H6
<b>N</b> Neurobiology		14.9.   15.9.		H3   H3
<b>P</b> Physiology	13.9.	15.9.	H6	H3
<b>Z</b> Zoological Systematics		14.9.		H6
<b>Organizer's Symposium</b>	13.9.			H3
<b>Animal Welfare Workshop</b>		16.9.	W0135	

## Studygroup Invited Talks

## Overview

	DAY & ROOM
<b>B</b> Behaviour	13.9.   H12 & 14.9.   H12
<b>D</b> Developmental Biology	13.9.   H1
<b>E</b> Evolutionary Biology	14.9.   H1 & 15.9.   H1
<b>EC</b> Ecology	14.9.   H1 & 15.9.   H1
<b>M</b> Morphology	13.9.   H1 & 15.9.   H12
<b>N</b> Neurobiology	13.9.   H12 & 14.9.   H12
<b>P</b> Physiology	13.9.   H1 & 14.9.   H12
<b>Z</b> Zoological Systematics	14.9.   H1 & 15.9.   H12

ERFAHREN • KOMPETENT • ÜBERZEUGEND

# Cuvillier Verlag

Ihr internationaler Fachverlag für Wissenschaft und Wirtschaft  
Dissertationen, Habilitationen, Hochschulschriften,  
Tagungs- und Kongressbände

## Über 25 Jahre Erfahrung im wissenschaftlichen Publizieren

### Eingespielt und kompetent

Seit über 25 Jahren steht Cuvillier Verlag für kompetente Verlagsbetreuung, Einsatz modernster Printtechnik der jeweils neuesten Generation und die Veröffentlichung erstklassiger wissenschaftlicher Publikationen.

### Unser ALL-INCLUSIVE-Leistungspaket

- ✓ Umfassende Verlagsbetreuung und persönliche Beratung
- ✓ Individuelle Umschlaggestaltung in Vollfarbe ohne Aufpreis
- ✓ Digitale Bereitstellung individuell anpassbarer, fertig vorformatierter Layout-Themes zur freien Verwendung
- ✓ Kompletcheck aller Dateien auf Drucktauglichkeit
- ✓ Hochwertige Produktion einschließlich Kaltleimbindung für Beständigkeit und Qualität
- ✓ Optimales Druckprozessmanagement
- ✓ Aufnahme in das Cuvillier-Verlagsprogramm inkl. ISBN-Nummernvergabe
- ✓ Internationaler Vertrieb und Bewerbung bei wissenschaftlichen Einrichtungen und Bibliotheken
- ✓ Garantierte Auslieferung 3-5 Tage nach Druckfreigabe

### Überzeugend

Reichen auch Sie uns Ihre Hand. Über 7.400 Titel und mehr als 25 Jahre Erfahrung sowie das Renommee eines internationalen Premiumpartners der Wissenschaft und Wirtschaft verdienen auch Ihr Vertrauen.

### Verlag für anspruchsvolle Autoren

Der Cuvillier Verlag ermöglicht Ihnen, Ihre wissenschaftliche Forschung professionell zu verbreiten und somit Ihr Standing auf dem internationalen wissenschaftlichen Terrain adäquat zu positionieren.



Cuvillier Verlag  
Nonnenstieg 8  
D-37085 Göttingen

Tel. +49(0)551/54724-0  
Fax. +49(0)551/54724-21  
E-Mail info@cuvillier.de

Internet: www.cuvillier.de  
ecollection.cuvillier.info  
InhaberIn Annette Jentzsch-Cuvillier

- 09:00-10:00 **Plenary talk | Lecturehall H4**  
**Helmut Hillebrand** (Oldenburg, DE)  
Ecological stoichiometry - a framework to understand trophic interactions and species coexistence.
- 10:00-11:00 **Plenary talk | Lecturehall H4**  
**Simone Immler** (Uppsala, SWE)  
The evolutionary consequences of selection at the gametic level.
- 
- 11:00-11:30 **Coffee Break**
- 
- |   |  |
|---|--|
| <p>11:30-12:00 <b>Morphology, H1</b><br/><b>Irina Ruf</b> (Frankfurt, DE)<br/>Evolution and functional morphology of the mammalian inner ear.</p> | <p><b>Behaviour, H12</b><br/><b>Timo Thünken</b> (Bonn, DE)<br/>Active inbreeding in a cichlid fish: functions and mechanisms.</p> |
|---|--|
- 12:00-12:15 **Poster Primer in H1 & H4**
- 
- 12:15-13:15 **Lunch break**
- 
- |   |   |
|---|---|
| <p>13:15-13:45 <b>Physiology, H1</b><br/><b>Wiebke Herzog</b> (Münster, DE)<br/>A live view on endothelial cell migration in zebrafish.</p> | <p><b>Neurobiology, H12</b><br/><b>Michael Metzen</b> (Montreal, CAD)<br/>Serotonergic SK channel modulation promotes adaptive optimized coding of natural stimuli.</p> |
|---|---|





## Behaviour | H 14

- 13:50 [Sarah Golüke \(Bielefeld, DE\)](#)  
Disentangling the mechanism of kin recognition in zebra finches
- 14:05 [Anna-Lena Cory \(Hamburg, DE\)](#)  
Mate availability does not influence male complicity in sexual cannibalism in the spider *Argiope bruennichi*
- 14:20 [Anja Guenther \(Groningen, NL\)](#)  
Effects of early cortisol elevation on personality in wild cavies
- 14:35 [Holger Goerlitz \(Seewiesen, DE\)](#)  
Environmental acoustic cues guide the biosonar attention of a highly specialised echolocator
- 14:50 [Marlen Fröhlich \(Zurich, CH\)](#)  
The ontogeny of intentional signalling in chimpanzees of two communities in the wild
- 15:05 **Coffee Break**
- 15:30 [Carolin Dittrich \(Berlin, DE\)](#)  
Too small to be picky - Size-assortative mating in *Rana temporaria* is influenced by temporal migration pattern and male mating tactic
- 15:45 [Jana Eccard \(Potsdam, DE\)](#)  
Reproductive behaviours in a risky world: are mothers trading-off offspring safety for future fitness?
- 16:00 [Nadja Catharina Wulff \(Berlin, DE\)](#)  
First comparative study on male bushcricket genitalia reveals a species-specific functioning of titillators
- 16:15 [Marina Scheumann \(Hannover, DE\)](#)  
Getting insight into the evolutionary roots of vocal greeting: the importance of mother-infant reunions
- 16:30 [Stephanie Kalberer \(Bielefeld, DE\)](#)  
Unpredictable life history in an unpredictable habitat?
- 16:50 **Meeting of Study Group Morphology H14**

## Evolution | H 13

- 13:50 [Alejandro Izquierdo López \(München, DE\)](#)  
Convergent evolution of raptorial appendages in arthropods: first steps towards a quantitative approach
- 14:05 [Georg Petschenka \(Giessen, DE\)](#)  
Does defense, not food, drive specialized associations between insects and plants?
- 14:20 [Jan Sauer \(Bielefeld, DE\)](#)  
The skin microbiomes of three different estrildid finch species reveal individual- and species- specific differences
- 14:35 [Rebecca Nagel \(Golm, Potsdam, DE\)](#)  
Genetic and behavioral investigations into African weakly electric fish signal evolution
- 14:50 [Joachim Kurtz \(Münster, DE\)](#)  
HSP90 as a capacitor for rapid evolution in the red flour beetle *Tribolium castaneum*
- 15:05 **Coffee Break**
- 15:30 [David Vendrami \(Bielefeld, DE\)](#)  
ddRAD sequencing resolves fine-scale population structure in a benthic invertebrate with implications for understanding phenotypic plasticity
- 15:45 [Martin Stoffel \(Bielefeld, DE\)](#)  
A comparative genetic study on the demographic histories of Pinnipeds: The consequences of the big hunt for fur and blubber
- 16:00 [Emily Humble \(Bielefeld, DE\)](#)  
Measuring inbreeding in Antarctic fur seals
- 16:15 [Victoria Moris \(Freiburg im Breisgau, DE\)](#)  
Elongases, key for cuticular hydrocarbon (CHC) diversity?
- 16:30 [Lea Böttinger \(Gießen, DE\)](#)  
Chemical Ecology and Pheromone Evolution in *Leptopilina*, a Parasitoid of *Drosophila*
- 16:50 **Meeting of Study Group Evolution H13**

