



# International Society for Neuroethology

Newsletter/March 2014

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## THIS ISSUE INCLUDES

President's Column by *A. Mercer*  
2013 Financial Report by *K. Mesce*  
Neuroethology: A Vital Odyssey by *J. Pena*  
New Approaches to Outreach by *C. Harley*  
Highlighting Early Career Scientists by *C. Baker*  
Call for ISN Fellow Nominations  
Call for 2018 ICN Proposals  
Konishi Research Awards, Other Announcements  
Dear Gabby – the new ISN Advice Column



*Seeking fresh ideas on bringing neuroethology to the public? See page 5 of this newsletter!*

## President's Column

*Alison Mercer*  
President of the ISN

Dear ISN Members,

I am delighted to be able to draw your attention to an exciting new initiative intended to support, encourage, and promote the research activities of our Society's early career investigators.

ISN Council recently approved the establishment of the **Konishi Neuroethology Research Awards**. A small number of awards of up to \$2,500 will be available each year. All early career investigators who work on the neural basis of natural animal behavior and who are members of the ISN are eligible to apply. A call for applications and full guidelines can be found in the announcements section of this Newsletter, and further information about the awards can be found on the [ISN website](#). The closing date for the first round of applications is **30 April, 2014**.

The **Konishi Neuroethology Research Awards** are named in honor of **Masakazu (Mark) Konishi**, a master of the neurobiological study of natural behavior. Mark's outstanding work on prey capture by owls and singing in songbirds will be well known to you all. His research is as exquisite as it is interesting, and I was delighted recently to discover it also captures the imagination of students down under.

Walking along a street in New Zealand's capital city recently, I noticed 3 young men in grey suits striding at pace towards me. Suddenly, one of them smiled broadly and put his hands up to his ears with the fingers of his right hand pointing upwards and the fingers of his left hand pointing down towards the ground. He turned out to be a former student attempting to demonstrate the only thing he remembered from my 3<sup>rd</sup> year neuroethology lectures: how barn owls use sound intensity cues to determine the elevation of sound. I had to laugh when he said *You told us about Konishi – awesome! I decided I had to work on barn owls. Somewhere I went off the rails into criminal law – there's more loot in law you know, but not nearly as much hoot – do you know what I mean?*

I find it a pleasure each year to introduce students to champions of neuroethology like Mark Konishi, who opened our eyes to the extraordinary brains of barn owls and song birds and in so doing opened many doors for other neuroethologists to step through. I hope that this year's Congress in Sapporo will see Mark return to a city he knows well. Mark completed a Bachelor of Science degree and the degree of Master of Science at Hokkaido University in Sapporo before heading to the University of California, Berkeley, to work with **Peter Marler** on bird song.

The 2014 Congress is now only months away, so please be sure to register for the meeting as soon as possible (<http://www.icn2014.jp/>). 2014 ICN/JSCP promises to be a wonderful meeting. The Program Committee, co-chaired by **Heather Eisthen** and **Masashi Kawasaki**, has put together an outstanding program and your hosts

have been working extremely hard to ensure that your visit to the beautiful city of Sapporo will be interesting, enjoyable, and scientifically stimulating.

I very much look forward to seeing you in July.

With best wishes,  
Alison



## ISN FINANCIAL REPORT FOR 2013

The ISN Treasurer, Karen Mesce, has submitted the following annual report to the ISN President, Executive Committee, Council, and membership.

<b>Total Assets as of 1/1/2013</b>	
Cash	138,689.35
Investments	356,196.28
<b>TOTAL</b>	<b>\$494,885.63</b>

<b>Cash Revenue</b>	
Funds from Maryland ICN	54,387.43
Return of '12 ICN start-up funds	10,000.00
Membership Dues	21,630.00
Donations	450.00
Interest on cash deposits (US Bank)	47.69
Interest on cash deposits (Schwab)	11.36
<b>TOTAL</b>	<b>\$86,526.48</b>

<b>Investment Revenues for 2013</b>	
Investment dividends (non-cash)	7,912.76
Investment capital gain/(loss)	16,071.19
<b>Investment Gain for 2013</b>	<b>\$23,983.95</b>

**TOTAL PORTFOLIO APPRECIATION \$19,991.02**

<b>Expenditures</b>	
Operating Expenses	18,000.00
(Allen Press fixed fee)	
Executive Committee Meeting	11,030.02
(with ICN organizers & Allen Press rep)	
Bank wire fees	175.00
Tax filing fees, postage	50.74
Caribbean School (Cuba)	10,000.00
2014 ICN Sapporo Advance	10,000.00
Award Plaques	402.49
Heiligenberg Student Travel Awards (8)	5,600.00
Capranica Award	1,000.00
Bullock lectureships	2,600.00
<b>CASH EXPENDITURES FOR 2013</b>	<b>\$58,858.25</b>

<b>Total Assets as of 12/31/2013</b>	
Cash	164,694.52
Investments	401,029.72
<b>END OF YEAR TOTAL</b>	<b>\$565,724.24</b>

**2014 ICN/JSCP  
Registration is now open**



<http://www.icn2014.jp/>

**Important dates:**  
**2 May: reduced rate registration closes**  
**27 June: online hotel reservation service closes**



## **IBRO ADVANCED SCHOOL**

An **IBRO Advanced School of Neuroethology** will be held at **Hokkaido University, Sapporo**, from Thursday 24 July to Monday 28 July, 2014 in conjunction with the 2014 ICN / JSCP Congress. This school will provide an opportunity for senior Ph.D. students and post-doctoral fellows in the Asia-Pacific region to acquire experimental skills and knowledge in neuroethology. For further details and updates, visit our [website](#) or send an e-mail to [ibro2014@icn2014.jp](mailto:ibro2014@icn2014.jp).



