



111th Annual Meeting of the German Zoological Society

10 - 15 September 2018 | Greifswald

Program

Interactive Meeting Guide



recommended Browser:



- optimized for handheld device
- not working in private mode
- accept third party cookies for „favorites“ function

<https://m.dzg-meeting.de>



Some suggestions for the Lunch Break

- 1 1001 Nacht (turkish food) | €-€€
- 2 Bio-Bistro Sternwarte | €€
- 3 DOMINGO | €-€€
- 4 Fritz Braugasthaus | €€-€€€
- 5 Fellini (italian food) | €€
- 6 Goldmarie | €€
- 7 Brasserie Hermann | €€
- 8 Italian Bistro | €€
- 9 Junge - Die Bäckerei | €
- 10 Lichtblick | €-€€
- 11 Poro Restaurant | €€
- 12 S*Bar (soups and salads) | €-€€
- 13 Taverna Kostas (greek food) | €-€€

€: 0-5 | €€: 5-10 | €€€: >10



Lecture Halls

Ernst-Lohmeyer-Platz 6



Tent

Domstraße 11



Mensa-Club

Am Schießwall 1-4





Overview

Symposia | Workshops — p. 3-8

5th Meeting of the Arthropod Neuroscience Network	H4
Phenotypic Plasticity – RESPONSEs of Animals to Environmental Change	H3
Adaptations to Hematophagy in Blood-feeding Parasites	Krupp-Kolleg
MorphoEvoDevo: A happy threesome?	H1
CRISPR/Cas9 - Applications in Zoology	H2
Animal Welfare Workshop	H1

Main Meeting — p. 9-16

Opening, Keynotes, Prize Ceremony, Member Assembly	H3/4
Short talks	H1 H2 H3 H4
Poster Sessions, Reception, Closing Dinner, Awards	Tent

* = student contribution



Symposia | Workshops

5th Meeting of the Arthropod Neuroscience Network

September 10-11 | Organizer: Steffen Harzsch & Jakob Krieger | **Lecture Hall 4**



Monday, 10.9.

8⁴⁵ **Steffen Harzsch & Jakob Krieger**, Greifswald
Opening, Welcome

Chair: Christian Wegener

9⁰⁰ **Wolfgang Stein**, Normal, IL
Genes, channels and neuromodulation: how neurons remain functional as temperature changes

10⁰⁰ **Coffee Break**

Chair: Volker Hartenstein

10³⁰ **Volker Dürr**, Bielefeld
Sensory control of locomotion in stick insects

10⁵⁰ **Yannick Günzel***, Bielefeld
Adaptive control of locomotion: How do stick insects master the transition from level to slope walking?

11¹⁰ **Heather Marco**, Rondebosch/Cape Town
Be still my beating heart: the influence of aminergic and peptidergic substances on heart beat frequency in the Indian stick insect *Carausius morosus*

11³⁰ **Harald Wolf**, Ulm
High speed locomotion in the Saharan silver ant *Cataglyphis bombycina*

11⁵⁰ **Thordis Arnold***, Kassel
Input and output connections of the circadian clock of the Madeira cockroach *Rhyarobia (Leucophaea) maderae* with specific layers of lamina and medulla

12¹⁰ **Katharina Beer**, Würzburg
The circadian clock network in bees

12³⁰ **Lunch Break @ TENT**

13³⁰ **Poster Session**

Chair: Charlotte H.-Förster

15⁰⁰ **Uta Pegel***, Marburg
Influence of wide-field motion on the signaling of sky compass cues in the locust central complex

15²⁰ **Frederick Zittrell***, Marburg
Receptive-field tuning to celestial polarization patterns is topographically organized in the locust central complex

15⁴⁰ **Karsten Bode***, Hannover
Developmental neurotoxicity testing for axonal navigation defects in an intact locust embryo

16⁰⁰ **Volker Hartenstein**, Los Angeles, CA
Developmentally arrested precursors of pontine neurons establish an embryonic blueprint of the *Drosophila* central complex

16²⁰ **Coffee Break**

Chair: Giovanni Galizia

17⁰⁰ **Björn Trebels***, Marburg
Activity dependent adult neurogenesis in the mushroom bodies of the red flour beetle (*Tribolium castaneum*)

17²⁰ **Denise Drozd***, Ulm
Topographic organization of pectine neuropils in scorpions

17⁴⁰ **Torben Stemme**, Ulm
Neuroanatomy of Chelicerata – bringing the understudied into the spotlight

18⁰⁰ **Beer and Snacks @ TENT**

19³⁰ **"Retzius Plenary Discussion"**

Chair: Steffen Harzsch

Nick Strausfeld, Tucson, AZ
The apical brain enigma

Kei Ito, Köln
Evolution of sensory centres

Panel discussants

Andreas Hejnol (Bergen), Volker Hartenstein (Los Angeles, CA), Steffen Harzsch (Greifswald)

5th Meeting of the Arthropod Neuroscience Network (ANN)

Tuesday, 11.9.

Chair: Joachim Schachtner

9⁰⁰ **Marion Silies**, Göttingen
Distinct roles of parallel visual pathways

9⁴⁵ **Stefanie Ryglewski**, Mainz
Developmental and coding function of calcium channels in *Drosophila* motoneurons

10³⁰ **Coffee Break**

Chair: Monika Stengl

11⁰⁰ **Basil el Jundi**, Würzburg
A multimodal orientation compass in dung beetles

11⁴⁵ **Stanley Heinze**, Lund
The central complex and the neural basis of insect

12³⁰ **Steffen Harzsch & Jakob Krieger**, Greifswald; **Christian Wegener**, Würzburg
General Discussion, Awards and Farewell

List of Posters

ANN 1: Volker Berendes, Bielefeld

Evidence for a contribution of sensory feedback from leg chordotonal organs to speed-dependent inter leg coupling in *Drosophila*

ANN 2: Margaret DeMaegd*, Normal, IL

State-dependent sensory activity through modulation of back-propagating action potentials

ANN 3: Myriam Franzke*, Würzburg

The use of spectral cues for orientation in the monarch butterfly *Danaus plexippus*

ANN 4: Gerd Gäde, Rondebosch/Cape Town

Peptides of the adipokinetic hormone family in leaf beetles (Chrysomelidae)

ANN 5: Martina Held*, Würzburg

Calcium imaging in tethered behaving honeybees

ANN 6: Luca Hermes*, Bielefeld

Toward a biomimetic Johnston's organ for touch localization

ANN 7: Tobias Lehmann, München

The visual system of Amblypygi

ANN 8: Radostina Lyutova*, Würzburg

Feedback signaling from mushroom body Kenyon cells to DANs during larval associative conditioning

ANN 9: Tu Anh Nguyen Thi*, Würzburg

Intracellular recordings from a time-compensated sun-compass in monarch butterflies

ANN 10: Manuela Nowotny*, Frankfurt

Spike pattern of auditory and ascending neurons in katydids

ANN 11: Nia Papadopoulou*, Bielefeld

Cross-modal adaptation in a descending interneuron in the stick insect *Carausius morosus*

ANN 12: Jana Redeker*, Köln

Identification of products from novel tryptopyrokinin genes in the locust, *Locusta migratoria* (Insecta)

ANN 13: Fabian Schmalz*, Würzburg

Modulation of neuronal processing and behavior due to uni- and multi-modal learning in the honeybee *Apis mellifera*

ANN 14: Joss von Hadeln*, Würzburg

Anatomical analysis of tangential neurons of the central complex based on the desert locust brain atlas

ANN 15: Christian Wegener, Würzburg

Carboxypeptidase D (SILVER) is required for neuropeptide production and peptide-dependent behaviour in *Drosophila*

ANN 16: Janina Hladik*, Ulm

Neurotransmitters in the scorpion central nervous system

ANN 17: Manon Jeschke*, Bielefeld

Effects of thoracic connective lesions on inter-leg coordination in freely walking stick insects *Carausius morosus*

ANN 18: Lapo Ragionieri, Köln

Mass spectrometry imaging reveals distinct compartmentalization in neuroendocrine tissue of an insect

ANN 19: Nicoletta Schwermann*, Bielefeld

Tactile and visual orientation of the stick insect *Carausius morosus* during climbing

ANN 20: Torben Stemme, Ulm

Neuronal innervation of trunk appendages in Remipedia (Crustacea)

ANN 21: Lisa Epple*, Kassel

Immunohistochemical investigations of the brain of the water bear *Echiniscus* sp. (Heterotardigrada)

Phenotypic Plasticity – RESPONSEs of Animals to Environmental Change



September 10-11 | Organizer: Gerald Kerth & Klaus Fischer | **Lecture Hall 3**

Monday, 10.9.