## Physiology &amp; Development | H 6

- 13:50 [Luxi Chen \(Bochum, DE\)](#)  
Cellular activity levels and cytoskeletal reorganization during diapause in Daphnia
- 14:05 [Gregor Bucher \(Göttingen, DE\)](#)  
A morphological novelty based on a modified wing gene regulatory network
- 14:20 [Ulf Bickmeyer \(Bremerhaven, DE\)](#)  
A sponge fluorescent secondary metabolite absorbs light in the UV/blue colour range and increases O<sub>2</sub> concentrations in cultures of microalgae
- 14:35 [Conrad Helm \(Bergen, NO\)](#)  
The development of neuronal and neuroglial elements in the sedentary annelid *Malacoceros fuliginosus* (Annelida, Spionidae)
- 14:50 [Georg Brenneis \(Wellesley, US\)](#)  
First insights into the gene network underlying adult neurogenesis in procambrian crayfish
- 15:05 **Coffee Break**
- 15:30 [Judith Bossen \(Kiel, DE\)](#)  
Rescue of a Drosophila EGFR lung cancer-like phenotype by treatment with specific inhibitors
- 15:45 [Ramona Dölling \(Münster, DE\)](#)  
Food quality and low cadmium doses alter life history and gene expression in the nematode *Caenorhabditis elegans*
- 16:00 [Alexander Gruhl \(Bremen, DE\)](#)  
It takes two to tango: Two respiratory proteins with different functions in an animal-microbe symbiosis
- 16:15 [Amanda A. Wiesenthal \(Greifswald, DE\)](#)  
Survival and salinity tolerance limits in the snail *Theodoxus fluviatilis*: freshwater vs. brackish water lineages
- 16:30 [Fazal Wahab \(Göttingen, DE\)](#)  
Irisin is a spermatogonial stem cell regulator in the primate testis
- 16:50 **Meeting of Study Group Ecology H6**

Organizer's Symposium | H 3  
Neuronal Mechanisms in Interaction and Individuality

- 13:50-14:35 **Plenary talk | Lecturehall H3**  
**Jan Benda (Tübingen, DE)**  
**Communication in the wild at the limits of sensation.**
- 14:35 [Sabine Kraus \(Bielefeld, DE\)](#)  
Born to be aggressive, curious or fearless? – Heritability of personality
- 14:50 [Ahana Aurora Fernandez \(Berlin, DE\)](#)  
Babbling bats – how pups of the sac-winged bat, *Saccopteryx bilineata*, acquire their vocal repertoire
- 15:05 **Coffee Break**
- 15:30-16:15 **Plenary talk | Lecturehall H3**  
**Benjamin de Bivort (Harvard, USA)**  
**The neurobiology of individuality.**
- 16:15 [Chris J. Dallmann \(Bielefeld, DE\)](#)  
Inter-leg coordination in insects: A mechanism based on local load feedback
- 15:30 [Federico Pedraja \(Bielefeld, DE\)](#)  
Learning to behave: shaping sensory flow to enable and enhance active electrolocation
- 16:50 **Meeting of Study Group Neurobiology H3**



09:00-10:00	<b>Plenary talk   Lecturehall H4</b> <b>Hanna Kokko</b> (Zürich, CH) Males exist. Does it matter?	
10:00-11:00	<b>Plenary talk   Lecturehall H4</b> <b>Adam Kepecs</b> (Cold Spring Harbour, USA) Confidence in rats, humans and mathematics.	
.....		
11:00-11:30	Coffe break	
.....		
11:30-12:00	<b>Evolution, H1</b> <b>Philine Feulner</b> (Kastanienbaum, CH) Economics of ecological speciation across the Swiss Alpine whitefish radiation.	<b>Physiology, H12</b> <b>Violetta Pilorz</b> (Manchester, UK) A journey of the light from the eye to the physiology.
.....		
12:00-12:45	DFG, H1 <b>Dr. Limbach</b> Starting your research career.	DFG, H12 <b>Dr. Ihle</b> Teaming-up for research.
.....		
12:45-13:45	Lunch break	
.....		
13:45-14:15	<b>Ecology, H1</b> <b>Katja Heubel</b> (Köln, DE) Ecological divergence and context-dependent reproductive decisions along a salinity gradient	<b>Neurobiology, H12</b> <b>Ingrid Ehrlich</b> (Tübingen, DE) Amygdala circuits and the control of fear memory.
.....		
14:15-14:45	<b>Systematics, H1</b> <b>Carolin Haug</b> (München, DE) Evolution of body organisation in arthropods and its implications on systematics and character transformation.	<b>Behaviour, H12</b> <b>Wiebke Schütt</b> (Hamburg, DE) Sexual selection and life history trade-offs mediate animal personality differences.

14:50	<b>Gerlien Verhaegen</b> (Greifswald, DE) Morphological adaptation in a clonal invasive aquatic snail
15:05	<b>Anais Edme</b> (Olomouc, CZ) Environmental versus genetic sources of variation in avian sperm dimensions – estimates from a natural songbird population
15:20	<b>Ulrich Knief</b> (Planegg-Martinsried, DE) Heterotic effects of a sex-chromosome inversion on sperm characteristics and siring success in zebra finches
15:35	<b>Ruth Castillo</b> (Würzburg, DE) Sexual dimorphism of cuticular hydrocarbons in cuckoo wasps
15:50	Coffee Break
16:15	<b>Rienk Fokkema</b> (Groningen, NL) Individual reproductive behaviour in a social context
16:30	<b>Clemens Küpper</b> (Seewiesen, DE) Alternative reproductive tactics and a sexually antagonistic inversion
16:45	<b>David Wells</b> (Bielefeld, DE) Does inbreeding increase or decrease cooperative care?
17:00	<b>Christina Bauch</b> (Groningen, NL) Parental effort and telomere dynamics - a longitudinal study in jackdaws
17:20	Meeting of Study Group Physiology H13
18:30	<b>Horst-Wiehe Price   Lecturehall H4</b>
19:15	<b>Plenary talk   Lecturehall H4</b> <b>Joachim Ruther</b> (Regensburg, DE) Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen.

## Morphology | H 14

- 14:50 [Michael Heethoff \(Darmstadt, DE\)](#)  
Exploring the third dimension of insects - A novel approach using focus stacking and photogrammetry
- 15:05 [Thomas van de Kamp \(Karlsruhe, DE\)](#)  
Fast X-ray imaging of fossil insects from Paleogene fissure fillings
- 15:20 [Andreas Kumerics \(Kassel, DE\)](#)  
Three-dimensional reconstruction and functional morphology of leg musculature in Onychophora (velvet worms)
- 15:35 [Laura Heck \(Zurich, CH\)](#)  
Morphological disparity and developmental shape changes in domesticated horses
- 15:50 **Coffee Break**
- 16:15 [Patrick Arnold \(Leipzig, DE\)](#)  
Did extant tree sloths evolve divergent musculoskeletal organization of the neck to cope with mechanical head support in inverted locomotion?
- 16:30 [Julian Sartori \(Jena, DE\)](#)  
3D imaging of the tensile deformation of a mouse (*Mus musculus*) Achilles tendon enthesis
- 16:45 [Joachim T. Haug \(Planegg-Martinsried, DE\)](#)  
Super-sized crustacean larvae in oceans of today and in the past – the forgotten part of the plankton?
- 17:00 [Philip O.M. Steinhoff \(Greifswald, DE\)](#)  
Living in caves: A comparative morphological analysis of the central nervous system in *Pinelema* spiders
- 17:20 **Meeting of Study Group Behaviour H14**
- 18:30 **Horst-Wiehe Price | Lecturehall H4**
- 19:15 **Plenary talk | Lecturehall H4**  
**Joachim Ruther** (Regensburg, DE)  
Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen.

## Systematics | H 6

- 14:50 [Ivo de Sena Oliveira \(Kassel, DE\)](#)  
Three new onychophoran species from Tasmania shed light on the origin of New Zealand velvet worms
- 15:05 [Shou-Wang Lin \(Greifswald, DE\)](#)  
Knocking trees, spiders fall: fourteen new species of *Shaanxinus Tanasevitch*, 2006 (Araneae, Linyphiidae, Erigoninae) from Taiwan and Vietnam
- 15:20 [Sven Winter \(Frankfurt am Main, DE\)](#)  
Are there really four species of giraffe?
- 15:35 [Torsten Struck \(Oslo, NO\)](#)  
What are cryptic species? – A process-driven perspective
- 15:50 **Coffee Break**
- 16:15 [Leonie Pötter \(Bochum, DE\)](#)  
pCO<sub>2</sub> dependent effects on freshwater zooplankton
- 16:30 [Christoph Held \(Bremerhaven, DE\)](#)  
Beating the competition: Filter-feeding isopods conquer a habitat devoid of life on the underside of the Antarctic shelf ice
- 16:45 [Sebastian Schmelzle \(Darmstadt, DE\)](#)  
Holistic defense - morphological and chemical traits combined in the ptychoid oribatid mite *Euphthiracarus reticulatus*
- 17:00 [Elisabeth Reim \(Greifswald, DE\)](#)  
Factors affecting dispersal propensity and flight performance in a butterfly: When willingness and ability do not equate
- 17:20 **Meeting of Study Group Systematics H6**
- 18:30 **Horst-Wiehe Price | Lecturehall H4**
- 19:15 **Plenary talk | Lecturehall H4**  
**Joachim Ruther** (Regensburg, DE)  
Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen.