*The 2016 Congress will take place in Montevideo, Uruguay, March 29 through April 3, 2016. See the call for proposals to host the 2018 ICN later in this newsletter.*

**PROGRAM FOR 2014 ICN/JSCP**  
*please visit the website for updated program details*

### Plenary Speakers

**Barbara Finlay** Integrating brain diversity with conserved developmental mechanisms: The case of the isocortex

**Martin Giurfa** From simple to higher-order learning in an insect brain: Lessons from honey bees

**Ryohei Kanzaki** Analysis and synthesis of odor-source localization in insects: From genes, neural networks, and behavior to robot

**Malcolm MacIver** Convergent evolution of mechanically optimal locomotion and its implications for information acquisition

**Lidia Szczupak** Motor control: Neuronal interactions at the lower levels of the network hierarchy

**Sarah Woolley** Neural mechanisms of auditory-vocal communication: Mapping receiver auditory tuning to sender behavior

**Motojiro Yoshihara** Using the *Drosophila* feeding circuit to connect synaptic plasticity to memory

**Jochen Zeil** Visual homing in insects

**Harold Zakon** (Heiligenberg Lecturer) Electric fish in the age of genomics

**Alan Roberts** (Huber Lecturer) The formation and function of the first networks controlling behaviour in a very small vertebrate

### Contributed Symposia

**Action selection: The role of the insect central complex.** Organizer: Alberto Ferrús

**Avian models of cognitive development.** Organizer: Brian McCabe

**Bats as neuroethological models: From echolocation and vocal production to 3D neural codes and navigation.** Organizers: Nachum Ulanovsky & Hiroshi Riquimaroux

**Coordination of multi-legged locomotion.** Organizers: Carmen Smarandache-Wellmann & Brian Mulloney

**Decision making in worms, insects and vertebrates: Are there common principles or mechanisms?** Organizers: Kenji Doya & Hitoshi Okamoto

**Deep homology of circuits underlying behavioral actions.** Organizer: Nicholas Strausfeld

**Emergence of simple behavior: Channels, neurons and networks controlling swimming in developing vertebrates.** Organizers: Shin-ichi Higashijima & Wen-Chang Li

**Evolution of parental behaviors.** Organizers: Lauren O'Connell & Cheryl Rosenfeld

**In the footsteps of Karl von Frisch: 100 years of investigations into insect color and polarization vision.** Organizers: Kentaro Arikawa & Adrian Dyer

**Insights from molluscan studies into the evolution of neural mechanisms for simple and complex learning and memory systems.** Organizer: Binyamin Hochner

**JSCPb symposium: Third-generation photobiology and its relevance to chronobiology.** Organizers: Yoshitaka Fukada & Akihisa Terakita

**Learned vocal communication in songbirds: Recent developments.** Organizers: Melissa Coleman & Yoko Yazaki-Sugiyama

#### Other Symposia

The program will also include a symposium in honor of **Mark Konishi**, organized by **Catherine Carr**. Winners of the **Young Investigators Award** will present their research in a special **Young Investigator Symposium**. Speakers for three **Participant Symposia** will be chosen from among the submitted abstracts. Preference for slots in these symposia will be given to early career investigators. Details of the submission process for participant symposia will be posted on the ICN [website](#).

#### Hokkaido Neuroethology Workshops 2014

**HNW2014** is a satellite event to the 2014 ICN/JSCPb that will be held on July 26-27, 2014, on the **Sapporo Campus of the Hokkaido University**. This event is sponsored by the **Faculty of Science** and is hosted by **Laboratories of Behavioral Neurobiology** in the **Department of Biological Science** at the Hokkaido University. Workshops are open *free of charge* to all registered participants in the 2014ICN/JSCPb.



#### **THE ISN OFFICE HAS A NEW E-MAIL ADDRESS**

You can now use the following easy-to-remember e-mail address to share information with the ISN office: [isn@allenpress.com](mailto:isn@allenpress.com). Information you send to this address will go directly to **Joyce Lancaster**, our representative at Allen Press, our management company. Please use this address to submit applications and nominations for awards as well as your questions about the ISN and the website. Note that full contact information for ISN officers is always available on the first page of the newsletter. Any difficulties members experience using the website should also be reported using this e-mail address.



#### **NEUROETHOLOGY: A VITAL ODYSSEY**

ISN member Jose L Pena contributed the following original essay with the goal of inviting the ISN membership to think about the current status of our field in light of funding decreases and external pressures to perform translational research. Please share your views and continue the discussion by following the link embedded in the article. Responses will be shared with the membership in a future newsletter.

Neuroethology has historically bridged Ethology and Neuroscience. Its emphasis on evolution and behavioral specialists conferred a unique flavor to the discipline, arguably unlike others in the basic sciences. Today, however, we do not hear the word Neuroethology very much and many of us struggle to explain why our research should be funded. Rather than revisiting Neuroethology's illustrious past and achievements, with which we all are familiar, this essay attempts to respond to these existential concerns by outlining principles that bind us together on the human quest for self-understanding and determination. It is also an attempt to trigger your thoughts and to hear from you through the link provided below.

It has been said that Neuroethology is an *attitude*. One could argue, however, that it is much more than that – that Neuroethology is an *ideology* advocating the observation and tapping of the breadth of animal behaviors the better to understand nature.

Why does Neuroethology care about brain mechanisms underlying the behavior of electric fish, bats, or dragonflies? Surely not just to satisfy our curiosity. We have acquired a great amount of knowledge of interest to humans and human health studying diverse species, which, through their specialized behaviors and brains,

has revealed the principles of neural function. In addition, investigating other species is a means to rectify the biased lens of our own minds through which we view human behavior. The human mind often disregards its own mechanical essence! As a result, causal links blur and our human motivations are generalized to laws of nature. Understanding species very different from humans provides the essential big picture that leads to a more objective assessment of where we stand. Viewing the abundance of species across and over time yields a clearer, more complete perspective of events. This tactic is reflected in the two pillars of Neuroethology: the comparative and evolutionary approaches to the neural basis of behavior. The Neuroethological approach can help us see more objectively the subset of nature we inhabit.

Academia and scientific research are not immune to the bias of the human mind. The Neuroscience blueprints of the day focus on how each scientist's research contributes to treating disease, predicting human behavior, perception, emotions, markets or technological breakthroughs that make us more efficient. These goals are undeniably important but should not distract us from a most critical aim, which is to understand the global forces and trends that ultimately determine the emergence and extinction of species. Thus, as important as it is to sustain research targeting specific, human-related, questions, we must expand our knowledge beyond the boundaries of our own species. Neuroethologists understand that a leech carries as much evidence about the universe as a large vertebrate. This is perhaps why Neuroethology is not just an *attitude* but an *ideological framework* worth advocating.