Chair: Klaus Fischer

10⁰⁰ **Gerald Kerth**, Greifswald
Opening, Welcome

10¹⁵ **Torsten N. Kristensen**, Aalborg/Aarhus
The importance of plasticity for coping with environmental stress

11¹⁵ **Coffee Break**

Chair: Gerald Kerth

11³⁰ **Warren Burggren**, Denton, TX
Developmental phenotypic plasticity helps bridge stochastic weather events associated with climate change

11⁵⁰ **Anais Degut***, Villeurbanne/Greifswald
Master of invasion -- is phenotypic plasticity the key of *Drosophila suzukii* success?

12¹⁰ **Aleksander Janjic***, Freising
Enforced evolution via epigenetic pressure in drosophilids: Proof of principle via olfaction and oviposition

12³⁰ **Lunch Break**

Chair: Klaus Fischer

14⁰⁰ **Katja Heubel**, Köln
Responses to ending up in different environments: Effects of salinity on growth, metabolism, and behaviour in overwintering invasive gobies

14²⁰ **Amanda Wiesenthal**, Greifswald
Phenotypic plasticity allows the euryhaline snail *Theodoxus fluviatilis* to cope with hyperosmotic stress

14⁴⁰ **Gerlien Verhaegen**, Greifswald
Adaptation against dislodgement through phenotypic plasticity in shell morphology of a clonal aquatic gastropod?

15⁰⁰ **Sandra Trogant**, Bochum
Clonal variability in reaction norms of plasticity in prey defences and predator offences

15²⁰ **Coffee Break**

Chair: Gerald Kerth

15⁵⁰ **Jürgen Gadau**, Münster
Social evolution in the harvester ant genus *Pogonomyrmex*

16¹⁰ **Katharina Ruthsatz***, Hamburg
Altered thyroid hormone levels and developmental temperature affect the capacity for physiological acclimation in tadpoles of *Rana temporaria* and *Xenopus laevis*

16³⁰ **Rita Fragueira***, Greifswald
Tred does not always outperform black: morph-specific behavioural variation in response to environmental changes

16⁵⁰ **Poster Session**

18⁰⁰ **Joint Dinner @ TENT**

Tuesday, 11.9.

Chair: Gerald Kerth

10⁰⁰ **Klaus Fischer**, Koblenz-Landau
Welcome

10¹⁵ **Melanie Dammhahn**, Potsdam
Reversible plasticity in mammalian energy-saving strategies: a mechanism to cope with rapid climate change?

11¹⁵ **Coffee Break**

Chair: Klaus Fischer

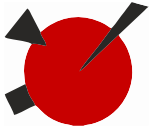
11³⁰ **Christine Reusch***, Greifswald
The costs of leaving early: Individual plasticity and mortality costs of emergence from hibernation in bats

11⁵⁰ **Michael Heathoff**, Darmstadt
Nutritional quality modulates phenotypic plasticity

12¹⁰ **Alexander Wacker**, Potsdam
How multiple-resource limitation (co-limitation) of consumer growth manifests in a fluctuating environment

12³⁰ **Gerald Kerth**, Greifswald
Concluding Remarks

Adaptations to Hematophagy in Blood-feeding Parasites



September 10-11 | Organizer: Sarah Lemke & Jan-Peter Hildebrandt | **Alfried Krupp
Wissenschaftskolleg**

Monday, 10.9.

Chair: Jan-Peter Hildebrandt

9⁰⁰ **Jan-Peter Hildebrandt**, Greifswald; **Sarah Lemke**, Gießen
Opening, Welcome

9¹⁰ **Jan-Peter Hildebrandt**, Greifswald
Adaptations to hematophagy in blood-feeding parasites

9³⁰ **Petra Sumova***, Prague
Yellow-related proteins from sand fly saliva act as binders of biogenic amines

10⁰⁰ **Nikola Polanska***, Prague
Salivary gland transcriptome and salivary enzymes of *Sergentomyia schwetzi*

10³⁰ **Coffee ☕ Break**

Chair: Jan-Peter Hildebrandt

11⁰⁰ **Cornelia Silaghi**, Riems
Haematophagous insects and their vector capacity for diverse pathogens

12⁰⁰ **Klaus Reinhardt**, Dresden
The evolution of specialisation and generalism in bedbugs (Cimicidae)

12³⁰ **Lunch Break**

Chair: Christian Müller

13³⁰ **Marcos H. Pereira**, Belo Horizonte
Biology of blood-feeding in kissing bugs (Hemiptera; Triatominae)

14³⁰ **Günter Schaub**, Bochum
Blood digestion in the reduviid bug *Triatoma infestans* and the human body louse *Pediculus humanus corporis* – A review

15⁰⁰ **Coffee ☕ Break**

Chair: Sarah Lemke

15³⁰ **Matej Kucera***, Ceske Budejovice
Tyrosine degradation - Achilles heel of blood feeding gluttony of *Ixodes ricinus*

16⁰⁰ **Sebastian Kvist**, Toronto
Anticoagulants and bacterial symbionts as means to study the evolution of blood feeding in leeches

17⁰⁰ **Christian Müller**, Greifswald
The hirudin superfamily

17³⁰ **Phil Lukas***, Greifswald
THirudin-like factor 8 derived from the Asian leech, *Hirudinaria manillensis*

18⁰⁰ **Joint Dinner @ TENT**

Tuesday, 11.9.

Chair: Christian Müller

9⁰⁰ **Sarah Lemke**, Gießen
Investigations of salivary gland cells and salivary proteins of the medicinal leech, *Hirudo verbana*

9³⁰ **Raja Ben Ahmed**, Tunis
An updated check-list of marine and freshwater leeches (Annelida: Clitellata: Hirudinida) of Tunisia

10⁰⁰ **Ben J. Mans**, Pretoria
Functional evolution at the tick-host interface: adaptive or neutral evolution?

11⁰⁰ **Coffee ☕ Break**

Chair: Sarah Lemke

11³⁰ **Jan Kotál***, Ceske Budejovice
A tick salivary serpin IRS-8 is an anticoagulant playing role in tick feeding and pathogen transmission

12⁰⁰ **Jan Perner**, Ceske Budejovice
Haem - dietary vitamin for ticks

12³⁰ **Adrien Blisnick***, Maisons-Alfort
Characterization of IrSPI, an *Ixodes ricinus* serine protease inhibitor involved in tick feeding and in bacterial infection of salivary glands

13⁰⁰ **Daniel Sojka**, Ceske Budejovice
Blood digestion in ticks

13³⁰ **Jan-Peter Hildebrandt**, Greifswald; **Sarah Lemke**, Gießen
Closing of the Symposium, Farewell

MorphoEvoDevo: A happy threesome?



September 10-11 | Organizer: Sabrina Kaul-Strehlow & Jörg Hammel | Lecture Hall 1

Monday, 10.9.

Chair: Sabrina Kaul-Strehlow

12⁰⁰ **Sabrina Kaul-Strehlow, Wien**
Opening, Welcome

12¹⁰ **Andreas Wanninger, Wien**
The need for a revised, multi-level view on homology and parsimony for reconstructing morphological evolution in the genomic era

12⁴⁰ **Thomas Stach, Berlin**
Some thoughts on threesomes, MorphoEvoDevo and happiness

13¹⁰ **Joint Lunch Break incl. Discussion**

Chair: Jörg Hammel

14⁰⁰ **Andy Sombke & Matthes Kenning, Greifswald**
The sensory pathways in arthropods – convergent evolutionary transformation or corollary of serial homology?

14²⁰ **Jörn von Döhren, Bonn**
First larva intercalated? – Evolutionary developmental morphology in Nemertea

14⁴⁰ **Andreas Hejnol, Bergen**
Toward a healthy synthesis: morphology, phylogenetics, evolution and development

15¹⁰ **Panel Discussion incl. Coffee and Snacks**

18⁰⁰ **Joint Dinner @ TENT**

Tuesday, 11.9.