## Ecology | H 6

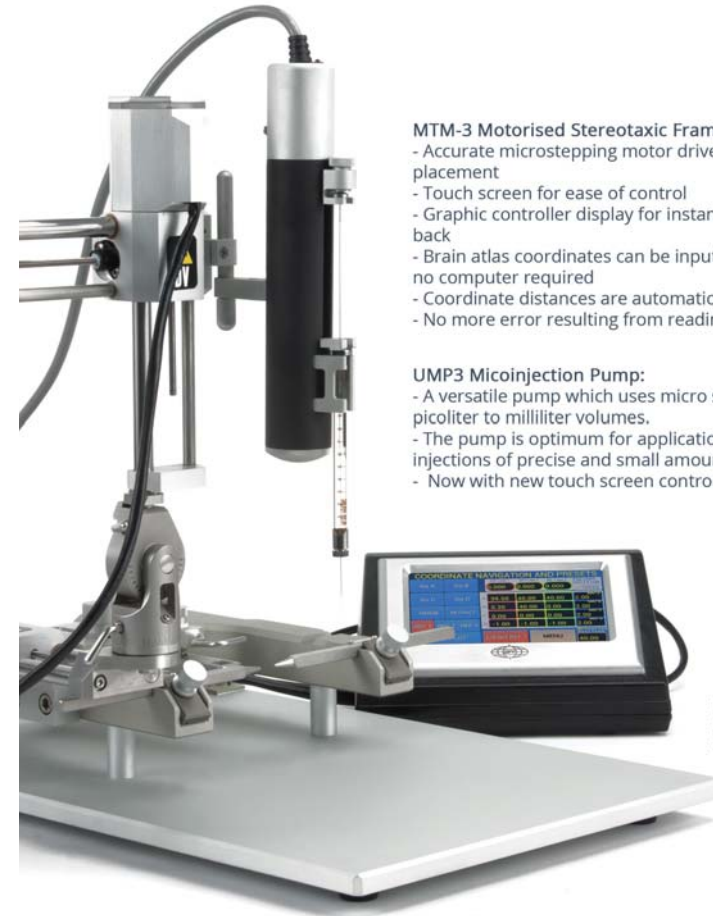
## Neurobiology | H 3

- 14:50 **Ronny Rosner (Newcastle upon Tyne, GB)**  
Discovering neurons for stereoscopic vision in the praying mantis
- 15:05 **Charlotte Doussot (Bielefeld, DE)**  
How bumblebees deal with conflicting visual cues when flying back home?
- 15:20 **Uta Pegel (Marburg, DE)**  
Compass-like representation of solar position in the locust central complex
- 15:35 **Volker Hofmann (Montreal, CA)**  
Stimulus dependent neural correlations in electric sensing: origins and function
- 15:50 **Coffee Break**
- 16:15 **Gaetan Lepreux (Bielefeld, DE)**  
Passive versus active sensing: stimulus induced modulation of background activity in an identified descending interneuron in the stick insect
- 16:30 **Paul Kalke (Rostock, DE)**  
The development of the nervous system in the bay barnacle (*Amphibalanus improvisus*) – the increasing importance of the peripheral nervous system
- 16:45 **Stefan Fischer (Tübingen, DE)**  
From 2D to 3D: evaluating the limits to neuronal miniaturization in insects on ultrastructural level using 3D image information
- 17:00 **Björn Trebels (Marburg, DE)**  
Postmetamorphic neurogenesis in the mushroom bodies of the red flour beetle
- 17:20 **Meeting of Study Group Developmental Biology H3**
- 18:30 **Horst-Wiehe Price | Lecturehall H4**
- 19:15 **Plenary talk | Lecturehall H4**  
**Joachim Ruther (Regensburg, DE)**  
Die Chemie muss stimmen - sexuelle Kommunikation bei parasitischen Wespen.



WORLD  
PRECISION  
INSTRUMENTS  
*Instrumenting scientific ideas*

## Discover our new Motorised Stereotaxic Frames with our UMP3 injector ideal for vector application in Neurogenetics



### MTM-3 Motorised Stereotaxic Frame:

- Accurate microstepping motor drive for high resolution placement
- Touch screen for ease of control
- Graphic controller display for instant operational feedback
- Brain atlas coordinates can be input into the controller, no computer required
- Coordinate distances are automatically calculated
- No more error resulting from reading Vernier scales

### UMP3 Microinjection Pump:

- A versatile pump which uses micro syringes to deliver picoliter to milliliter volumes.
- The pump is optimum for applications that require injections of precise and small amounts of liquid.
- Now with new touch screen controller

MTM-3 Frame with optional UMP3 Microinjection Pump

[www.wpi-europe.com](http://www.wpi-europe.com)

Germany +49 30 6188845 [wpide@wpi-europe.com](mailto:wpide@wpi-europe.com)  
UK +44 1462 424700 [wpiuk@wpi-europe.com](mailto:wpiuk@wpi-europe.com)

09:00-10:00	<b>Plenary talk   Lecturehall H4</b> <b>Barbara Taborsky</b> (Bern, CH) Proximate and ultimate causes of developmental plasticity.	
10:00-11:00	<b>Plenary talk   Lecturehall H4</b> <b>Susanne Fritz</b> (Frankfurt, DE) Macroevolution meets microecology: Diversity in space and time.	
11:00-11:30	Coffee Break	
11:30-12:00	<b>Ecology, H1</b> <b>Stefan Geisen</b> (Wageningen, NL) Soil biodiversity beyond animals, bacteria and fungi: A consensus on the highly diverse and functionally important Protists (Protozoa).	<b>Systematics, H12</b> <b>Karen Meusemann</b> (Freiburg, DE) A decade of cutting edge insect phylogenomics.
12:00-13:00	Lunch break	
13:00-13:30	<b>Evolution, H1</b> <b>Jan Oettler</b> (Regensburg, DE) From conceptual to mechanistic analyses: Eco-evo-devo of social insect plasticity.	<b>Morphology, H12</b> <b>Andy Sombke</b> (Greifswald, DE) Morphology and evolution of sensory and processing systems in mandibulate arthropods.

13:30	<b>Phillip Gienapp</b> (Wageningen, NL) Exploring the power of 'genomic' quantitative genetics for understanding and predicting adaptation
13:45	<b>Martin Hasselmann</b> (Stuttgart, DE) Two chromosomal regions govern local adaptation to high altitude in honey bees
14:00	<b>Jan-Niklas Runge</b> (Zürich, CH) The t haplotype: A selfish genetic element that manipulates migration propensity in its carrier?
14:15	<b>Michael Gerth</b> (Liverpool, GB) Experimental evolution of Spiroplasma symbionts in Drosophila
14:30	Coffee Break
15:00	<b>Ruth Jakobs</b> (Bielefeld, DE) Aphid feeding can increase nutritional value of the phloem
15:15	<b>Paul D'Alvise</b> (Stuttgart, DE) Understanding honey bee pathogen dynamics through high-throughput qPCR analysis
15:30	<b>Paolo Piedrahita</b> (Guayaquil, EC) Food habits of Galapagos Owls: a preliminary study
15:45	<b>Volker Nehring</b> (Freiburg, DE) A geographic mosaic of coevolution between mites and burying beetles
16:05	Presentation VBIO   Lecturehall H4
16:20	General Assembly of the DZG   Lecturehall H4

## Behaviour | H 14

- 13:30 [Anja Junghanns \(Greifswald, DE\)](#)  
Extreme allomaternal care by unmated females in a cooperatively breeding spider
- 13:45 [Luke Eberhart-Phillips \(Seewiesen, DE\)](#)  
Evolution of sex roles: the significance of sex-biased social environments
- 14:00 [Christoph von Beeren \(Darmstadt, DE\)](#)  
Sheep in wolves' clothing and in wolves' smell: anatomical and chemical mimicry in army ant-associated staphylinids
- 14:15 [Joern Peter Scharsack \(Muenster, DE\)](#)  
Sticklebacks become bolder in the presence of parasite manipulated conspecifics
- 14:30 Coffee Break
- 15:00 [Daniel Schmidtke \(Hannover, DE\)](#)  
Touchscreen-based visual object-location paired-associates learning: A first comparative approach in humans and a non-human primate.
- 15:15 [Daniel Lewanzik \(Seewiesen, DE\)](#)  
The bat-moth arms race goes on: Barbastelle bats lead through the combination of low-intensity echolocation and intensity compensation
- 15:30 [Harald Wolf \(Ulm, DE\)](#)  
Interaction of two distance memories in desert ants
- 15:45 [Tom Weihmann \(Köln, DE\)](#)  
Body dynamics and gait choice in poly-pedal animals
- 16:05 Presentation VBIO | Lecturehall H4
- 16:20 General Assembly of the DZG | Lecturehall H4