Did we truly understand the implications of Darwin's theory of evolution? Evolution is unstoppable. The current definition of human will inevitably become outdated. To make things even more thrilling, humans have invented a peculiar, high-speed way of evolving from generation to generation. We evolve faster than other species and we will become something else sooner than our fellow citizens the cockroaches. This highway over the already vertiginous course of evolution is perhaps the only aspect of the universe for which our principles and convictions may play God. How, then, do we want to evolve? The strategy of worrying only about our own species cannot be justified, as keeping us viable requires knowing where we stand. For the same reasons that NASA invests billions of dollars sending probes to other planets, Neuroethology should be supported as the astrobiology of Neuroscience.

The ISN has created a [link](#) given in full at the end of this newsletter (*password is neuroethology*) where we

welcome your thoughts about where our field is going and/or should go. We would like to hear suggestions about strategies for increasing our visibility and our funding, and conveying our ideas to a broader audience. **Don't miss the chance to participate in this critical discussion about our field's future.**



## NEW APPROACHES TO OUTREACH

ISN member Cindy Harley of the University of Minnesota currently serves as an Early Career Representative on the ISN Council. Here she uses case studies to convey the impact of outreach based on sharing our love of neuroethology with new audiences.

In part because of vigorous enforcement of the broader impacts requirement for proposals submitted to the U.S. National Science Foundation, for many of us outreach programs have transitioned from a labor of love to a required activity. We are lucky in that our field is conducive to outreach – frankly, we work with some of the coolest critters in the business and that fact alone gives us a head start on many of our colleagues. Even so, it is still possible to fall into an outreach rut! It can be valuable to be reminded that outreach comes in many different flavors. In this column, several highly creative approaches to outreach successfully implemented by fellow neuroethologists are highlighted.

**Jon Pierce-Shimomura: teaching science to adults with intellectual and developmental disability** While reviewing educational opportunities for individuals with Down Syndrome (DS), **Jon Pierce-Shimomura**, parent of a son with DS, noticed that there was a dearth of exciting programs for adults. This motivated Jon to start a 6 week evening course for adults with DS at his home institution of **University of Texas-Austin**. Students in this course learn side-by-side with graduate students by means of scientific discussions and hands-on demonstrations. The first course, titled *Our Senses*, covered the physiological and molecular bases for senses and included experiments with *C. elegans* mutants illustrating these concepts. Since its inception, this exciting program has grown significantly, adding additional Austin faculty including **Ashley Rowe** and **George Pollak**. The program now comprises six courses offered each semester serving 200 developmentally disabled individuals per year. The photograph on the first page of this newsletter was taken during one of the courses in this program, and features **Jon Pierce-Shimomura** and **Brennan O'Donnell** (photograph provided by Jon Pierce-Shimomura).

**Rayna Harris: mentoring high school students in the laboratory** When graduate student **Rayna Harris** joined the laboratory of **Hans Hofmann** at the **University of Texas-Austin**, she was surprised to find that one of her colleagues was a high school student. She said, *I was in awe... I didn't even get involved in research until after I had my undergraduate degree, so I was quite envious of the early start that this student had compared with me.* Rayna quickly joined the program and began mentoring her own high school students, teaching them essential skills for collecting and analyzing data. The students, many of whom live in low income neighborhoods, often identify the experience as one of the biggest influences on their decisions to attend university and pursue degrees in STEM (science, technology, engineering, and math) fields. *It's a great way to reach groups of people who would make great scientists if they were aware of the possibility* said Rayna, who urges others to consider the benefits of welcoming high school students into their laboratories.

**Zen Faulkes: using the internet and social media to reach a wider audience** Inspired by his scientific idols who were bringing attention to science via books and blogs for the general public, **Zen Faulkes**, a faculty member at the **University of Texas-Pan American**, began the blog known as [NeuroDojo](#) as a personal attempt at outreach. This blog started as a way for Zen to discuss publically the science that he thinks is interesting. He also uses his blog to discuss life as an academic scientist. *People hear about scientific discoveries and not so much about the people involved in making them....Thanks to social media, you have very easy ways to get to know scientists a little more personally.* His efforts have received numerous accolades for achievement in scientific blog writing and have resulted in articles, book chapters, conference symposia, and even crowd sourced funding of small research projects. What truly drives Zen to continue blogging, however, is a chance to humanize the endeavor of science and to promote the field of neuroethology.

**Linnea van Griethuijsen: teaching at the OLLI** As a graduate student in the laboratory of **Barry Trimmer** at **Tufts University**, **Linnea van Griethuijsen** (now on the job market – see her biosketch at <https://sites.google.com/site/linneavang/>) welcomed opportunities for teaching experience, but the courses that she was offered were not well-matched to her interests. Instead, she got creative and found an opportunity to volunteer at the **Osher Life Long Learning Institute** (OLLI), a nationwide program in the U.S. for students 50 years of age and older. She said, *Ever since my qualifying exam I had been telling my*

*friends and family about the amazing hearing capabilities of barn owls and the jamming avoidance response in weakly electric fish, so it seemed like a good idea to teach others about this... I think outreach is important because it makes scientists more approachable. There are many people that would never interact with a scientist if it weren't for an outreach program. I think it is important that the general public at least has some idea of what a scientist does.* While her initial experience was motivated by a desire to gain additional teaching experience, Linnea said that it forced her to zoom out and look at her research from a distance. She reports that seeing the big picture afresh through the eyes of others intensified her love for neuroethology.