Chair: Sabrina Kaul-Strehlow

10⁰⁰ **Jakob Vinther, Bristol**
Palaeontological evidence for the origin of ctenophores

10³⁰ **Franziska Spitzner*, Greifswald**
Maybe a metamorphosis is not such a big thing?
Reconstructing the larval organogenesis of *Carcinus maenas* (Decapoda: Brachyura)

10⁴⁵ **Philipp Thieme*, Stralsund**
Supraneurals – What are they and what can we learn from them?

11⁰⁰ **Panel Discussion**

Awards



Poster prize of the Deutsche Zoologische Gesellschaft (1., 2. and 3. place); all posters of the 2018 main meeting may be selected



Poster prize sponsored by Nikon, Germany; all posters of the 2018 main meeting may be selected



Prize for the best student's talk during the 2018 main meeting **sponsored by „Frontiers in Zoology“**; all talks labelled with an asterisk in the program/app may be selected



Poster prize for each „Fachgruppe“; selected by the respective section speakers

Please return your completed ballot forms to the conference desk by Friday, Sept 14 at 4 pm (16.00 Uhr)!

Please note: The **poster prize winners will be notified by e-mail Friday afternoon before 6 pm (18.00 Uhr).**

The winners are asked to put up their posters again in the tent in the historic campus of the university before 8 pm (20.00 Uhr) and be present during the award ceremony.

CRISPR/Cas9 - Applications in Zoology

September 11 | Organizer: Susanne Önel, Gregor Bucher & Nico Posnien | **Lecture Hall 2**

Tuesday 11.9.

Chair: Nico Posnien

9⁰⁰ **Nico Posnien**, Göttingen
Opening, Welcome

9⁰⁵ **Gregor Bucher**, Göttingen
Genome editing - the basics

9³⁵ **Lennart Randau**, Marburg
CRISPR-Cas: Adaptive immune systems in prokaryotes and DNA scissors in eukaryotes

10¹⁵ **Coffee Break**

Chair: Gregor Bucher

10³⁵ **Patricio Ferrer-Murguía**, Vienna
Lessons learnt from CRISPR/Cas9 on the sea anemone *Nematostella vectensis*

11¹⁵ **Sebastian Fraune**, Kiel
Regulation of developmental age specific bacterial colonization by TLR receptors in *Nematostella vectensis*

12⁰⁰ **Joint Lunch at a Restaurant**

Chair: Gregor Bucher

13⁰⁰ **Wiebke Herzog**, Münster
CRISPR/Cas9 genome editing applications in zebrafish

13⁴⁰ **Max Farnworth**, Göttingen
Marking genetic neural lineages in insects

14²⁰ **Coffee Break**

Chair: Gregor Bucher

14⁴⁰ **Discussion of own projects with our experts**

Animal Welfare Workshop

September 15 | Organizer: Christian Müller | **Lecture Hall 1**

Saturday 15.9.

Chair: Christian Müller

9⁰⁰ **Christian Müller**, Greifswald
Welcome Address

9⁰⁵ **Christian Müller**, Greifswald
Fortbildung und Schulung von Mitarbeitern nach § 3 und § 4 der TierSchVersV

9³⁰ **Kieran Ponder**, Liverpool
Nociception and Pain in fish

10¹⁵ **Felix C. Mark**, Bremerhaven
Considering animal welfare and EU legislation in cephalopod research

11⁰⁰ **General Discussion**

11¹⁵ **Lunch Break**

Chair: Christian Müller

12¹⁵ **Janina Feige-Diller**, Münster
The influence of feeding routines on animal welfare in laboratory mice

12⁴⁵ **Anne Balkema-Buschmann**, Riems
Animal experimentation under the requirements of biological safety levels BSL-3 and BSL-4

13¹⁵ **Nils Kley**, Riems
Husbandry of two species of flying foxes in a laboratory animal setting

13⁴⁵ **General Discussion**

14⁰⁰ **Christian Müller**, Greifswald
Closing of the Workshop, Farewell



Main Meeting

Tuesday — 11th September

Board Meetings | Wollweberstraße 1

Meeting of the DZG Board

12³⁰ - 14⁰⁰

S 142

Meeting of the FG Speakers

12³⁰ - 14⁰⁰

S 143

Advisory Board Meeting

14⁰⁰ - 16⁰⁰

S 142

Opening & Welcome Greetings @ Lecture Hall Building (Ernst-Lohmeyer-Platz 6) **H3/4**

- 17⁰⁰ **Stefan Richter**, President of the DZG
- 17¹⁵ **Johanna L. Weber**, Rector of the University
- 17³⁰ **Stefan Fassbinder**, Oberbürgermeister der Stadt Greifswald
- Jan-Peter Hildebrandt** (for the organizers)



Public Lectures (in German) **H3/4**

- 17⁴⁵ **Michael Schmitt**, Greifswald
Die Geschichte der Zoologie in Greifswald
- 18¹⁵ **Monika Hilker**, Berlin
Der stille Überlebenskampf zwischen Pflanzen und pflanzenfressenden Insekten: Eine chemisch-ökologische Perspektive

19³⁰ Opening Reception @ TENT (Domstraße 11)



**BEER
SNACK**

Wednesday — 12th September

9⁰⁰ **Bill Hansson, Jena**
Smelling to survive – Insect olfactory neuroecology

H 3/4 | Keynote

10⁰⁰ **Chris Thomas, York**
Biodiversity in the Anthropocene: a story of biological gains as well as losses

H 3/4 | Keynote

11⁰⁰ **Coffee Break**

H 2 | Developmental Biology

Chair: Joachim T. Haug

H 3 | Systematics

Chair: Torsten Struck

H 4 | Ecology

Chair: Marko Rohlf & Gerlind U.C. Lehmann

11³⁰ **Jacqueline Tabler, Dresden**
Understanding cellular mechanisms driving skull morphogenesis through ex vivo imaging

Julia Schwarzer, Bonn
Impact and potential benefit of hybridization in teleost fishes

Oliver Otti, Bayreuth
Microbes: ecological factors affecting reproductive traits in males and females

12⁰⁰ **Nico Posnien, Göttingen**
Evolution of visual system development – morphology meets genomics

Phil Barden, Newark, NJ
The earliest ants: diversity and extinction illuminated by amber

Oliver Hawlitschek, München
Admixture and fast speciation in species complexes of phytophagous Hymenoptera and Orthoptera: a MuseOMICS approach

12³⁰ **Lunch Break (self-organized)**

H 1 | Ecology

Chair: Oliver Hawlitschek & Oliver Otti

H 2 | Behavioral Ecology

Chair: Anja Guenther

H 3 | Systematics

Chair: Phil Barden

H 4 | Evolutionary Biology

Chair: Claudia Fricke

14⁰⁰ **Nicola M. Fischer*, Greifswald**
The role of environmental reservoirs in the persistence and transmission of pathogens: Lessons from *Pseudogymnoascus destructans*, the causative agent of White-Nose Disease

Anissa Dudde*, Celle
Clever birds – The relationship between productivity and learning in layer hens

Marcel Bläser*, Köln
Neuropeptide precursor sequences provide comprehensive data to elucidate phylogenetic relationships within Blattodea

Susanne Affenzeller*, Göttingen
A colourful mystery: Insights into the *Cepaea nemoralis* banding pattern mechanism

14¹⁵ **Alessandra Iannino*, Köln**
Effects of nutrient stoichiometry on the top-down control of stream periphyton: compensatory feeding in the freshwater gastropod *Ancylus fluviatilis*

Robin Grob*, Würzburg
The role of a geomagnetic compass for early learning behavior in desert ants

Serena Dool, Greifswald
Drivers of diversification in Mantophasmatodea (Insecta)

Carolin Ditttrich*, Berlin
How mothers deal with unpredictable environments: The European common frog, *Rana temporaria*

14³⁰ **Tomer Gilad*, Tel Aviv**
The effect of continuous and alternating starvation on flour beetles and their offspring

Volker Nehring, Freiburg
Associative learning of recognition templates

Andres Fabian Herrera Florez*, München
A morphometric approach to the diversity of fossil and extant larvae of neuropteran insects