## Physiology | H3

- 13:30 [Nicola Erdsack \(Sarasota, US\)](#)  
Heat flux in manatees: A new approach to estimate metabolic rates in Florida Manatees (*Trichechus manatus latirostris*)
- 13:45 [Michaël Beaulieu \(Greifswald, DE\)](#)  
Seasonal telomere dynamics in a free-ranging primate
- 14:00 [Heather Marco \(Rondebosch, ZA\)](#)  
Adipokinetic hormones: receptor-ligand studies in the desert locust, *Schistocerca gregaria*
- 14:15 [Christine Fink \(Kiel, DE\)](#)  
The influence of ORMDL overexpression on the gut homeostasis in *Drosophila melanogaster*
- 14:30 Coffee Break
- 15:00 [Uwe Mayer \(Rovereto, IT\)](#)  
Different structure same function: avian hippocampus and spatial memory
- 15:15 [Julie Goulet \(Munich, DE\)](#)  
Aquatic Imaging: Neuronal Map Formation through the Lateral-Line System
- 15:30 [Thomas Frase \(Rostock, DE\)](#)  
Beautiful bodies, tiny brains? The protocerebral architecture and corresponding sense organs in calanoid copepods
- 15:45 [Sabrina Kaul-Strehlow \(Wien, AT\)](#)  
Characterization of the neuromuscular junction in the Cnidarian *Nematostella vectensis* and its evolutionary implications
- 16:05 Presentation VBIO | Lecturehall H4
- 16:20 General Assembly of the DZG | Lecturehall H4

## Neurobiology | H3

## Morphology | H 6

- 13:30 [Hendrik Herzog \(Bonn, DE\)](#)  
Fish functional morphology based on 3D reconstructions and numerical modelling
- 13:45 [Jan Wölfer \(Berlin, DE\)](#)  
Adaptive convergence in the femoral shape of sciuriform rodents depends on locomotor behavior
- 14:00 [Markus Grams \(Rostock, DE\)](#)  
Serial and special: comparison of podomeres and muscles in tactile vs walking legs of whip scorpions (Arachnida, Uropygi)
- 14:15 [Thies Büscher \(Kiel, DE\)](#)  
Morphology, microstructure and evolution of tarsal attachment pads in Phasmatodea (Hexapoda)
- 14:30 [Coffee Break](#)
- 15:00 [Benjamin Eggs \(Tübingen, DE\)](#)  
Functional morphology of the skeletomuscular ovipositor system in parasitoid hymenopterans
- 15:15 [Matthes Kenning \(Greifswald, DE\)](#)  
Terminal legs of Chilopoda (Myriapoda) - A prime example of morphological disparity and functional diversity
- 15:30 [Peter T. Rühr \(Bonn, DE\)](#)  
Head Biomechanics of a Springtail
- 15:45 [Philipp Wagner \(Planegg-Martinsried, DE\)](#)  
Morphological diversity of mantis shrimps: ontogeny in focus
- 16:05 [Presentation VBIO | Lecturehall H4](#)
- 16:20 [General Assembly of the DZG | Lecturehall H4](#)

## Workshop | Wo 135

- 9:30 [A.Ziesenis & B.Caspers \(Bielefeld, DE\)](#)  
Welcome address
- 9:15 [Axel Ziesenis \(Bielefeld, DE\)](#)  
Der Tierversuch - ein Auslaufmodell?
- 9:45 [Vivian Goerlich-Janson \(Utrecht, NL\)](#)  
An evaluation of (non-) invasive methods in endocrinology and stress physiology in the light of the 3Rs
- 10:30 [E. Tobias Krause \(Celle, DE\)](#)  
Measuring (farm) animal needs and requirements
- 11:15 [Discussion](#)
- 11:30 [Coffee Break](#)
- 12:00 [Andreas Teubner \(Maastricht, NL\)](#)  
CRISPR/Cas und Co: Neue Scheren für den perfekten Schnitt
- 12:45 [Oliver Krüger \(Bielefeld, DE\)](#)  
Joys and pitfalls of doing fieldwork with animals
- 13:30-14:00 [Discussion](#)



**Information:**

To save print space, only the address of the presenting author is being indicated. For more details, please refer to the abstract PDF.

**Even posters: please be at your poster on Wednesday from 18:00–19:00h.**

**Odd posters: please be at your poster on Wednesday from 19:30–20:30h.**

...professional entomology...

>entomologie  
 >mikroskopie  
 >equipment  
 >outdoor  
 >buch  
 >gps

**entomology** bioform.de  
**new books** entobooks.de  
**antiquarian** bioquant.de  
**microscopy** bioformmicro.de

**bioform**<sup>®</sup>.de  
 entomology & equipment

info@bioform.de  
 www.bioform.de

dr. jürgen schmidl e.k.  
 am kressenstein 48  
 D-90427 nürnberg-kraftshof  
 tel +49 (0) 911/93 85-778  
 fax +49 (0) 911/93 85-774

- P-B-01** [Deterministic or random search: How should I find my route again?](#)  
Olivier Bertrand; Jens Peter Lindemann; Martin Egelhaaf (Bielefeld/DE)
- P-B-02** [High, low, or familiar? Laying hens' nest site preferences](#)  
E. Tobias Krause; Lars Schrader (Celle/DE)
- P-B-03** [Impact of kinship on allopreening behaviour in adolescent Bengalese finches.](#)  
Verena Schöler; Barbara A. Caspers (Bielefeld/DE)
- P-B-04** [Bioluminescence in flashlight fishes. Diversity in blink frequencies and light organ function](#)  
Jens Hellinger; Stefan Herlitze; Peter Jägers; Franziska Sutt (Bochum/DE)
- P-B-05** [Good vibrations: Are they involved in the courtship display of colourful birds?](#)  
Dominique Treschnak; Rita Fragueira; Michaël Beaulieu; Monika J.B. Eberhard (Greifswald/DE)
- P-B-06** [Variations in vibrational signals of Karoophasma biedouwense](#)  
Simon Küpper; Mike Picker; Monika J.B. Eberhard (Greifswald/DE)
- P-B-07** [The Influence of Training on Dynamic Weighting of Multisensory Inputs in the Weakly Electric Fish Gnathonemus petersii](#)  
Malou Zeymer; Anna Kurth; Gerhard von der Emde (Bonn/DE)
- P-B-08** [Group dynamics, electric behaviour and motor-interactions of the weakly electric fish Mormyrus rume in natural and mixed groups](#)  
Sarah Pannhausen; Martin Worm; Gerhard von der Emde (Bonn/DE)

- P-B-09** Adaptive behavioural shaping during adolescence in male zebra finches (*Taeniopygia guttata*)  
Stefanie Bölting; Nikolaus von Engelhardt (Bielefeld/DE)
- P-B-10** Do temperate bats keep their detection distances constant by adjusting call parameters to daily weather fluctuations?  
Verena Reininger; Holger R. Goerlitz (Seewiesen/DE)
- P-B-11** The influence of husbandry conditions to physical attributes and behaviour in zebra finch (*Taeniopygia guttata*)  
Lisa Kalnins (Bielefeld/DE)
- P-B-12** The behavioural dynamics during antagonistic encounters of *Mormyrus rume*: motor patterns and electrocommunication in fish-fish and fish-dummy interactions  
Anna Kersten; Martin Worm; Gerhard von der Emde (Bonn/DE)
- P-B-13** The more the merrier: Dynamics of behavioural interactions and electro-communication behaviour in differently sized groups of *Mormyrus rume*  
Daniela Kupschus; Sarah Pannhausen; Gerhard von der Emde (Bonn/DE)
- P-B-14** Intra- and interspecific information transfer in foraging insectivorous bats  
Theresa Hügél; Daniel Lewanzik; Holger R. Goerlitz (Seewiesen/DE)
- P-B-15** Behavioural variability as anti-predator adaptation? Reaction to ultrasound stimuli in eared moths  
Theresa Hügél; Hannah ter Hofstede; Holger R. Goerlitz (Seewiesen/DE)
- P-B-16** Dynamics of the Social Structure of Captive *Sapajus flavius* at Parque Estadual de Dois Irmãos, Recife, PE.  
Rachel Souza Ferreira (Bremen/DE)

- P-B-17** The role of body condition and social environment during escalated singing contests in the bushcricket *Poecilimon ampliatus*.  
Marianna Anichini; Karl-Heinz Frommolt; Gerlind U.C. Lehmann (Berlin/DE)
- P-B-18** Reduced sensor movement sequences for a partitioning of search area and a selection of discrete EEV contour-ring fragments in active electrolocation  
Sabine Wolf-Homeyer; Axel Schneider; Jacob Engelmann (Bielefeld/DE)
- P-B-19** Do blowflies shape their walking style to detect camouflaged objects in three-dimensional environments?  
José Monteagudo (Bielefeld/DE)
- P-B-20** The problem of home choice in skyline-based homing  
Martin Müller; Olivier Bertrand; Dario Differt; Martin Egelhaaf (Bielefeld/DE)
- P-B-21** Motion cues increase stimulus-directed behaviour and focused attention towards purely visual prey stimuli in a nocturnal primate  
Michele Janice Ohmes; Elke Zimmermann; Daniel Schmidtke (Hannover/DE)
- P-B-22** How do scorpions walk? Locomotion and walking parameters of the scorpion *Mesobuthus eupeus*  
Elena Haugg; Harald Wolf; Sarah Pfeffer (Pfaffenhofen Ilm/DE)
- P-B-23** Go with the flow? Contribution of visual and electrical parallax to depth perception in weakly electric fish.  
Valerie Lucks; Jacob Engelmann (Bielefeld/DE)