*Cole Gilbert leads a field trip for the New York Master Naturalists program. Photograph provided by Cole Gilbert.*

**Cole Gilbert: an annual one day insect fair** **Cole Gilbert**, professor in the entomology department at **Cornell University**, began performing outreach at the local natural history museum while he was in graduate school. He noticed that the summer taxonomy programs for kids included programs in herpetology, mammology, and ornithology, but no entomology. He asked the museum if he could offer a course dedicated to insects. Since that time, Cole's involvement in outreach has expanded to include visiting classrooms, leading eco tours, and most notably Cornell's **Insectapalooza**, an annual event that even has its own [Facebook page](#). Insectapalooza started 10 years ago in honor of the Department of Entomology's 100<sup>th</sup> anniversary. Cole, working with his wife **Linda Rayor**, turned his entire department into an open house by giving everyone who worked with insects at Cornell the opportunity to create a display. What happened next was completely unexpected – in a mere 6 hours over 3000 people attended the event. *The first year was so successful that it was clear it needed to continue.* Insectapalooza now involves numerous students, faculty, and staff from a variety of departments. But Cole notes, *You don't have*

to start your own *Insectapalooza* or *Neuropalooza*; you can start as one person going to one classroom.

### Epilogue

All of the scientists contacted said essentially the same two things. First, we need to humanize science by breaking the stereotypes of what a scientist is – we are not mad scientists or pocket protector-wielding nerds. Second, as stated succinctly by **Cole Gilbert**: *We can represent our field and science in general. There is a lot of education and dispelling of misconceptions that we need to do. Most scientists like staying in the lab and communicating with other scientists, but our budget is not being paid by scientists – it is coming from regular folks and tax dollars.*

Whether you want to get involved in outreach for the first time or want to try a new method, there are countless ways to get involved. Talk at schools, contact your local science museum, look for programs in your area, start a science blog, mentor non-university students. Be creative. While creating a program may seem daunting, you do not have to reinvent the wheel. As part of annual [Brain Awareness Week](#) activities, the Society for Neuroscience has educational materials on their website that can help get you started. And if you are already involved in outreach, consider sharing your experiences in a future edition of the ISN Newsletter.



## HIGHLIGHTING EARLY CAREER RESEARCHERS

ISN member Christa Baker from Washington University in St. Louis, Missouri, currently serves as an Early Career Representative to the ISN Council. Here she highlights some of the exciting research being done by early career members of the ISN. The ISN Newsletter plans to make this column a recurring feature.

Early career members of ISN are doing a lot of exciting research, and the Early Career Representatives on the ISN Council want to let the Society know about it! If you would like to be featured in a future column, or if you would like to nominate someone to be featured, please email **Christa Baker** at [cabaker@wustl.edu](mailto:cabaker@wustl.edu). For our first submission, we will hear from post-doc **Andrés G. Vidal-Gadea** and doctoral student **Katie Willis**.



*Andrés G. Vidal-Gadea, lab of Jon Pierce-Shimomura, University of Texas at Austin. Photograph provided by Andrés G. Vidal-Gadea.*

I study the genetic and neuronal underpinnings of natural behavior. I have chosen to work with the nematode *Caenorhabditis elegans* because it is amenable to a plethora of molecular/genetic techniques and possesses an extensive behavioral repertoire. Presently, our work centers on understanding the neuromolecular basis of three natural behaviors found across many taxa: gait transitions; magnetic orientation; and burrowing behavior.

Using optogenetic, behavioral, and genetic approaches we were able to show that nematodes swim in liquid and crawl on solid surfaces using distinct locomotor gaits. As previously described in other taxa (from leeches to mammals), transition between gaits is a highly conserved mechanism that involves extrasynaptic dopamine and serotonin.

Another behavior previously unsuspected in *C. elegans* is its ability to detect magnetic fields. Although the identification of a magnetoreceptor has long been a goal of sensory biology, to date no such neuron has been found in any animal. We recently discovered that worms can orient to the magnetic field of the earth. Worms appear to use earth's magnetic field as aid during vertical migrations. We identified a pair of ciliated sensory neurons that are capable of detecting magnetic fields, and required for the performance of the magnetic orientation behavior. We are now investigating the molecular basis of the transduction machinery, which may provide clues into how other organisms accomplish this amazing feat.

The study of magnetic orientation led us to consider how worms burrow. In over forty years of *C. elegans* research, this behavior remains virtually unstudied. To date, we have found that worms are capable of modulating their behavior as substrate density increases. Additionally, vertical burrowing migrations appear to be affected by the presence of magnetic fields and by environmental temperature.

Their experimental amenability, behavioral repertoire, and potential for comparative and translational studies make these elegant little animals an exciting model in which to study the neural and molecular basis of natural behavior.



*Katie Willis, lab of Catherine Carr, University of Maryland. Photograph provided by Katie Willis, who is standing in front of Charles Banks Wilson's portrait of American folk singer Woody Guthrie.*

**Katie Willis** studies the anatomy and physiology of the brain stem sound localization circuit as well as the functional morphology of middle ear cavities in turtles. She is broadly interested in the evolution of sensory systems. She studies turtle hearing in order to add details of an entire taxon to comparative hearing. Her work with many international collaborators on middle ear cavity function showed that turtle hearing is enhanced under water by the resonance of the middle ear cavity. This is conserved across all species of turtles and tortoises, supporting an aquatic origin for the group.

Katie has used a variety of anatomical techniques to describe the connectivity of brain stem auditory nuclei and characterize the structure of individual neurons. With fellow graduate student **Jeff Chrabaszcz** she is using these data to apply a method for mathematically characterizing and classifying types of neurons that are not easily distinguishable visually in each auditory nucleus. Anatomy is paired with physiology in order to understand how auditory stimuli are detected and encoded. She uses modified *in vivo* physiology to characterize the responses of individual neurons to sound. Katie defends her dissertation this spring.

President-Elect, Secretary, and Councilor. The nominees will be announced at the business meeting at the ICN. In order to be considered by the Nominating Committee, proposals for the slate of nominees should be submitted by members of the Society no later than thirty days before the Congress. Inquiries or nominations should be submitted as soon as possible via e-mail directly to the Chair of the Nominating Committee, **Past-President Paul Katz** ([pkatz@gsu.edu](mailto:pkatz@gsu.edu)). Please note that eight Councilor positions will be filled at this election, one of which will be an early career representative. In this round of elections we are seeking nominations for a graduate student (rather than a postdoctoral) early career representative for Council.