Stephan Holger Drukewitz*, Leipzig
Venom evolution in robber flies

14⁴⁵ **Fabienne Maihoff, Würzburg**
Maintaining colony integrity in aggregation: A comparative study of CHC complexity and nestmate recognition in the Asian honey bee species *Apis florea* and *Apis dorsata*

Lenka Sentenská, Brno
Immature mating and male mate choice in the cannibalistic brown widow spider *Latrodectus geometricus*

Alexandros Vasilikopoulos*, Bonn
A transcriptomic approach to investigate the phylogeny of Dytiscoidea (Coleoptera: Aedeoidea)

Daniel Elsner*, Freiburg
Longevity and transposon defense, the case of termite reproductives

15⁰⁰ **Rienk W. Fokkema, Bielefeld**
The effect of ectoparasites on the nesting preference of a migrant and a resident passerine species: a choice experiment

Anne Clara von Philipsborn, Aarhus
Female *Drosophila* copulatory song impacts strategic ejaculate allocation and sperm competition

Anne-Sarah Ganske*, Vienna
First phylogenetic analysis of the centipede genus *Lithobius* Leach, 1814 (Arthropoda, Myriapoda) based on morphological and molecular data

Jürgen Gadau, Münster
Social evolution in the harvester ant genus *Pogonomyrmex*

15¹⁵ **Alexander Wacker, Potsdam**
How multiple-resource limitation (co-limitation) of consumer growth manifests in a fluctuating environment

Nadja Catharina Wulff*, Berlin
Species-specific functions of male genital titillators in bushcrickets

Sebastian Stumpf, Vienna
What is a catshark? On the taxonomy and systematics of Mesozoic Carcharhiniformes (Elasmobranchii)

Phillip Gienapp, Wageningen
Environmental coupling of heritability and selection is rare and of minor evolutionary significance in wild populations

15³⁰ **Coffee Break**

	H 2 Behavioral Biology	H 3 Systematics	H 4 Evolutionary Biology
	Chair: Vladislav Nachev	Chair: Julia Schwarzer	Chair: Volker Nehring
16 ⁰⁰	Michael Dähne , Stralsund To scare or not to scare – effects of pile-driving and mitigation strategies on porpoises	Lars Dietz , Bonn Phylogenomics of the longitarsal Colossendeidae resolves the evolution of a diverse and globally distributed sea spider group	Jürgen Heinze , Regensburg Royal matchmaking: ants carry young queens to alien nests to promote outbreeding
16 ¹⁵	Sebastian Köthe* , Düsseldorf How highly eusocial bees find flowers – A comparative study of the Australian sugarbag bee and the Western honeybee	Christine Ewers-Saucedo , Kiel More than meets the eye: genetic and morphological divergence between populations of North and Baltic Sea marine macrozoobenthos	Tobias Kaiser , Plön An evolutionary approach to the molecular basis of circalunar clocks
16 ³⁰	Monika J.B. Eberhard , Greifswald Biotremology in heelwalkers: I got rhythm!	Christian Foth , Fribourg A taxonomic re-evaluation of the genus <i>Archaeopteryx</i> – implications for the diversity and biogeography of Jurassic stem-line representatives of birds	Nidal Karagic* , Konstanz How ontogeny and plasticity contribute to adaptation: Changes in the visual system of Nicaraguan Midas cichlids
16 ⁴⁵	Tom Weihmann , Köln Stochastic variations in gait patterns and their effect on body dynamics in multilegged locomotor systems	Thies Henning Büscher* , Kiel Turing pattern diversity and the rapid evolution of tarsal adhesive microstructures in stick and leaf insects (Phasmatodea)	Wencke Krings* , Hamburg Diversity overload – niche partitioning resulting in various shell sizes and tooth morphologies in a radiation of gastropods in “ancient lake” Tanganyika
17 ⁰⁰	Valentina Migani , Bremen Hard times for prey: the effects of weaver ant presence on foraging strategies in a fruit fly-parasitoid system	Melita Vamberger , Dresden In quest of contact: phylogeography of helmeted terrapins (<i>Pelomedusa galeata</i> , <i>P. subrufa</i> sensu stricto)	Jennifer Lohr , London The role of bacterial infection on ageing and lifespan in the worm (<i>Caenorhabditis elegans</i>) model system
17 ¹⁵	Gabriella Gall , Reisbach Signalling adjustment and its limitations to challenging environmental conditions in meerkats	Mario Schädel* , München 100 million years old insect larvae shed light on the ancestral morphology of Odonata (dragonflies and damselflies)	Fee Meinzer* , Hamburg ABC transporters enable sequestration of secondary plant compounds in a highly specialized herbivorous insect
17 ³⁰		Lars Vogt , Bonn Semantic morphological descriptions using Morph-D-Base	Ruijian Guo* , Dresden Interaction of male age and mitonuclear epistasis effects on male reproduction in <i>Drosophila melanogaster</i>
17 ⁴⁵		Flora Ihlow , Dresden Taxonomy and distribution of southeast Asian Chelonians	Ekin Tilic , San Diego, CA Phylogeny and Life-History Evolution of Sabellidae (Annelida)

18 ⁰⁰	Poster Primers			
	H 1 Ecology	H 2 Behavioral Biology	H 3 Developmental Biology	H 4 Physiology
	Chair: Marko Rohlf & Gerlind U.C. Lehmann	Chair: Anja Guenther	Chair: Nico Posnien	Chair: Hans Merzendorfer & Sarah Lemke
	Ecol 1, 3, 4, 5, 6, 7, 8, 11	Behav 3, 4, 10, 11, 12, 13, 16, 17	Dev 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Phy 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

18 ³⁰	„Fachgruppen“ Meetings			
	H 1 Ecology	H 2 Behavioral Biology	H 3 Systematics	H 4 Physiology

19³⁰ Poster Sesion I @ TENT (Food and Drinks included)

Ecology

Ecol 1: Martin Horstmann*, Bochum

More than meets the eye - unravelling the morphology of *Daphnia*'s inducible defences in 3D

Ecol 2: Linda Westphal, Stralsund

Increased strandings of dead grey seals (*Halichoerus grypus*) in fall 2017 in Mecklenburg – Western Pomerania: Pathological investigation, legal situation and consequences

Ecol 3: Verena Bamberger*, Bochum

Stage-specific expression of blue-, UV- and long wavelength-sensitive opsins in the freshwater crustacean *Daphnia*

Ecol 4: Christian Laumen*, Dortmund

Daphnia pulex populations: Influence of predators on population size and genotypic variability

Ecol 5: Julius A. Ellrich*, Antigonish/Nova Scotia

Predator-driven biotic resistance: dogwhelk preferences for prey and nonconsumptive limitation of prey recruitment constrain introduced barnacles on the Pacific coast of Hokkaido, Japan

Ecol 6: Alena Marcella Schäfer*, Koblenz

Colonisation history of a fragmented *Bombina variegata* population: Genetic vs. capture-mark-recapture data

Ecol 7: Kerstin Dreczko*, Hamburg

Ecology and interaction of bumblebees and their phoretic mites – a case study in Middle and Northern Germany

Ecol 8: Franziska Spitzner*, Greifswald

Will climate change threaten early life-history of the European shore crab *Carcinus maenas* Linnaeus 1758 (Brachyura: Portunidae)?