## POSTERS

## Behaviour

- B**
- P-B-24** Population structure in the Antarctic fur seal: recolonization by a recovering population  
Anneke J. Paijmans; Alison C. Cleary; Emily Humble; Jaume Forcada; P. J. Nico Bruyn; Marthán N. Bester; Christian Lydersen; Christophe Guinet; Simon D. Goldsworthy; Kit M. Kovacs; Andrew D. Lowther; Joseph I. Hoffman (Bielefeld/DE)
- P-B-25** Road to recovery: tracing global population expansion of Antarctic fur seals via color polymorphism.  
Erin Bauer; Marthán N. Bester; Nico de Bruyn; Felicitas Christaller; Alison C. Cleary; Dr. Jaume Forcada; Birgit Fuchs; Simon D. Goldsworthy; Christophe Guinet; Joseph I. Hoffman; Emily Humble; Kit M. Kovacs; Nicole Kröcker; Cora Kubetschek; (Bielefeld/DE)
- P-B-26** What's for dinner: olfactory food choice in oribatid mites  
Adrian Brückner; Michael Heethoff (Darmstadt/DE)
- P-B-27** Daphnia's swimming behaviour: Behavioural adaptations in a dangerous world  
Sina Becker; Linda C. Weiss; Mikael Ekvall; Giuseppe Bianco; Lars-Anders Hansson; Ralph Tollrian (Bochum/DE)
- P-B-28** Mouth-brooding within the Neotropical Cichlids genus *Apistogramma* (Regan, 1913)  
Uwe Römer; Clara Isis Römer; Ingo Hahn (Verl/DE)
- P-B-29** Do maternal hormones in eggs correlate with offspring fitness?  
Peter Korsten; Jan Komdeur; Ton Groothuis; Berber de Jong (Bielefeld/DE)
- P-B-30** Innate social predispositions for animate motion and their neural correlates in newly-hatched chicks (*Gallus gallus*)  
Orsola Rosa-Salva; Uwe Mayer; Mikolaj Hernik; Elena Lorenzi; Giorgio Vallortigara (Rovereto/IT)

## Developmental Biology

## POSTERS

- D**
- P-D-01** Identification and characterization of novel genes involved in quinone synthesis in the odoriferous defensive stink glands of the red flour beetle, *Tribolium castaneum*  
Bibi Atika; Sabrina Lehmann; Ernst Wimmer (Göttingen/DE)
- P-D-02** Conserved versus derived patterns of controlled cell death during the embryonic development of two species of *Onychophora* (velvet worms)  
Sandra Treffkorn; Georg Mayer (Kassel/DE)
- P-D-03** The genetically encoded voltage sensor ArcLight is a useful tool for investigating bioelectric phenomena during *Drosophila* oogenesis  
Susanne Katharina Schotthöfer; Johannes Bohrmann (Aachen/DE)
- P-D-04** Development of morphological asymmetries in owls  
Markus Krings; Laura Roskamp; Hermann Wagner (Aachen/DE)

**REBIE: Jeden Tag ein bisschen besser!**

**Neue starke Marken bei REBIE**

**ATI** Innovative Technik für Ihr Aquarium

**TUNZE** High-Tech Aquarium Ecology

**ARKA** BIOTECHNOLOGIE

**Tropical**

**sera**

**Back to Nature**

**AGROBS**

**DISCUSFOOD** Alleinvertrieb

REBIE: Der zoologische Versand Großhandel.

**Seit über 50 Jahren** **EHEIM**

kompetenter Partner für den Zoofachhandel **Vollsortiment**

**... und über 100 weitere Lieferanten!**

 **REBIE** - Tel.: 0521/9688880 - [www.rebie.de](http://www.rebie.de) 



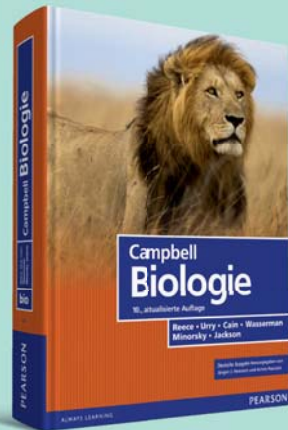
Pearson

# Klassiker trifft Spezialist

Den Biologen der Campbell – den Zoologen unser Value Pack Zoologie.

Aus der Biologie nicht mehr wegzudenken: der Campbell – unser absoluter Klassiker!

Vereint Theorie & Praxis wie kein anderer: das Value Pack Zoologie – unser Spezialist zum unschlagbaren Preis!



Neil A. Campbell et al.

## Biologie

10., aktualisierte Auflage  
ISBN: 978-3-8689-4259-0  
1856 Seiten | 4-farbig  
ET: Okt 2015  
€ 99,95 [D] | € 102,80 [A]  
sFr 115,70\*



Cleveland P. Hickman et al.

## Value Pack Zoologie – Bafög-Ausgabe

ISBN: 978-3-8689-4330-6  
1.872 Seiten | 4-farbig  
ET: Mai 2017  
€ 49,95 [D] | € 51,40 [A]  
sFr 58,40\*

Jetzt  
kostenfreies  
Prüfexemplar  
anfordern!

[www.pearson-studium.de](http://www.pearson-studium.de)

[www.pearson-studium.de](http://www.pearson-studium.de)

\*unverbindliche Preisempfehlung

## Evolution

## POSTERS

- P-E-01** [Speciation in Space & Time](#)  
Lucienne Eweleit; Klaus Reinhold; Jan Sauer (Bielefeld/DE)
- P-E-02** [Do gut symbionts have an impact on the mate choice of Zebra Finches?](#)  
Öncü Maracı; Barbara A. Caspers (Bielefeld/DE)
- P-E-03** [Immunolocalisation of opsins in tardigrades \(water bears\)](#)  
Julian Reichelt; Lars Hering; Georg Mayer (Kassel/DE)
- P-E-04** [Untangling the diversification of malaria parasites: Insights from whole-genome sequencing of Polychromophilus](#)  
Elsa Ziegler; Janus Borner; Thorsten Burmester (Hamburg/DE)
- P-E-05** [Agony of choice — The impact of assembly strategies on phylogenetic studies in Cladobronchia \(Gastropoda, Mollusca\)](#)  
Dario Karmeinski; Jessica Goodheart; Alexander Donath; Heike Wägele (Bonn/DE)
- P-E-06** [Stronger together: collective antimicrobial defence in Drosophila larvae](#)  
Monika Trienens; Marko Rohlf (Bremen/DE)
- P-E-07** [Prezygotic and postzygotic barriers between strains of the parasitic wasp Lariophagus distinguendus](#)  
Irmela Homolka; Marie Pollmann; Kerstin König; Johannes L.M. Steidle (Stuttgart Hohenheim/DE)
- P-E-08** [Sex determination of larvae of a flea beetle with extremely skewed sex ratio](#)  
Sebastian Franke; Kim Rohlfling; Regina Jäckel; Susanne Dobler (Hamburg/DE)
- P-E-09** [Fertility and extra-pair paternity in a wild population of great tits](#)  
Maike Foraita (Cork/IE)

E

# Expanding the view on your samples.

ZEISS Lightsheet Z.1



// INSPIRATION  
MADE BY ZEISS

## Fast, gentle Multiview imaging of large samples

Discover an imaging system that delivers optical sections of large samples with virtually no phototoxicity or bleaching. ZEISS Lightsheet Z.1 is also fast: you get 3D data from your whole sample at unprecedented speed and subcellular resolution. This unique light sheet fluorescence microscope allows you to image large, living samples gently to produce exceptionally high image content.