## CALL FOR NOMINATIONS

### FELLOW OF THE INTERNATIONAL SOCIETY FOR NEUROETHOLOGY

**April 30, 2014**, is the deadline for submitting nominations for the honorary position of Fellow of the Society for Neuroethology. This is the highest award given by the ISN. Fellows honored in 2012 were **Robert G. Capranica, John G. Hildebrand, Masakazu Konishi, Michael F. Land, Randolph Menzel, and Rüdiger Wehner**. New Fellows will be recognized at the 2014 ICN.

**Eligibility:** Candidates must have been a member of the ISN continuously for at least six years prior to nomination. Candidates must be a current member.

**Criteria:** Fellows are recognized for meritorious efforts to advance the science of neuroethology. These include:

- a significant body of published research
- leadership in educational and outreach efforts
- extraordinary service that promotes science, particularly neuroethology

**Who can nominate?** Fellow nominations may be made by any current regular, lifetime, or emeritus member of the ISN. The nominee must not be a member of the nominator's current department nor be a doctoral or postdoctoral associate of the nominator (either currently or within the past 10 years).

**Nomination procedure:** A letter from the nominating member must be submitted detailing the qualifications of the nominee and providing evidence of achievements that demonstrate fulfillment of the criteria. Supporting letters must be submitted by two additional current



## ANNOUNCEMENTS PLEASE NOTE THE LARGE NUMBER OF RAPIDLY APPROACHING DEADLINES



## CALL FOR NOMINATIONS

### PRESIDENT-ELECT, SECRETARY, AND COUNCILORS OF THE INTERNATIONAL SOCIETY FOR NEUROETHOLOGY

In accord with ISN Bylaw 9, a Nominating Committee has been appointed by the Executive Committee to prepare a slate of candidates for the elective offices of

members of the ISN. The nomination should include a brief biographical sketch of the nominee (< 250 words) that summarizes his or her educational and professional background and a description of major achievements. Send materials in the form of a single pdf file to the ISN Office at [isn@allenpress.com](mailto:isn@allenpress.com).

*Selection of ISN Fellows is based entirely on scientific merit, irrespective of race, creed, sex, age, or nationality.*

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## CALL FOR PROPOSALS

Peter Narins, President-Elect of the ISN, has issued a call for proposals for the 2018 International Congress.

We hope that you are already considering the possibility of hosting the 2018 Congress. Now is the time to begin thinking about this in earnest and planning your proposal. Keep in mind that the conference generally attracts between 500-700 people, so it is important that you have a lecture hall that is large enough to accommodate this many people. If you are interested in hosting the Congress please put together a proposal and send it to me ([pnarins@ucla.edu](mailto:pnarins@ucla.edu)) for pre-approval. Proposals should include the following information.

### Required host information

1. host name and contact information
2. list of the faculty, students and staff who will form the local organizing committee
3. availability of local support from your home institution, local sources, government sources (note that the program committee will be responsible for writing grants in support of the conference, but if there is local support available to offset costs this is very helpful)
4. an estimate of registration fees (if possible)

**Proposed Dates for the Congress.** Offer a number of choices, if possible.

**Meeting venue information.** This should include the following information: location, rooms available with seating, poster room locations, facilities for meals, off-site availability of food, internet services, media services, and childcare arrangements.

**Housing information.** This should include the following: estimate of the number of rooms/beds for students and/or faculty at the meeting site, if limited, list of local hotels, approximate cost of housing, and location of housing relative to the meeting site.

**Transportation information.** This should include

current airline prices from: New York, Los Angeles, Chicago, Atlanta, London, Berlin, Frankfurt, Tokyo, Sydney, and Buenos Aires; cost of transportation from nearest international airport to meeting site; transportation availability at meeting site (if applicable).

**Local attractions and/or possible daytrips.** If your university or local convention center regularly hosts meetings of this size, there may be a professional conference organizer who can assist you in gathering this information.

**\*\*\* The deadline for submitting your proposal is June 4, 2014\*\*\***

Prospective hosts who receive pre-approval will give a 10 minute presentation at the Sapporo, Japan Congress in July, 2014. Information about the proposals will be available online and a poll will be conducted shortly after the Sapporo Congress to decide where the 2018 Congress will be held. Once this has been decided, the Executive Committee will appoint two Program Chairs who will assemble a Program Committee to determine the content of the Congress.



## CALL FOR NOMINATIONS

### THE 2014 INTERNATIONAL SOCIETY OF NEUROETHOLOGY CAPRANICA PRIZE



The **Capranica Neuroethology Prize** was established in 1986 by **Robert and Patricia Capranica** to provide an annual cash prize for recognition of an outstanding achievement or future promise in the field of neuroethology by investigators early in their careers. Robert ("Bob") Capranica (1931 – 2012) was a longtime professor in the Department of Neurobiology and Behavior at Cornell University. He was a leader in developing the field of the neural basis of auditory communication. The ISN now awards this prize, which continues to bear the Capranica name, in honor of Robert and Patricia Capranica.

The 2014 prize (U.S. \$1,000) will be awarded to a promising early career investigator who is the author of a paper (published online or in print during the 2013 calendar year) that is judged to be the most outstanding in terms of scientific significance in the field of neuroethology on the basis of criteria including novelty of the scientific discovery, implications for scientific

technical advancement, and/or importance for advancement of knowledge. **The new investigator must be first author on the submitted paper and must have played a major role in the inception and execution of the study.** Candidates must be either graduate students or postdoctoral trainees who have received their doctoral degree within the last 5 years. Either the nominee or the advisor must be a current member of ISN.

Applicants should submit by e-mail in a single PDF file a brief statement of their qualifications and the significance of their published paper, a copy of the paper, a *curriculum vitae*, and a letter of reference from their graduate or postdoctoral advisor that details the role of the applicant in the published study as well as the overall accomplishments of the young investigator. The application should be sent to [isn@allenpress.com](mailto:isn@allenpress.com). The cash prize will be awarded to the recipient and their name will be announced at the 2014 ICN.