Ecol 9: Anette Graeve, Essen

Detecting molecular mechanisms of predator-induced plasticity in *Daphnia* with (fluorescent) in situ hybridisation

Ecol 10: Katja Heubel, Köln

Responses to ending up in different environments: Effects of salinity on growth, metabolism, and behaviour in overwintering invasive gobies

Ecol 11: Aleksander Janjic*, Freising

Enforced evolution via epigenetic pressure in *Drosophilids*: Proof of principle via olfaction and oviposition

Behavioral Biology

Behav 1: Sebastian Bach*, Troisdorf

Discrimination of temporal patterns of electric communication signals in the weakly electric fish, *Mormyrus rume probosciostris*

Behav 2: Leonie Jonas*, Bonn

The neglected sense: Orientation by passive electrolocation in the weakly electric fish, *Gnathonemus petersii*

Behav 3: Sarah Pannhausen*, Bonn

What does your neighbour do? – Electric signalling during different behavioural contexts in a weakly electric fish

Behav 4: Tom Bär*, Stralsund

Harbour porpoises (*Phocoena phocoena*) show significantly decreased source levels of echolocation in shallow waters of the Wadden Sea

Behav 5: Volker Berendes, Bielefeld

Evidence for a contribution of sensory feedback from leg chordotonal organs to speed-dependent inter leg coupling in *Drosophila*

Behav 6: Steffen Bleich*, Rostock

The corona ciliata in arrow worms: functional implications of flow measurements

Behavioral Biology (cont.)**Behav 7: Miriam Gehre***, Bonn

Visual discrimination in the grey bamboo shark (*Chiloscyllium griseum*)

Behav 8: Eva Halbe*, Bonn

Acoustic discrimination of travel direction of grey bamboo shark (*Chiloscyllium griseum*)

Behav 9: Wolf Hanke, Rostock

Detection and discrimination of travel direction of vortex rings by harbour seals (*Phoca vitulina*)

Behav 10: Josephine Züchner*, Stralsund

Are harbour porpoises displaced or quiet during construction work of offshore windparks?

Behav 11: Janina Feige-Diller*, Münster

The influence of feeding routines on animal welfare in laboratory mice

Behav 12: Vivian Fischbach*, Düsseldorf

The meaning of scent marks and location on the foraging behaviour of stingless bees

Behav 13: Daniel Heimerl*, München

From correlation to causation - testing the effect of intra-sexual competition on gift strategy in nursery web spiders

Behav 14: Jakob Krieger, Greifswald

Shell-use as a tool in the Pacific hermit crab *Coenobita compressus* H. Milne-Edwards, 1836

Behav 15: Pierick Mougnot*, Greifswald

The evolution of female genital mutilation: implications of fitness costs and female mate preference.

Behav 16: Onno A. Preik*, Hamburg

Morphological investigation into cryptic female choice in *Argiope bruennichi* (Scopoli, 1772)

Behav 17: Verena Schöler, Celle

Behavioral observations and animal welfare implications of lab housing conditions in red foxes (*Vulpes vulpes*) in the frame of oral rabies vaccine testing

Behav 18: Wolfram Schulze, Bayreuth

Plasticity of the start decisions of hunting archerfish

Behav 19: Brian Schulze*, Mülheim an der Ruhr

Dispersal in the spider *Argiope bruennichi*: do density and kinship matter?

Behav 20: Binia Stieger*, Münster

Righty or Lefty: About the consistency of lateralized behavior across time and context in mice

Behav 21: Simon Vitt*, Bonn

Kinship promotes exploratory behavior in the West African cichlid *Pelvicachromis taeniatus*

Developmental Biology**Dev 1: Felix Simon Christian Quade***, Göttingen

Origin and development of the male copulatory organ in the spider *Parasteatoda tepidariorum*

Dev 2: Susanne Katharina Schotthöfer*, Aachen

Analyzing bioelectric phenomena during *Drosophila* oogenesis: Quantification of changes in membrane potential and intracellular pH by genetically encoded sensors expressed in epithelial cells

Dev 3: Christoph-Rüdiger von Bredow*, Gießen

Manduca sexta haematopoiesis: the role of the haematopoietic organ in larval haemocyte formation

Dev 4: Rebecca Meth*, Greifswald

Ontogeny of the deutocerebral proliferative system in the crab *Carcinus maenas*: new insights into the evolution of adult neurogenesis in decapod crustaceans

Dev 5: Benjamin Naumann*, Jena

Loss and re-evolution of the mechanosensory lateral line system in amphibians?

Dev 6: Andreas Denner*, Wien

Characterization of putative stem cell marker genes in *Nematostella vectensis*

Dev 7: Mario Stehle*, Bonn

Stain alive: Illuminating embryology with a fluorescent dye

Dev 8: Yvette M. von Bredow*, Gießen

Identification of a GATA transcription factor coding mRNA in *Manduca sexta* and its localisation in haemocytes

Dev 9: Laura Kahnke*, Kassel

Embryonic staging of an emerging onychophoran model species

Dev 10: Isabel Weis*, Aachen

Electrochemical gradients as regulators of cytoskeletal patterns during oogenesis of *Drosophila melanogaster*

Dev 11: Reinhard Schröder, Rostock

The roles of the Wnt-antagonists Axin and Lrp4 during embryogenesis of the red flour beetle *Tribolium castaneum*

Dev 12: Alexander Gruhl, Bremen

How to eat with your skin – radical body-plan changes in an animal-microbe symbiosis

Dev 13: Bianka Grunow, Dummerstorf

Stem cell expression and skeletal muscle development of lesser-spotted dogfish larvae (*Scyliorhinus canicula*)

Dev 14: Bastian-J. Klußmann-Fricke, Barcelona

The role of chitin deposition during tracheal morphogenesis in *Drosophila*

Dev 15: Chuang Liu, Potsdam

The microstructure, proteomics and crystallization of the limpet teeth

Physiology**Phy 1, Michael Baum**, Kiel

Toxic Cargo? Organic anion transporting polypeptides (Oatp) in a cardenolide-sequestering leaf beetle

Phy 2, Janin Rösner*, Osnabrück

Characterization of ABC transporters from the red flour beetle, *Tribolium castaneum*, involved in the elimination of diflubenzuron

Phy 3, Benedikt Wellmeyer*, Osnabrück

A putative steroid hormone transporter from the red flour beetle, *Tribolium castaneum*

Phy 4, Piotr Bebas, Warsaw

Clock genes expression in the red flour beetle, *Tribolium castaneum*

Phy 5, Heather Marco, Rondebosch/Cape Town

Be still my beating heart: the influence of aminergic and peptidergic substances on heart beat frequency in the Indian stick insect *Carausius morosus*

Phy 6, Martin Speckmann*, Gießen

The Down syndrome cell adhesion molecule (Dscam) in innate immunity: Proof of Dscam in phagocytic haemocytes of *Manduca sexta*

Phy 7, Mia Bengtsson, Greifswald

The glutton's secret weapon: The gut microbiome in the sea urchin *Strongylocentrotus droebachiensis*

Phy 8, Paresa Papadopoulou*, Hamburg

Comparison of tissue-specific transcriptomes of three *Danio* species

Phy 9, Karin Uliczka, Borstel

Activity of FoxO transcription factors are involved in airway epithelial remodeling processes

Phy 10, Anna Katharina Kolonko*, Münster

Chitosan as a non-toxic transfection reagent for ENaC antisense oligonucleotide delivery in human airway epithelial cells

Phy 11, Wolf-Michael Weber, Münster

Characterization of fluorescent-labeled Chitosan-wtCFTR-mRNA complexes and tracking their uptake in human bronchial epithelial cells

Phy 12, Sabine Ziesemer, Greifswald

Staphylococcus aureus α -toxin induces defects in cell layer integrity by actin filament remodeling via cofilin activation in human airway epithelial cells

Phy 13, Nils Möller*, Greifswald

Processing of the *Staphylococcus aureus* alpha-toxin in human airway epithelial cells via endocytosis

Thursday — 13th September

9⁰⁰ **Warren Burggren**, Denton, TX
Developmental plasticity, epigenetics and evolution: a comparative physiological perspective

H 3/4 | Keynote

10⁰⁰ **Rosemary Gillespie**, Berkeley, CA
Origins of diversity on islands: The nexus of ecology and evolution in community assembly

H 3/4 | Keynote

11⁰⁰ **Coffee Break**

H 1 | Physiology

Chair: Hans Merzendorfer & Sarah Lemke

11³⁰ **Julian A.T. Dow**, Glasgow
Insect renal function – new insights from multi-omic approaches

H 3 | Morphology

Chair: Sabrina Kaul-Strehlow & Jörg Hammel

Jakob Vinther, Bristol
Fossil colours and the evolution of predator-prey landscapes

H 4 | Behavioral Biology

Chair: Mirjam Knörnschild

Vladislav Nachev, Berlin
Quantity vs. quality: bat choices drive the evolution of copious but dilute floral nectars

12⁰⁰ **Shireen Davies**, Glasgow
Neuroendocrine control of environmental stress responses

Georg Brenneis, Berlin
Nobodies or Somebodies? – Exploring the unexplored potential of sea spiders (Pycnogonida) to inform on arthropod evolution

Angela Stöger-Horwath, Wien
The gentlemen's club: vocal communication in male African elephants

12³⁰ **Lunch Break (self-organized)**



H 1 | Meet DFG @ DZG 2018 (Sonja Ihle, Dorette Breitkreuz)

H 1 | Physiology

Chair: Hans Merzendorfer

14⁰⁰ **Klaus Reinhardt**, Dresden
Metabolic mapping of *Drosophila* sperm

H 2 | Developmental Biology

Chair: Felix Simon Christian Quade

Joachim Haug, Planegg-Martinsried
Beyond terminology: what does 'larva' and 'metamorphosis' really mean?