[www.zeiss.com/lightsheet](http://www.zeiss.com/lightsheet)



## Evolution

## POSTERS

- P-E-10** [Resource allocation trade-offs can explain the allometry of sexually selected traits](#)  
Mark Koschmieder; Steven Ramm; Matthias Galipaud (Bielefeld/DE)
- P-E-11** [Teasing apart environmental vs inherited components of a termite gut microbiome](#)  
Tamara Hartke; Ghislaine Small; Kate Howell; Boris Baer (Göttingen/DE)
- P-E-12** [Identification and gene-knockdown of putative seminal fluid proteins in a simultaneously hermaphroditic flatworm](#)  
Michael Weber; Julia Wunderer; Birgit Lengerer; Robert Pjeta; Marcelo Rodrigues; Lukas Schärer; Peter Ladurner; Steven Ramm (Bielefeld/DE)
- P-E-13** [The impact of ageing on male post-mating reproductive success](#)  
Claudia Fricke; Hanna Ruhmann; Mareike Koppik (Münster/DE)
- P-E-14** [Opportunistic males and female remating in a sex role reversed spider](#)  
Fedra Bollatti; Alfredo Vicente Peretti; Anita Aisenberg (Córdoba/AR)
- P-E-15** [Sexual selection acting on male genitalia, copulation behaviour and spermatophore size in a bushcricket](#)  
Gerlind U.C. Lehmann; Sina Kuchenreuther; Arne Lehmann; Thorsten Dickhaus (Berlin/DE)
- P-E-16** [A distinctive violent courtship behavior does not influence paternity in the Siberian grasshopper \*Gomphocerus sibiricus\*](#)  
Michael Haneke-Reinders; Petra Dieker; Holger Schielzeth; Klaus Reinhold (Bielefeld/DE)
- P-E-17** [Selfing delay and sex allocation in a natural population of a preferentially outcrossing, simultaneously hermaphroditic flatworm](#)  
Athina Giannakara; Steven Ramm (Bielefeld/DE)

- P-E-18** Lineage specific gene duplication as driver for sex specific physiological changes in the honey bee *Apis mellifera*  
Birgit Gessler; Martin Hasselmann (Stuttgart/DE)
- P-E-19** Is cytoplasmic incompatibility (CI) acting as an isolation barrier between two strains of the parasitic wasp *Lariophagus distinguendus*?  
Johanna Schaal; Irmela Homolka; Marie Pollmann; Kerstin König; Johannes L.M. Steidle (Stuttgart Hohenheim/DE)
- P-E-20** Clonal variability of predation induced phenotypic plasticity in ciliates  
Sandra Trogant; Linda C. Weiss; Ralph Tollrian (Bochum/DE)
- P-E-21** Phenotypic plasticity and genetic adaptation in a rapidly range-expanding spider  
Michael Klockmann; Marina Wolz; Torben Schmitz; Gabriele Uhl (Greifswald/DE)
- P-E-22** Melting pots in the city: Novel contact zones emerge when hybrid swarms meet  
Joscha Beninde; Axel Hochkirch; Michael Veith (Trier/DE)
- P-E-23** Avian malaria and sperm morphology in songbirds with extra-pair paternity  
Jan-Simon Baasner; Susanne Koriath; Tim Schmoll; Nayden Chakarov (Bielefeld/DE)
- P-E-24** Analysis of the Na,K-ATPase  $\alpha$  and  $\beta$ -subunits of the cardenolide-adapted large milkweed bug *Oncopeltus fasciatus*  
Marlena Winter; Safaa Dalla; Susanne Dobler (Hamburg/DE)
- P-E-25** Phylogeny of Forkhead transcription factors  
Christoph Schomburg; Nikola-Michael Prpic (Göttingen/DE)
- P-E-26** Why do moths have sperm that cannot fertilize eggs?  
Alicia Jarrige; Tim Schmoll (Bielefeld/DE)

- P-E-27** Indication for selfing in geographically separated populations of the pulmonate land snail *Cylindrus obtusus* (Pulmonata: Helicidae)  
Luise Kruckenhauser; Elisabeth Haring; Barbara Tautscher; Luis Cadahia; Laura Zopp; Michael Duda; Josef Harl; Helmut Sattmann (Wien/AT)
- P-E-28** And then there were four – hidden genetic diversity within the cyprinid freshwater fish *Garra barreimiae* from Oman  
Sandra Kirchner; Helmut Sattmann; Elisabeth Haring; Reginald Victor; Luise Kruckenhauser (Wien/AT)
- P-E-29** From genes to the environment and back  
Francesco Catania (Münster/DE)
- P-E-30** Fruit flies conform in love  
Sabine Nöbel; Guillaume Isabel; Etienne Danchin (Toulouse/FR)
- P-E-31** Ecological speciation in African weakly electric fish (genus *Campylomormyrus*): The influence of gravel size on species-specific feeding behavior  
Rahma Amen; Rebecca Nagel; Frank Kirschbaum; Ralph Tiedemann (Potsdam/DE)
- P-E-32** Developmental plasticity of seminal fluid protein gene expression in a simultaneously hermaphroditic snail species  
Yumi Nakadera; Steven Ramm (Bielefeld/DE)
- P-E-33** The structure of protein-coding genes: a comparison of unreviewed automatically inferred and of manually curated annotations  
Jeanne Wilbrandt, Bernhard Misof, Kristen Panfilio, Oliver Niehuis (Bonn/DE)

## POSTERS

## Ecology

- P-EC-01** **Mucus – “How flatworms affect nematode prey fitness”**  
Benjamin Wilden; Nabil Majdi; Walter Traunspurger (Bielefeld/DE)
- P-EC-02** **Perspectives of coherent anti-Stokes Raman scattering microscopy (CARS) for assessing fatty acid content as an additional fitness trait of microscopic biological samples**  
Hendrik Füser; Nabil Majdi; Christian Pilger; Henning Hachmeister; Thomas Huser; Walter Traunspurger (Bielefeld/DE)
- P-EC-03** **Molecular identification of nematodes across Germany with the ribosomal D3-D5 region**  
Janina Schenk; Karin Hohberg; Kai Ristau; Johannes Helder; Walter Traunspurger (Bielefeld/DE)
- P-EC-04** **Mate recognition in *Muscidifurax raptorellus***  
Tamara Pokorny; Katharina Bogenberger; Joachim Ruther (Regensburg/DE)
- P-EC-05** **Transcriptional responses to short-term versus long-term host plant adaptation and parasite load in an oligophagous beetle**  
Caroline Müller<sup>1</sup>; Heiko Vogel<sup>2</sup>; David Heckel<sup>2</sup> (Bielefeld/DE)
- P-EC-06** **Comparing skin microbiomes of wild and captive zebra finches**  
Kathrin Engel; Jan Sauer; Sabine Kraus; Hanja Brandl; Simon Griffith; Barbara A. Caspers (Bielefeld/DE)
- P-EC-07** **Thermoregulatory behaviour and high thermal preference buffer impact of climate change in a Namib Desert lizard**  
Sebastian Kirchhof (Berlin/DE)
- P-EC-08** **Mass, phylogeny and temperature are sufficient to explain differences in metabolic scaling across mammalian orders?**  
Eva Maria Griebeler; Jan Werner (Mainz/DE)
- P-EC-09** **Gone with the wind: The passive dispersal of nematodes**  
Christoph Ptatscheck; Birgit Dümmer; Walter Traunspurger (Bielefeld/DE)

## Morphology

## POSTERS

- P-EC-10** **Sublethal insecticide exposure affects the chemical phenotype and fitness of a leaf beetle**  
Thorben Müller; Alexander Prosche; Caroline Müller (Bielefeld/DE)
- P-EC-11** **Patterns and dynamics of neutral lipid fatty acids in Formicidae – implications to study ant ecology**  
Felix Baumgarten Rosumek; Adrian Brückner; Nico Blüthgen; Florian Menzel; Michael Heethoff (Darmstadt/DE)
- P-M-01** **Cell division in adult water bears (Tardigrada)**  
Vladimir Gross; Rebecca Bährle; Georg Mayer (Kassel/DE)
- P-M-02** **The circulatory system of the velvet worm *Euperipatoides rowelli* (Onychophora, Peripatopsidae)**  
Henry Jahn; Jörg U. Hammel; Georg Mayer (Kassel/DE)
- P-M-03** **Post-embryonic development in tarantulan spiders – less direct than assumed?**  
Daniel Heimerl; Carolin Haug (München/DE)
- P-M-04** **These legs were NOT made for walking**  
Jens Runge; Christian Wirkner (Rostock/DE)
- P-M-05** **Bending the sting: joint-free movement principles in the parasitoid wasp *Leptopilina heterotoma***  
Benjamin Sampalla; Benjamin Eggs; Oliver Betz (Tübingen/DE)
- P-M-06** **Tuning of grasshopper songs to road noise: is the morphology of the stridulatory apparatus involved?**  
Krisztina Petróczki<sup>1</sup>; T. Schmoll<sup>2</sup>; K. Reinhold<sup>2</sup> (Debrecen/HU)

- P-M-07** Characters of the nervous system support sipunculid and amphinomid affinity  
Patrick Beckers; Ekin Tilic (Bonn/DE)
- P-M-08** The diversity of body organisation in mites: first steps towards a quantitative approach  
Melissa Biedermann; Carolin Haug (Schwabmünchen/DE)
- P-M-09** The terminal legs in Geophilomorpha (Myriapoda, Chilopoda) – morphological evaluation of transformed walking legs  
Jan Roy; Matthes Kenning; Andy Sombke (Greifswald/DE)
- P-M-10** Comparative morphology of the stylets and the head of hematophagous Triatominae (Hemiptera: Reduviidae)  
Tatjana Tull; Benjamin Eggs; Oliver Betz (Tübingen/DE)
- P-M-11** Ultrastructure and possible role of the epidermal gland system of Tetranchyroderma suecicum Boaden, 1960 (Gastrotricha: Macrotrichida)  
Jannik Schnier<sup>1</sup>; Alexander Kieneke<sup>2</sup> (Oldenburg/DE)
- P-M-12** Functional morphology and tagmatisation in a spirostreptid giant millipede  
Timo Kolb; Joachim T. Haug; Carolin Haug (München/DE)
- P-M-13** Corrugation alters aerodynamic performance in flapping insect wings  
Henja-Niniane Wehmann; Thomas Engels; Kai Schneider; Marie Farge; Jörn Sesterhenn; Fritz-Olaf Lehmann<sup>1</sup>(Rostock/DE)
- P-M-14** Morphological adaptations on owl wings: a reality check  
Hermann Wagner; Paolo Piedrahita (Aachen/DE)
- P-M-15** A new method for morphology-based species identification in ciliates  
Katja Becker; Sandra Trogant; Ioanna Ioannidou; Ralph Tollrian; Linda C. Weiss (Bochum/DE)