**\*\*\*All materials must reach the ISN office by April 30, 2014\*\*\***

*Selection of the recipient of the Prize will be based entirely on scientific merit, irrespective of race, creed, sex, age, or nationality. Donations to the fund supporting this Prize are welcome; please contact [isn@allenpress.com](mailto:isn@allenpress.com) for details on how to make a contribution.*

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## CALL FOR APPLICATIONS

### 2014 HEILIGENBERG STUDENT TRAVEL AWARDS



Walter Heiligenberg (1938 – 1994)

**Heiligenberg Student Travel Awards** are awarded annually to qualified students who wish to present work in the field of neuroethology at selected national and international scientific meetings. This year up to six awards are available. The awards cover expenses such as travel to and from the conference site, registration fees, and/or housing costs up to a total of \$700 per awardee.

The 2014 ICN in Sapporo, Japan, is being given high priority this year, but students wishing to attend other conferences with a strong neuroethology presence are also encouraged to apply. This award is given in honor of **Walter Heiligenberg**, who was a distinguished neuroethologist and a pioneer in the field. Walter made seminal contributions to understanding the neural mechanisms underlying the jamming avoidance response of weakly electric fish. He is recalled by those who knew him as both a great scientist and an inspiring teacher.

**Qualifications:** Both the student and the student's mentor must be ISN members by the application deadline of April 30<sup>th</sup>. Applicants must be registered graduate students at a university, and must plan to present their work at the conference. Priority will be given to applicants with demonstrated academic excellence and research potential as evidenced by the abstract of the work to be presented and the recommendation letters. Demonstrated financial need will also be considered. Preference will be given to applicants who have not previously received this award.

**To apply**, fill out the application form available on the ISN website and submit this, together with two letters of recommendation, to [isn@allenpress.com](mailto:isn@allenpress.com).

**The deadline for applications for the 2014 Awards is April 30, 2014, and the decisions on funding will be announced by May 31, 2014.**



## CALL FOR APPLICATIONS

### 2014 DEVELOPING NEUROETHOLOGY AWARDS

These awards provide travel support for ISN members from emerging and developing countries to attend and present their work at the ICN. Awards will be given this year to support participation in the 2014 ICN in Sapporo.

Applications should include the following:

1. A preliminary abstract including the names of authors and their institutions
2. The type of presentation (oral or poster) planned
3. A brief justification for the request of travel funds
4. The amount of matching funds available from the applicant's institution (or, if none, a letter

from the PI or the applicant's Department Chair supporting the request)

Priority is given to members with the greatest need and merits. All applicants will be considered for special membership status, and need not apply separately for membership.

**To apply**, submit all materials via e-mail as a single pdf file to [isn@allenpress.com](mailto:isn@allenpress.com).

**The deadline for applications for the 2014 Award is April 30, 2014, and the decisions on funding will be announced by May 31, 2014.**

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## CALL FOR APPLICATIONS

### 2014 YOUNG INVESTIGATOR AWARDS

These awards support emerging researchers in the neuroethology community and are presented at the International Congress of Neuroethology.

The award recognizes doctoral graduate students and early postdoctoral fellows who have shown outstanding promise and have already made a significant research contribution in any aspect of the field of neuroethology. Our emphasis in these awards is on young investigators that represent the ISN of tomorrow. The Society feels that it is very important to acknowledge and reward our future in this way.

Recipients receive up to U.S. \$1,200 to reimburse travel expenses.

Applications consist of a brief description of research work and a statement of its significance, a copy of a *curriculum vitae*, and letters of recommendation from two senior associates. Both the applicant and at least one of his/her senior associates must be ISN members by the deadline of the application.

**To apply**, submit all materials via e-mail as a pdf file to [isn@allenpress.com](mailto:isn@allenpress.com).

**The deadline for applications for the 2014 Awards is April 30, 2014, and the decisions on funding will be announced by May 31, 2014.**



Note: because this is a new awards program and the first deadline is approaching quickly, this edition of the newsletter contains the complete guidelines for the Konishi Neuroethology Research Awards.

## CALL FOR APPLICATIONS

### 2014 KONISHI NEUROETHOLOGY RESEARCH AWARDS

#### Research Project Funding for Early Career Investigators

##### I. General Guidelines

**Purpose:** Konishi Neuroethology Research Awards from the International Society for Neuroethology (ISN) are intended to promote research by early career investigators. Funds awarded can be used to cover any direct research expenses (including travel to a field site) but conference travel, participation in formal workshops or courses, and salaries are excluded. Applications will be reviewed on the basis of scientific merit, feasibility of the project, and consistency with the mission of the ISN.

**Eligibility:** All early career investigators who are members of the ISN at the time of application; for the purposes of this research award, an early career investigator is defined as a graduate student currently enrolled in a doctoral program or an investigator who has received a doctoral degree within the past 10 years; investigators more than 10 years beyond the doctoral degree are welcome to apply, but must provide a statement on their biosketch explaining why their career path was interrupted.

**Topics:** Neuroethology seeks to understand the neural basis of natural animal behavior. All research topics encompassed within the field of neuroethology will be considered.

**Deadlines:** Applications are due by 30 April of each year. Proposals should be sent as a single PDF file to [isn@allenpress.com](mailto:isn@allenpress.com).

**Amount:** Funds are available to support a small number of awards of up to \$2,500. Awards are not renewable. Early career investigators may only apply for a single award per deadline. Awardees may apply for a subsequent award for a different project, but priority will be given to new applicants over previous awardees.

**Review:** Applications are evaluated by a committee appointed by the President of the ISN. Proposals will be evaluated on the following criteria:

- a. Relevance to the ISN's focus on the neural basis of natural animal behavior.
- b. Clarity and significance of study question.
- c. Sound scientific methodology, appropriate to study question.
- d. Demonstration that the proposed project is feasible.
- e. Prior publication record, awards, and honors of the applicant.
- f. A clear statement of how the awarded funds will enhance the proposed project.
- g. A demonstration of financial need.

Funding during any given round will be affected by the desire to balance awards across different categories of early career investigators (graduate students and postdocs) and geographically.