H 3 | Morphology

Chair: Jakob Vinther

Sebastian Büsse, Kiel
Biomechanics of the predatory strike in dragonfly larvae (Insecta: Odonata)

H 4 | Evolutionary Biology

Chair: Mathilde Cordellier

Hendrik Müller, Jena
Evolution of viviparity in African toads (Anura: Bufonidae)

14¹⁵ **Taufia Hussain***, Rostock
Light-gated channelrhodopsin-2 alters calcium signaling for power control in the indirect flight muscle of *Drosophila*

Claudius Kratochwil, Konstanz
Agouti-related peptide 2 drives convergent evolution of stripe patterns across cichlid fish radiations

Henja-Niniane Wehmann*, Rostock
Spatial imaging of wing flexing in flies by force deflection analysis

Lapo Ragonieri, Köln
First neuropeptidome of Aedeptera – Data from *Carabus problematicus* (Carabidae) shed new light on the evolutionary trends of neuropeptides in Coleoptera

14³⁰ **Ulrich Rupp**, Ulm
Calcium uptake from ingested exuviae in the terrestrial isopod *Porcellio scaber*

Luxi Chen*, Bochum
Cellular changes during diapause in *Daphnia* resting embryos

Torben Göpel*, Rostock
Anything but void – the hemolymph lacunar system of *Penaeus vannamei*

Marko Rohlf*, Bremen
How it all (perhaps) began – insights into the origin of the coevolution between microbe management and insect sociality using *Drosophila*

14⁴⁵ **Janin Rösner***, Osnabrück
Characterization of ABC transporters from the red flour beetle, *Tribolium castaneum*, involved in the elimination of diflubenzuron

Elisabeth Zieger, Vienna
Comparative assessment of Sox gene involvement in molluscan neural development

Henry Jahn*, Kassel
Reconstruction of the circulatory system of the velvet worm *Euperipatoides rowelli* (Onychophora: Peripatopsidae)

Sina Julia Rometsch*, Konstanz
Does size matter? The evolution of highly exaggerated head humps in Midas cichlid fishes in the light of Zahavi's handicap-principle

15⁰⁰ **Gerd Gäde**, Rondebosch/Cape Town
"Green insecticides" based on insect neuropeptides: concept and first results

Alexander Klimovich, Kiel
Rethinking the role of the nervous system: Lessons from the freshwater polyp *Hydra*

Julia Orth*, Kassel
Structure and development of the tracheal system in Onychophora (velvet worms)

Peter T. Rühr*, Köln
The evolution of biting-chewing effectivity in non-holometabolan insects

15¹⁵ **Ulf Bickmeyer**, Bremerhaven
Fluorescence measurements of the marine flatworm *Macrostomum lignano* during exposure to the TNT derivatives 2ADNT and 4ADNT

Markus Krings*, Aachen
A new insight into palatal ossification in the Neognathae

Jens Runge*, Rostock
A morpho-functional comparison of antenniform legs in Pedipalpi

Jan-Niklas Runge*, Zürich
Selection on selfishness: The fitness of a selfish genetic element in different densities of wild house mice

15³⁰ **Coffee Break**

	H 1 Physiology	H 2 Behavioral Biology	H 3 Morphology	H 4 Evolutionary Biology
	Chair: Sarah Lemke	Chair: Angela Stöger-Horwath	Chair: Georg Brenneis	Chair: Ulrich Steiner
16 ⁰⁰	Bettina Zeis , Münster Adjustments of protein digestion to temperature changes in <i>Daphnia pulex</i>	Inon Scharf , Tel Aviv The link between habitat preference and performance in pit-building predators	Ronald Seidel , Potsdam A peculiar vertebrate skeleton – an ultrastructural survey of the cartilaginous endoskeleton in sharks and rays	Joachim Ruther , Regensburg Sex pheromone of <i>Urolepis rufipes</i> suggests saltational biosynthetic switch between fatty acid and isoprenoid metabolism within the <i>Nasonia</i> group
16 ¹⁵	Nadine Hoffschroer* , Münster Metabolic adjustments during starvation in <i>Daphnia pulex</i>	Sabine Kraus* , Bielefeld Relationship between corticosterone and the personality of zebra finches	Mason Dean , Potsdam Bricks and anchors: strategies for load bearing and muscle attachment in the cartilage skeletons of sharks and rays	Yui Sato , Bremen Location matters: Low-coverage exomewide sequencing reveals population divergence over extremely small spatial scales in a marine oligochaete worm
16 ³⁰	Patrick Fink , Köln The molecular basis of essential fatty acid limitation in <i>Daphnia magna</i> - a transcriptomic approach	Anja Guenther , Bielefeld Sex-specific pace-of-life syndromes in caviés (<i>Cavia aperea</i>)?	Timo Moritz , Stralsund Unexpected diversity of median caudal cartilages in teleosts	Hannah Schmidbaur* , Vienna Regulation, synteny and functional novelties in cephalopod genomes
16 ⁴⁵	Piotr Bernatowicz , Warsaw Algae affect rhythms in <i>Daphnia</i>	Joern Peter Scharsack , Münster Linking personality, parasite-induced behavioural manipulation and immunity in two populations of three-spined sticklebacks (<i>Gasterosteus aculeatus</i>)	Julian Sartori* , Jena Enthesis deformation – comparison between a model and mechanical tests	Ralf Schneider , Konstanz Swimming performances in a sympatric species pair: is body shape an adaptive trait driving sympatric speciation in neotropical Midas cichlid fishes?
17 ⁰⁰	Raimund Schnegg* , Innsbruck Metal responsive hemocyanin genes in the gastropod <i>Cantareus aspersus</i> ?	Barbara König , Zürich Feeling sick modifies social interactions in wild house mice (<i>Mus musculus domesticus</i>)	Adrian Scheidt* , Leipzig Cross sectional properties of Sciuriform femora and their relation to lifestyle and phylogeny	Timo Thünken , Bonn Effects of genetic relatedness on intra- and inter-sexual selection in a cichlid fish
17 ¹⁵	Amanda Wiesenthal* , Greifswald Different mechanisms of organic osmolyte accumulation in subgroups of <i>Theodoxus fluviatilis</i> under hyperosmotic stress	E. Tobias Krause , Celle Nest height preferences of altricial and precocial birds in captivity	Egon Heiss , Jena Chewing à la newt: Intraoral food processing in a salamandrid newt and the evolution of intraoral cyclic behavior	Mark D. Scherz* , Planegg-Martinsried A taxonomic renaissance in the narrow-mouthed frogs of Madagascar is opening a new model system to understand ecomorphological evolution in amphibians
17 ³⁰	Alena Krüger* , Hamburg Into the deep: A transcriptome analysis of the molecular mechanisms of hypoxia tolerance in the whale brain		Ellen Schulz-Kornas , Leipzig The more they chew the more is lost: jaw kinematics, tooth wear and digestive physiology in equids	Biz Turnell , Dresden Oxidative stress in sperm: effects of metabolic pathways, male and gamete age, and storage duration
17 ⁴⁵	Thomas Roeder , Kiel Impaired insulin signaling in response to ER stress in insulin producing cells		Peter Pogoda* , Stuttgart Flesh and bone: an integrative approach towards sexual size dimorphism of a terrestrial salamander (<i>Salamandrina</i>)	Jeanne Wilbrandt* , Bonn Protein-coding gene repertoires – Annotation, characterization and dynamics in non-model insects