- P-M-16** A comparative analysis of adult neurogenesis in malacostracan crustaceans  
Christin Wittfoth; Steffen Harzsch (Greifswald/DE)
- P-M-17** Sensory projections of pectines in the scorpion nervous system  
Denise Drozd; Harald Wolf; Torben Stemme (Ulm/DE)
- P-M-18** A crustacean invader's brain - the anatomy of the central nervous system in the Japanese skeleton shrimp *Caprella mutica* (Malacostraca, Amphipoda)  
Valerie Kreifelts; Jakob Krieger (Greifswald/DE)
- P-M-19** The nervous systems of onychophorans, tardigrades and arthropods shed light on panarthropod evolution  
Christine Martin; Vladimir Gross; Paul A. Stevenson; Georg Mayer (Kassel/DE)
- P-M-20** Comparative morphology and evolution of venom glands in Chilopoda  
Carsten H.G. Müller; Andy Sombke; Hanne Thoen; Eivind A.B. Undheim (Greifswald/DE)
- P-M-21** Integrative morphological survey of *Xenotrichula intermedia* Remane, 1934 (Gastrotricha: Paucitubulatina): Implications for a pan-European species and a cosmopolitan 'X. intermedia species complex'  
Lukas Münter; Alexander Kieneke (Bremen/DE)
- P-M-22** Differences in morphometric and life history traits between two related scaly cricket species, with first data for the little-known *Paramogoplistes novaki* (Orthoptera: Mogoplistidae)  
Fran Rebrina; Andreja Brigic (Zagreb/HR)
- P-M-23** Biomedisa: The Biomedical Image Segmentation App  
Philipp Lösel; Vincent Heuveline; Thomas van de Kamp; Nicholas Tan Jerome; Andreas Kopmann; Sebastian Schmelzle; Michael Heethoff (Heidelberg/DE)



- P-M-24** **How do spiders taste and smell? Insights from ultrastructure of tip-pore leg sensilla in wasp spiders (*Argiope* spp.)**  
Carsten H.G. Müller; Anne-Sarah Ganske; Gabriele Uhl (Greifswald/DE)
- P-M-25** **The morphology of the bulbus organ of *Parasteatoda tepidariorum***  
Felix Simon Christian Quade; Jana Holtzheimer; Mareike Töpferwien; Jasper Frohn; Torben Ruhwedel; Wiebke Möbius; Tim Salditt; Nikola-Michael Prpic (Göttingen/DE)
- P-M-26** **More than meets the eye - unravelling the morphology of *Daphnia's* inducible defences in 3D**  
Martin Horstmann; Ralph Tollrian; Linda C. Weiss (Bochum/DE)

## FiberOptoMeter

**npi**  
Electronic Instruments  
for the Life Sciences

## ELC-03XS



*made to measure*

**In vivo Fluorescence Monitoring**

- Calcium Signal Detection
- Optogenetic Stimulation
- One or Two Excitation LEDs
- Dual-Detector Version (FRET)

**All-in-One Amplifier**

- Intra-/Extracellular Recording
- Juxtacellular Dye Filling
- Whole-cell Patch Clamp
- Miniature Headstages

[www.npielectronic.com](http://www.npielectronic.com)

- P-N-01** **Adaptive mechanisms in the insect visual motion pathway facilitates optic flow-based spatial vision in cluttered environments**  
Jinglin Li (Bielefeld/DE)
- P-N-02** **Neurons in the locust central brain are sensitive to polarized light from ventral directions**  
Vanessa Althaus; Uwe Homberg; Uta Pegel (Marburg/DE)
- P-N-03** **A multi-compartment model based on expression patterns of structural and ion channel proteins in a multimodal cell type of the avian optic tectum**  
Katharina Lischka; Thomas Künzel; Harald Luksch; Stefan Weigel (Freising/DE)
- P-N-04** **Responses to visual and hydrodynamic stimuli in the goldfish optic tectum**  
Mayan Baues; Joachim Mogdans (Bonn/DE)
- P-N-05** **How does an animal keep track of its heading when it moves through the world?**  
Stephanie Wegener; Daniel B. Turner-Evans; Hervé Rouault; Romain Franconville; Johannes D. Seelig; Shaul Druckmann; Vivek Jayaraman (Ashburn VA/US)
- P-N-06** **Estimating higher-order locomotion parameters from distributed proprioception**  
Arne Gollin; Volker Dürr (Bielefeld/DE)
- P-N-07** **Potential mechanisms for feature invariance in passive electroreception**  
Rahul Gaddi; Jacob Engelmann; Volker Hofmann; Sarah Nicola Jung (Bielefeld/DE)
- P-N-08** **Learning and the involvement of the telencephalon in *Gnathonemus petersii***  
S. Nicola Jung; Rahul Gaddi; Jacob Engelmann (Bielefeld/DE)



- P-N-09** Stepping, searching, swing or stance: Common patterns of inter-joint coordination  
Yannick Günzel; Ago Mesanovic; Volker Dürr (Bielefeld/DE)
- P-N-10** A second insect olfactory center in the red flour beetle  
Yasmin Rein; Janet Anders; Stefan Dippel; Martin Kollmann; Ernst A Wimmer; Joachim Schachtner (Marburg/DE)
- P-N-11** Eyes, ears, noses and the lateral line system: Experimental cross-modal and uni-modal reorganizations facilitate understanding of developmental and evolutionary principles  
Bernd Fritzscht (Iowa City/US)
- P-N-12** Molecular function of mechanosensory neurons in the antenna of *Drosophila melanogaster*  
Natascha Zhang geb. Turetzek; Thomas Effertz; Martin Göpfert (Göttingen/DE)
- P-N-13** A noise robust two-dimensional spiking neuronal network model of the electrosensory lateral line lobe of *Gnathonemus petersii*  
Tim Walther; Elisabetta Chicca; Jacob Engelmann (Bielefeld/DE)
- P-N-14** Quantifying sensory collisions in groups of echolocators  
Thejasvi Beleyur (Seewiesen/DE)
- P-N-15** Coordinating thorax, legs and antennae: How stick insects climb horizontal obstacles  
Anna Vavakou; Volker Dürr (Bielefeld/DE)
- P-N-16** Metamorphic development of the olfactory system in *Tribolium castaneum*  
Björn Trebels; Vanessa Weber; Brigitte Götz; Stefan Dippel; Carolin Knoll; Ernst A Wimmer; Joachim Schachtner (Marburg/DE)

- P-N-17** Immunohistochemical Characterization of the *Daphnia* Nervous System  
Ioanna Ioannidou; Jacqueline Reinhard; Andreas Faissner; Ralph Tollrian; Linda C. Weiss (Bochum/DE)
- P-N-18** Aquatic Imaging: Anatomical Base of Map Formation in the Lateral-Line System  
Vanessa Hollmann; Julie Goulet; J. Leo van Hemmen; Jacob Engelmann (Bielefeld/DE)
- P-N-19** Biomechanics and proprioception of antennal bending  
Volker Dürr; Annelie Exter; Stephan S. Haupt; Marco Schultz (Bielefeld/DE)
- P-N-20** Receptive fields of polarization-sensitive neurons of the central complex in the desert locust  
Frederick Zittrell; Keram Pfeiffer; Uwe Homberg (Marburg/DE)
- P-N-21** Directional sensitivity in the infrared system of a rattlesnake (*Crotalus atrox*)  
Maximilian S. Bothe; Harald Luksch; Hans Straka; Tobias Kohl (Freising/DE)
- P-N-22** Spike-timing precision across olfactory receptor neurons allows instantaneous odor coding  
Paul Szyszka (Konstanz/DE)
- P-N-23** Visuo-motor response to rotational and translational optic flow in the fruit fly *Drosophila melanogaster*  
Etienne Campione (Freiburg im Breisgau/DE)