**Award period and budget procedure:** When a grant is awarded, the awardee's institution will establish an account for the funds and disburse them on the written authority of the awardee through the sponsoring institution's usual budget mechanisms. Funds will be transferred as a lump sum at the start of the award and must be spent within 12 months from the start date of the award. All funds must be used to support the research of the awardee, and the sponsoring institution must waive all claims to recovery of indirect costs. In exceptional cases, alternative arrangements may be devised to handle the transfer of funds to the investigator. Such alternative arrangements shall be approved by both the President and the Treasurer of the ISN.

**Unused funds:** Any balance unexpended upon grant expiration must be returned to the ISN unless a no-cost extension is requested by the investigator and approved by the award committee.

**Reporting:** A written final report is required at the end of each project (within 90 days of the end date). The final report (typically no more than 1 – 2 pages) should include scientific findings, abstracts and/or publications resulting from the project; a brief description of how the funding was spent, and whether the funding was instrumental in the completion of the project.

## II. Instructions for Proposal

A. General guidelines. Use standard fonts and margins (11-point font or larger and 1-inch margins; line spacing: single). The header should include the early career investigator's name (Last Name, First Name) and the page number. A PDF of the proposal should be submitted electronically to [isn@allenpress.com](mailto:isn@allenpress.com) by the appropriate deadline.

- B. The proposal should begin with a one-page *cover page* that includes:
- a. A project title
  - b. Contact information for the early career investigator
  - c. Name and location of the sponsoring institution
  - d. A brief statement by the sponsoring mentor (or an institutional representative familiar with the investigator's activities) accompanied by the mentor's signature (and the date on which the cover page was signed). The mentor's statement should read: *I have read and approved this proposal for submission to the Konishi Neuroethology Award Program of the International Society for Neuroethology.*
  - e. A brief statement by a representative of the sponsoring institution accompanied by the signature of the institutional representative (and the date on which the cover page was signed). The institution's statement should read: *This proposal is approved by [name of sponsoring institution] for submission to the Konishi Neuroethology Award program of the International Society for Neuroethology. Any awarded funds administered by the institution will be used entirely for the direct support of the proposed project.*

C. The *research plan*, limited to a total of three (3) pages, excluding references, should include the following:

**Abstract:** A brief summary of the proposed activity (easily interpreted by neuroethologists outside the investigator's field).

**Specific Aims:** Bullet point statements of what the project intends to accomplish.

**Background and Significance:** Summary of the most pertinent prior published work and the current state of the field. Applicants may include, if available (not required), their own unpublished preliminary data. Identify the gaps in the field's knowledge that the proposed project may fill. If, as will likely be typical, funds are sought for a project embedded within a larger project, describe how the smaller project will enhance the larger effort.

**Methods:** Describe the experimental design and methods proposed to accomplish project objectives briefly but in sufficient detail to allow assessment of their feasibility and applicability.

Indicate the type of data to be generated, and how they will be analyzed and archived.

**Future plans:** Provide plans for future efforts directly related to the proposed project, including publication of results or submission of proposals to other sponsors. Include a proposed project timeline.

**References (all that are pertinent; give full citations; references are NOT included in the three-page limit)**

D. *Additional pages*, limited to three, should detail:

**Budget:** Include a brief and informal but descriptive budget and budget justification. If this budget is not adequate to fund the entire proposed research project, indicate the likely source and estimated amount of additional funds.

- Equipment: justify why the equipment requested is necessary for the proposed study.
- Supplies: list major categories of reagents and disposable supplies.
- Other: list additional costs, such as essential travel to a field site, computer charges, equipment charges, hazardous waste disposal costs, etc. (This list is not to be considered limiting, but note that conference travel, workshop fees, and salaries should not be requested, as they will not be covered by a Konishi Award.)

**Research support and environment:**

- Describe the facilities (equipment) and space (including labs and field sites) to be used in the research.
  - List all active and pending additional sources of financial support for the project.
  - If other support is available, briefly explain the need for ISN support.
  - If field permits or permits to work with animals in a laboratory setting are required, provide evidence that the appropriate permits have been obtained or specify what permits will have to be sought prior to commencing the project.
- E. Within two additional pages, provide a *biosketch* of the early career investigator, including:
- Name, current affiliation, and academic position.
  - Education. Include dates of enrollment at all named institutions and dates degrees were awarded, beginning with the undergraduate degree.
  - Record of professional employment.

- Awards and honors.
- Publications. Distinguish peer-reviewed publications from non-peer reviewed publications (such as commentaries and book chapters).
- Presentations at conferences and meetings.
- Attendance at pertinent workshops and short courses.
- If applicable, include a statement describing the nature and duration of any career interruptions at the end of the biosketch.

**To apply**, submit all materials via e-mail as a single pdf file to [isn@allenpress.com](mailto:isn@allenpress.com).

**The deadline for applications for the 2014 Awards is April 30, 2014, and the decisions on funding will be announced by May 31, 2014.**



## COURSE ANNOUNCEMENT



### SENSORY ECOLOGY AN INTERNATIONAL COURSE FOR POSTGRADUATE STUDENTS

The senses of animals are essential for every aspect of daily life. Whether detecting a mate or a prey, escaping the attentions of a predator or simply monitoring the surrounding habitat, an animal's senses are critical to its survival. To respond to the opportunities and dangers of the world quickly and effectively, each species must possess a sensory system that is uniquely optimised to its particular ecology. This sensory ecology has driven the remarkable range of sensory systems we find in nature today.

Now in its second decade, the **international postgraduate course Sensory Ecology** is known throughout the world. The two-week course – which is limited to 40 participants – is organised by the Department of Biology at the **University of Lund** in Sweden. The course is held every second year in autumn. The world's leading authorities in sensory ecology are invited to Lund to deliver an outstanding program of lectures covering all animal senses. **The next course will take place in Lund from September 21-October 4, 2014.**

Places will be allocated on a first-in first-served basis until the maximum number of places is filled (40 places). The **closing date for applications is August 1<sup>st</sup> 2014**, although the course is likely to fill before this date.