18⁰⁰ Poster Primers

	H 1 Systematics	H 2 Neurobiology	H 3 Morphology	H 4 Evolutionary Biology
	Chair: Torsten Struck	Chair: Tobias Kohl	Chair: Sabrina Kaul-Strehlow	Chair: Claudia Fricke
	Syst 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	NB 3, 5, 9, 14, 18	Morph 1, 2, 3, 5, 6, 7, 8, 10, 15, 18, 20	EvoBio 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

18³⁰ „Fachgruppen“ Meetings

H 1 Developmental Biology	H 2 Neurobiology	H 3 Morphology	H 4 Evolutionary Biology
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19³⁰ Poster Sesion II @ TENT (Food and Drinks included)

Morphology

Morph 1: Maximilian Franke*, Bremen

Tracking the development of deep sea mussels during colonization by their symbionts

Morph 2: Aravind Kumar Jayasankar*, Potsdam

Mechanical and structural characterization of stingray inspired tessellations using computational techniques

Morph 3: Julian Müller*, Bonn

A heart urchin hemorrhoid? Not quite, but close

Morph 4: Ronald Seidel, Potsdam

Sustained function despite constant wear – structural and mechanical reinforcements of the tooth plates in chimaeroid fish (Holocephali)

Morph 5: Jana Kabus*, Kiel

Reproduction at depth - the reproductive morphology of hydrothermal vent crabs

Morph 6: Franziska Goldner, Leipzig

Muscle fiber type composition and muscle spindle density in the masticatory muscles of wolves and dogs

Morph 7: Vladimir Gross*, Kassel

A new muscle cell morphology reveals serial homology of leg muscles in tardigrades (water bears)

Morph 8: Matthias Merten*, Stralsund

Denticeps clupeioides (Teleostei, Clupeomorpha) – morphology and its relevance for the understanding of clupeoid and otomorph evolution

Morph 9: Alex Rixen*, Rostock

The scale diversity in Pristigasteridae (Teleostei, Clupeiformes) with special focus on *Ilisha africana*

Morph 10: Christine Martin*, Kassel

Novel olfactory and mechanosensory neuropils in the brain of Onychophora (velvet worms)

Morph 11: Laura Herdt*, Rostock

The morphology of hypopalatal arches and its meaning for inter- and intrarelations in Alepocephaliformes

Morph 12: Jens Runge*, Rostock

The prosomal endoskeleton and musculature in *Galeodes granti* (Solifugae)

Morph 13: Stefan Fischer, Tübingen

3D reconstruction of the smallest known insect photoreceptors: the stemmata of the first instar larvae of *Stylops ovinae* (Insecta, Strepsiptera)

Morph 14: Patrick Beckers, Bonn

The effects of head appendages on the brain anatomy of *Eunicida* (Polychaeta)

Morph 15: Tim M. Dederichs*, Greifswald

Comparative analysis of the innervation pattern in the male copulatory organ of spiders (Araneae)

Morph 16: Andy Sombke, Greifswald

On the secretory ultimate legs in *Haplophilus subterraneus* (Chilopoda, Geophilomorpha)

Morph 17: Matthes Kenning, Greifswald

The ultimate legs of *Lithobius forficatus* – a morphological analysis of transformed arthropodia

Morph 18: Alice Guenther*, Rostock

The bearer of bad news: comparative morphology of metasomata in scorpions

Morph 19: Ulrike Buschewski, Stralsund
The functional organization of the sclerome of five species of *Acanthogorgia* (Octocorallia, Holaxonia)

Morph 20: Birte Schadlowski*, Greifswald
Does spinneret morphology in the spider *Argiope bruennichi* differ between developmental stages and populations?

Morph 21: Fanny Weitz (born Leubner), Göttingen
Autotomy in stick and leaf insects (Phasmatodea): comparative morphology and evolutionary implications

Morph 22: Marie K. Hörnig*, Greifswald
Sensing the environment – an atlas of the malacostracan sensory appendages

Morph 23: Patricia Berles*, Erfurt
Differential habitat utilisation in two sympatric tamarins (Callitrichidae, Primates) in Amazonian Peru: Leaping behavior and implications for morpho-functional adaptations in the hindlimbs

Morph 24: Julia Chaumel*, Berlin
Histological analysis of cartilages from *Raja undulata* (Rajidae)

Morph 25: Sebastian Schmelzle, Darmstadt
Under pressure they're breaking - force resistance measurements in Ptychoidea oribatid mites

Morph 26: Stanislav Gorb, Kiel
Functional morphology of spermathecae in leaf beetles (Coleoptera: Chrysomelidae)

Morph 27: Lisa Ilgen*, Stuttgart
Evolutionary implications of detrital metamorphosis in caecilian amphibians: a revisit

Morph 28: Heidi Land, Greifswald
Mating changes genital morphology in the silk spider *Nephila clavipes*

Morph 29: Lisa Epple*, Kassel
Immunohistochemical investigations of the brain of the water bear *Echiniscus* sp. (Heterotardigrada)

Morph 30: Thomas Frase*, Rostock
The development of protocerebral sensory organs in *Amphibalanus improvisus* (Cirripedia, Crustacea)

Evolutionary Biology

EvoBio 1: Jonas Krämer*, Bonn
First proteomic analysis of the venom composition of pseudoscorpions and insights into the venom delivery system of the book scorpion *Chelifer cancroides*

EvoBio 2: Barbara Eckel*, Dresden
The effect of spermathecal secretions on sperm storage in *Drosophila melanogaster*

EvoBio 3: Sebastian Franke*, Hamburg
Male mate choice and aggregation behavior in relation to highly divergent mtDNA haplotypes in *Altica lythri* (Col., Chrys.)

EvoBio 4: Anja Junghanns*, Greifswald
Morphological adaptations to extreme maternal and allomaternal care in spiders

EvoBio 5: Gerlind U.C. Lehmann, Berlin
Multiple origin of flightlessness in Phaneropterinae (Orthoptera: Tettigoniodea) bushcrickets

EvoBio 6: Lisa Männer*, Greifswald
Characterization of the MHC class II loci in meerkats, *Suricata suricatta*

EvoBio 7: Monica Sheffer*, Greifswald
Zooming in on range expansion: insights into the microbiome of the European wasp spider, *Argiope bruennichi*

EvoBio 8: Mariana Villalba*, Manchester
DNA methylation as a mechanism of transgenerational phenotypic plasticity in *Daphnia*

EvoBio 9: Marlena Winter*, Hamburg
Functional roles and differences between the Na,K-ATPase α/β -subunit combinations in the large milkweed bug

EvoBio 10: Marina Wolz*, Greifswald
Latitudinal differences in life history traits of a rapidly range-expanding spider

Neurobiology

NB 1: Yannick Günzel*, Bielefeld
Adaptive control of locomotion: How do stick insects master the transition from level to slope walking?

NB 2: Manon Jeschke*, Bielefeld
Effects of thoracic connective lesions on inter-leg coordination in freely walking stick insects *Carausius morosus*

NB 3: Nia Papadopoulou*, Bielefeld
Cross-modal adaptation in a descending interneuron in the stick insect *Carausius morosus*

NB 4: Nicoletta Schwermann*, Bielefeld
Tactile and visual orientation of the stick insect *Carausius morosus* during climbing

NB 5: Luca Hermes*, Bielefeld
Toward a biomimetic Johnston's organ for touch localization

NB 6: Torben Stemme, Ulm
Neuronal innervation of trunk appendages in Remipedia (Crustacea)

NB 7: Tobias Lehmann, München
The visual system of Amblypygi

NB 8: Frederick Zittrell, Marburg
Receptive-field tuning to celestial polarization patterns is topographically organized in the locust central complex

NB 9: Martina Held, Würzburg
Calcium imaging in tethered behaving honeybees

NB 10: Joss von Hadeln, Marburg
Anatomical analysis of tangential neurons of the central complex based on the desert locust brain atlas

NB 11: Tu Anh Nguyen Thi*, Würzburg
Intracellular recordings from a time-compensated sun-compass in monarch butterflies

NB 12: Manuela Nowotny, Frankfurt am Main
Spike pattern of auditory and ascending neurons in katydids