- P-P-01** **Transfection of human airway epithelial cells using chitosan as a non-viral delivery system**  
Anna Katharina Kolonko; Elena Fernández Fernández; Beatriz Santos-Carballal; Nadine Bangel-Ruland; Francisco M. Goy-coolea; Wolf-Michael Weber (Münster/DE)
- P-P-02** **Uptake of labeled Chitosan-wtCFTR-mRNA complexes in human bronchial epithelial cells**  
Svenja Nitzlaff; Nadine Bangel-Ruland; Stefan Hoffmann; Francisco M. Goycoolea; Wolf-Michael Weber (Münster/DE)
- P-P-03** **Characterization of ABC transporters from the red flour beetle, *Tribolium castaneum*, involved in renal excretion of xenobiotics**  
Janin Rösner; Hans Merzendorfer (Osnabrück/DE)
- P-P-04** **The brain in the deep: A transcriptome analysis of the molecular mechanisms of hypoxia tolerance in the whale brain**  
Alena Krüger; Andrej Fabrizius; Lars Folkow; Thorsten Burmester (Hamburg/DE)
- P-P-05** **Tissue-specificity of zebrafish globins**  
Cäcilia Plate; Kathrin Helfenrath; Thorsten Burmester; Andrej Fabrizius (Hamburg/DE)
- P-P-06** **Unprecedented globin diversity in lungfish**  
Julia Lüdemann; Angela Fago; Igor Schneider; Thorsten Burmester (Hamburg/DE)
- P-P-07** **Aquaporins of the medicinal leech, *Hirudo verbana***  
Christian Müller; Simon Bub; Sarah Lemke; Jan-Peter Hildebrandt (Greifswald/DE)
- P-P-08** **Hormons and Immunity - Biogenic amines regulate the cellular immune response in *Drosophila melanogaster***  
Karin Uliczka; Stephanie Papenmeier; Thomas Roeder; Christina Wagner (Borstel/DE)

- P-P-09** **Characterisation of *Plasmodium falciparum* populations selected on the human endothelial receptors P-selectin, CD9, CD36 and ICAM-1**  
Nahla Metwally; Pedro Lubiana; Michael Dörpinghaus; Finn Fürstenwerth; Torben Rehn; Lisa K. Roth; Ann-Kathrin Tilly; Iris Bruchhaus (Hamburg/DE)
- P-P-10** **Novel antistasin-like proteins in the medicinal leech (*Hirudo verbana*)**  
Sarah Lemke; Jan-Peter Hildebrandt; Christian Müller (Greifswald/DE)
- P-P-11** **The power of high resolution mass spectrometry for de novo sequencing of insect adipokinetic neuropeptides**  
Gerd Gäde (Rondebosch, ZA)
- P-P-12** **Marine mammals down under: adaptations of the brain to hypoxia during diving**  
Cornelia Gessner; Andrej Fabrizius; Mariana Leivas Müller Hoff; Lars Folkow; Thorsten Burmester (Hamburg/DE)
- P-P-13** **Molting genes in the onychophoran *Euperipatoides rowelli* – first insights into the ancestral mode of ecdysis in panarthropods**  
Isabell Schumann; Jonatan Vering; Lars Hering; Georg Mayer (Leipzig/DE)
- P-P-14** **Significance of calcium signaling in flight of transgenic *Drosophila* expressing the laser light-triggered calcium ion channel channelrhodopsin (ChR) in the asynchronous flight muscle tissue**  
Taufia Hussain; Fritz-Olaf Lehmann (Rostock/DE)

- P-S-01** [The endemic New Zealand spider family Huttoniidae \(Araneae, Arachnida\)](#)  
Tim Martin Dederichs; Raymond Forster; Cor J. Vink; Peter Michalik (Greifswald/DE)
- P-S-02** [Repeat landscapes in the genomes of Cirripedia \(Crustacea\)](#)  
Sebastian Martin; Henrik Glenner; Lars Podsiadlowski (Bonn/DE)
- P-S-03** [Trans-oceanic dispersal shaped distribution of Branchiopoda](#)  
Martin Schwentner; Stefan Richter; Gonzalo Giribet (Hamburg/DE)
- P-S-04** [The oldest antlion-like larva, the challenges of diagnostic characters, and morphometrics as a possible strategy](#)  
Dominik Kammerer; Carolin Haug; Joachim T. Haug (München/DE)
- P-S-05** [Species Identification and Delimitation in Nemertean - Meet me half way between morphology and molecular-based taxonomy](#)  
Daria Krämer; Jörn von Döhren (Bonn/DE)
- P-S-06** [The development of \*Thalassema thalasseum\* \(Echiura\) provides novel insights into the evolution of trochophore larvae](#)  
Jörn von Döhren (Bonn/DE)

**Imprint**

<b>Layout</b>	J. Engelmann & M. Paul
<b>Print</b>	XXX
<b>Circulation</b>	500
<b>Editorial Deadline</b>	15.08.2017

**Conference Chair**

Klaus Reinhold

**Commitee**

Volker Dürr

Jacob Engelmann

Manfred Kraemer

Martin Egelhaaf

Oliver Krüger

Barbara Caspers

Caroline Müller

Walter Traunspurger

*Unser Vorbild ist die Natur*

Seit über 140 Jahren stellt SOMSO Originale her, die sich an höchsten pädagogischen und wissenschaftlichen Ansprüchen orientieren. In Form, Funktion und Zerlegbarkeit sind sie erprobte Basis für einen lebendigen Unterricht.

**ZoS 1013/2**Erdkröte (*Bufo bufo*) Paar im Amplexus.  
Nach Studiendirektor Christian Groß.**MARCUS SOMMER SOMSO MODELLE GMBH**Friedrich-Rückert-Straße 54, 96450 Coburg  
Telefon (0 95 61) 8 57 40 • Telefax (0 95 61) 85 74 11  
somso@somso.de • www.somso.de**SOMSO  
MODELLE  
SEIT 1876**

## In vivo & in vitro Electrophysiology

The complete spectrum from high throughput cell culture to recording in freely-moving animals - All with one interface board

### MEA2100-System

*In vitro* recordings from 60, 120 or 252 electrodes

### ME2100-System

Tethered *in vivo* experiments with up to 256 channels

### Multiwell-MEA-System

High throughput experiments in 96 wells



### W2100-System

Wireless recordings from freely-moving animals

### CMOS-MEA5000-System

High resolution recordings from 4,225 electrodes

## Frontiers in Zoology

Editors-in-Chief: Juergen Heinze and Ulrich Technau  
Impact Factor: 3.042\*

## Frontiers in Zoology

- Ranked Q1 in Thomson Reuters Zoology category
- Supported by the Deutsche Zoologische Gesellschaft
- Rapid peer review and production times



*Frontiers in Zoology* is the official journal of the Deutsche Zoologische Gesellschaft (German Society of Zoology).

- » Submit your article at [frontiersinzoology.biomedcentral.com](http://frontiersinzoology.biomedcentral.com)

\* The Impact Factor (IF) is just one measure used for evaluating the impact of research. For further information on the IF and alternative metrics used to measure the impact of research, please visit [biomedcentral.com/gbnc-impact](http://biomedcentral.com/gbnc-impact)

**F · S · T<sup>®</sup>**  
FINE SCIENCE TOOLS

## Creating a Selection to Fit Your Needs

Scissors · Retractors · Magnifiers · Probes & Hooks · Bone Instruments  
Animal Identification · Hemostats · Forceps · Surgical & Laboratory Equipment  
Feeding Needles · Spatulae & Spoons Wound Closure · Surgical Plates  
Instrument Care & Sterilization · Rongeurs · Scalpels & Knives Clamps · Pins  
& Holders · Needles & Needle Holders · Student Quality Instruments and other  
useful items you will find in our catalogue 2017!



FINE SURGICAL INSTRUMENTS FOR RESEARCH™  
Visit us at [finescience.de](http://finescience.de) or call **+49 (0)6221 90 50 50**

ORDER OUR CATALOGUE 2017

## Sponsors



WORLD  
PRECISION  
INSTRUMENTS  
*Instrumenting scientj*



**Noldus**



UNIVERSITÄTSGESELLSCHAFT  
BIELEFELD  
*Verein der Freunde und Förderer  
der Universität Bielefeld e. V.*



**multichannel\***  
**systems**

LaVision **BioTec**



SEIT 1876

**CITEC**  
Cognitive Interaction Technology  
Center of Excellence  
Bielefeld University

**Jülich**  
elektronische  
Optische  
Geräte

**F · S · T<sup>®</sup>**  
FINE SCIENCE TOOLS



**BIOZOL**  
FIT FOR SCIENCE



**NEW ENGLAND**  
**BioLabs<sup>®</sup>**  
GmbH  
*be INSPIRED | drive DISCOVERY | stay GENUINE*



**The Company of  
Biologists**

**REBIE**  
Der Versandgroßhandel für den Heimtierbedarf.  
Lieferung nur an den Zoofachhandel, Zoos & Institute  
33602 Bielefeld Tel.: 0521/9688880  
www.rebie.de / Mail: info@rebie.de



**moBiel**

**Springer**

**CONRAD**  
Business Supplies



- 1** Main Meeting
- 2** Satellites & Mensa
- H-** Straßenbahn Linie 4 Tram Line No 4
- P** Parkplätze parking