Please see the course web site for application procedures, details of the course contents and other practical information:

[www.lu.se/vision-group/courses/sensory-ecology](http://www.lu.se/vision-group/courses/sensory-ecology)

Or contact the organisers via the following e-mail address: [Sensory.Ecology@cob.lu.se](mailto:Sensory.Ecology@cob.lu.se)



## INTRODUCING: DEAR GABBY THE INAUGURAL ISN ADVICE COLUMN

Gabriella Wolff of the University of Arizona, Tucson, AZ, is a Graduate Student Representative on the ISN Council. Gabriella has taken the lead in preparing the first ever ISN advice column. Like it? Let Gabriella know ([gabbycat@email.arizona.edu](mailto:gabbycat@email.arizona.edu)). Feel free to submit your own questions and to suggest topics for future columns.

## NEUROETHOLOGY EARLY CAREER ADVICE: NAILING YOUR INTERVIEW FOR A FACULTY POSITION

**Gabriella Wolff** writes: As graduation approaches or postdoctorate research gets wrapped up, the top priority on any early-career neuroethologist's mind is most likely getting a job. Although there are many things out of our control such as the state of the economy, the most important aspect of the job hunt that we can prepare for is nailing the interview and job talk. To get the freshest advice for how to succeed in the job market, I spoke to three neuroethologists who recently landed faculty

positions. After all of the travel, exhausting days of interviews, job talks, and chalk talks, what can we learn from their experience?

Read on for the advice you need to succeed.

**Andrew Dacks, West Virginia University:** Highlight your fit. Describe how you specifically will enhance the existing strengths of a department (or company, etc.) and



how you bring new expertise that will fill current gaps. Demonstrating knowledge of the department to which you are applying will demonstrate that you are not only a well-qualified applicant, but that you have considered what opportunities to take advantage of and potential future directions for the department.

**Paloma Gonzalez-Bellido, University of Cambridge:** My job interview included a job talk of only 25 minutes, including 5 min of questions. I was very nervous



because I did not think that I could fit everything in such a short amount of time. [My] adviser said 25 minutes: think of it as if it was a TED talk! Concentrate on getting the story across, show your enthusiasm and the importance of what you do. Above all,

make sure that everyone in the audience is able to follow it. Nail your job talk. That is the most important part of the interview.

**Julie Miller, University of Arizona:** Most universities and colleges (not all), have a chalk talk, which is where



you have to discuss your five-year plan. Summarize what your plans are. You have to be able to think on your feet; you have to know what grants you're going to get, especially in this funding climate. They want to know

that you have a game plan: these are the aims for my first R01 for example, or my first NSF and this is how I'm going to carry them out. Get a group of faculty together from your home institution, (not just your post-doc mentor), who are not in your subject area and do a mock chalk talk.

Finally, while it is crucial to develop a strong interview strategy, preparing for disappointment is equally important. To that end, **Paloma Gonzalez-Bellido** offered a great way to put a positive spin on an interview that doesn't result in an offer. Paloma says: *My personal trick is to prevent disappointment in the first place by thinking of the interview process as something valuable and exciting on its own. I feel privileged whenever I attend an interview because I always learn something*

*new and I also find out areas where I need to improve. To remind myself to keep a positive attitude, during the interview trip I reserve some time to shop for a small object to take home as a reminder of the trip. In a sense I treat the interview as if it was a holiday.*

## SUPPORTING THE ISN AND ITS PROGRAMS

Note from the ISN Secretary: If you worked your way through the 2013 financial report presented in this issue of the newsletter, you might be thinking: *Wow, we're in great shape!* But if you read carefully, perhaps you were surprised to note that members contributed only \$450 to the ISN in 2013. I don't know why donations were so low in 2013, but let's resolve to do better in 2014. You can [contribute](#) to the **General Fund** (which will support the new **Konishi Research Awards** described above, in addition to general operations) or designate any of the following special funds: **Capranica Prize** (recognition of an outstanding achievement or future promise in the field of neuroethology); the **Bullock Visiting Lecturer Fund** (supports travel of invited lecturers); the **Developing Neuroethology Fund** (supports scientists in non-western countries having trouble acquiring travel funds to attend an ISN Congress); and the **Heiligenberg Travel Award** (supports student travel related to neuroethology, including lab visits to learn new techniques).



## SURVEY LINK AND PASSWORD

Send responses to Jose Pena's essay via the following link, which you can copy and paste into your browser. **Use the word neuroethology as the password.** This survey is open to all ISN members. This software will NOT track identifying information, so if you want to include your name and institutional affiliation (not required), please include this information in your response. Responses may be summarized and quoted in a future newsletter.

[https://wakeforest.qualtrics.com/SE/?SID=SV\\_6GB7h87rFwrC0aF](https://wakeforest.qualtrics.com/SE/?SID=SV_6GB7h87rFwrC0aF)

## SYMPOSIUM ANNOUNCEMENT CONTEMPORARY RESEARCH ON ANURAN COMMUNICATION

Wednesday, August 6, 2014  
Hunter College, New York City

We invite you to attend a one-day satellite symposium on *Contemporary Research on Anuran Communication* to be held as part of the **15th Congress of the International Society for Behavioral Ecology**. The symposium will feature a number of invited talks on contemporary issues in frog communication research while celebrating the extraordinary careers and scientific contributions of **Albert Feng, Carl Gerhardt, Walter Hödl, Darcy Kelley, Peter Narins, and Kent Wells**. You can read more about the symposium at the following (case-sensitive) URL, where you will also find information about registering for this special one-day event.

[http://www.umn.edu/~mbee/OFS/Frog\\_Symposium/](http://www.umn.edu/~mbee/OFS/Frog_Symposium/)

The symposium will take place on Wednesday, 6 August 2014, on the campus of **Hunter College** in New York City (the ISBE venue). This date was selected because it is between the end of the ISBE meeting (on 8/5) and the beginning of the Animal Behavior Society meeting (on 8/9). We invite attendees of both the ISBE and ABS meetings – and anyone else who might be interested – to consider joining us and our honorees for this unique event.

Josh Schwartz, Mark Bee, Mike Ryan  
Symposium Organizers

# See you in Sapporo!