NB 13: Larissa Roth*, Bonn
pERK as marker for neural activity after multimodal sensory stimulation in the weakly electric fish *Gnathonemus petersii*

NB 14: Philip Wolff*, Bonn
Weakly electric fish as models for electric imaging of objects under water

NB 15: Malou Zeymer*, Bonn
Topographical relationship between the optic tectum and lateral nucleus of the torus semicircularis of the midbrain in the weakly electric fish, *Gnathonemus petersii*

NB 16: Katharina Brands*, Bonn
The influence of learning conditions on a learned, multimodal object detection task

NB 17: Tobias Kohl, München
Infrared object motion-processing in the rattlesnake hindbrain depends on rate- as well as spike time encoding mechanisms

NB 18: Margaret DeMaegd*, Normal, IL
State-dependent sensory activity through modulation of back-propagating action potentials

NB 19: Fabian Schmalz*, Würzburg
Modulation of neuronal processing and behavior due to uni- and multi-modal learning in the honeybee *Apis mellifera*

NB 20: Ioanna Ioannidou*, Bochum
Neuronal plasticity of predator induced defences in *Daphnia*

NB 21: Heinrich Dirksen, Stockholm
Neurohormones from a novel neurohaemal organ in *Daphnia*: Adipokinetic hormone/red pigment concentrating hormone-related peptide and corazonin

NB 22: Christian Wegener, Würzburg
Carboxypeptidase D (SILVER) is required for neuropeptide production and peptide-dependent behaviour in *Drosophila*

NB 23: Jana Redeker*, Köln
Identification of products from novel tryptopyrokinin genes in the locust, *Locusta migratoria* (Insecta)

NB 24: Lapo Ragionieri, Cologne
Mass spectrometry imaging reveals distinct compartmentalization in neuroendocrine tissue of an insect

NB 25: Cornelia Voigt, Pretoria
Reproductive status-dependent Kisspeptin and RFamide-related peptide (Rfrp) gene expression in female Damaraland mole-rats

NB 26: Janina Hladik*, Ulm
Neurotransmitters in the scorpion central nervous system

NB 27: Myriam Franzke*, Würzburg
The use of spectral cues for orientation in the monarch butterfly *Danaus plexippus*

NB 28: Lisa Knechtges*, Bonn
Shape discrimination in the weakly electric fish *Gnathonemus petersii*: local or global cues?

Systematics

Syst 1: Ivo de Sena Oliveira, Kassel
The hidden species diversity of Brazilian velvet worms (Onychophora: Peripatidae) in scientific collections

Syst 2: Robert Klesser*, Hamburg
High degrees of cryptic microendemism in the scorpion genus *Buthus* as revealed by DNA barcoding

Syst 3: Christoph G. Höpel*, Rostock
Phylogeography of the Tasmanian mountain shrimps (Anaspidae; Malacostraca) - Multiple immigrations into subterranean habitats and biodiversity

Syst 4: Kira Ovenbeck*, Kiel
Distribution history of the palaemonid shrimp in the Baltic Sea based on the analysis of zoological collections

Syst 5: Alvaro Zúñiga-Reinoso, Köln
Phylogenetic exploration on the genetic diversity of *Maindronia neotropicalis* (Thysanura: Maindroniidae) - an enigmatic Gondwanan relict from the Atacama Desert

Syst 6: Lara-Sophie Dey*, Hamburg
The power of single- and multigene molecular species delimitation in a recent grasshopper radiation

Syst 7: Julia Oly*, Köln
Peptide mass fingerprints in combination with molecular phylogenetic analyses reveal genetic differentiation in *Psectrascelis* (Coleoptera, Tenebrionidae) from the Atacama

Syst 8: Marina Lindackers*, Marburg
Character variability of some Primnoidea (Cnidaria: Octocorallia) from cold-water reefs in the North Atlantic and bordering seas

Syst 9: Patrick Schwarzbach, Stralsund
Effective detection ranges of porpoise click loggers: an important step towards estimating abundance from click loggers

Syst 10: Sarah Hayer*, Kiel
Museum collections – a time machine to the past

Syst 11: Shou-Wang Lin*, Greifswald
Implications of the newly discovered species richness of the dwarf spider genus *Shaanxinus* Tanasevitch, 2006 (Araneae, Linyphiidae, Erigoninae) from Taiwan and Vietnam

Syst 12: Carlos Alberto Martínez Muñoz*, Greifswald
A new species of *Newportia* (Scolopendromorpha: Scolopocryptopidae) from Cuba with a standardized terminology for cuticular structures and aspects on the transformation of ultimate legs

Syst 13: Katharina Koch, Stralsund
Development of polygonal scales in the genus *Atherina* (Teleostei, Atheriniformes)

Friday — 14th September

9⁰⁰ **Mariana Wolfner**, Ithaca, NY
Seminal contributions: how male-derived proteins regulate reproduction

H 3/4 | Keynote

10⁰⁰ **Marta Manser**, Zürich
Communication as a key feature in mammalian cooperation and competition

H 3/4 | Keynote

11⁰⁰ **Coffee Break**

H 3 | Neurobiology

Chair: Tobias Kohl & Keram Pfeiffer

11³⁰ **Daniela Vallentin**, Berlin
Neural mechanisms underlying song learning in zebra finches

12⁰⁰ **Paul Szyszka**, Konstanz
How insects find food in turbulent odor environments

H 4 | Evolutionary Biology

Chair: Claudia Fricke & Volker Nehring

Ulrich Steiner, Odense
Population dynamics - an evolutionary demographic process

Mathilde Cordellier, Hamburg
Predation effects on fitness and gene expression: genotype-phenotype mapping in *Daphnia*

12³⁰ **Lunch Break (self-organized)**

H 3 | Neurobiology

Chair: Tobias Kohl

14⁰⁰ **Vera Schluessel**, Bonn
Jaws with brains – Cognition in elasmobranchs

14¹⁵ **Radostina Lyutova***, Würzburg
Feedback signaling from mushroom body Kenyon cells to DANs during larval associative conditioning

14³⁰ **Martin Strube-Bloss**, Würzburg
Olfactory-visual integration and reward association in mushroom body output neurons

14⁴⁵ **Nina Hahn***, Göttingen
Epo-induced neuroprotection is mediated by orthologues of the orphan cytokine receptor CRLF3

15⁰⁰ **Philip O.M. Steinhoff***, Greifswald
Complex integration of visual information: The secondary eye pathway of the jumping spider brain

15¹⁵ **Michael Stern**, Hannover
Neuromuscular transmitters in myriapods

H 4 | Morphology

Chair: Andy Sombke

Yoko Matsumura, Kiel
Masturbation-like behavior of male beetles let their long penis settle in a right position and makes them ready for copulation

Christian Fischer, Göttingen
On the ultrastructure of the epithelium of Pendergrast's organ of Acanthosomatidae (Insecta, Heteroptera, Pentatomoidea)

Mercedes Klein*, Kassel
Three-dimensional reconstruction of the brain and its neuropils in the onychophoran *Euperipatoides rowelli*

Christine Kiesmüller*, München
A look inside: Approaching the "mysterious" pupal development of holometabolan insects

Markus Grams*, Rostock
Two joints are not enough – functional morphology of the protopodal part of thoracopods in malacostracans

Philipp Wagner*, Planegg-Martinsried
Differentiation of trunk segments in the early euchelicerate lineage: First results of an evolutionary historical approach

15³⁰ **Coffee Break**

H 3/4 | Karl Ritter von Frisch-Prize Ceremony

16⁰⁰ **Music: Stephani-Quartett**, Greifswald

16¹⁰ **Welcome and introduction - DZG President**

16²⁰ **Laudation by Prof. Dr. Harald Wolf**, Ulm

16⁴⁰ **Karl Ritter von Frisch-Medal to Prof. Dr. Stanislav Gorb**, Kiel

16⁵⁰ **Prize lecture by Prof. Dr. Stanislav Gorb**, Kiel

17³⁰ **Music: Stephani-Quartett**, Greifswald

18⁰⁰ **H 3/4 | DZG - Member Assembly / DZG - Mitgliederversammlung**



20⁰⁰ **Poster Awards, Closing Session @ TENT (Food and Drinks included)**

22⁰⁰ **After-Show-Party @ Mensa-Club**

DFG

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