



International Society for Neuroethology

Newsletter March 2011

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President's Column

Paul S. Katz
President of the ISN

I'm happy to report that the International Society for Neuroethology is doing well and beginning a number of exciting new initiatives including new fellowship and learning opportunities for students. Despite the recent economic problems in the world the



Society is in excellent financial shape and can afford to help the membership through these and other upcoming programs.

The ISN will be providing \$8,000 for the **First Caribbean School of Neuroethology**, which is being organized by Emanuel Mora and will be held May 9-19, 2011 at Havana University in Cuba¹. Twenty students from Latin American countries, particularly the Caribbean and Central American nations, will participate in this ten day lecture and laboratory course. Several faculty members of ISN from North America, Europe, and Latin America will be teaching in the course. Courses such as these introduce students to the international community of neuroethology and help foster ties that can lead to life-long collaborations.

The ISN is also providing some funding to the 2011 **Ricardo Miledi Neuroscience Training Program**, which will be held March 14 to April 9, 2011 in Montevideo, Uruguay². Ana Silva and José Luis Peña are coordinating the last week of the course, which will be focused on Neural Systems and Behavior, which will include an evening of "Neuroethologists stories".

The ISN council has approved a general policy to provide up to \$10,000 annually to fund intensive neuroethology courses. The reason for investing in these courses is that they are an effective way to establish the next generation of international neuroethologists. These courses help bond the students and often give them the incentive to do post-docs in neuroethology. They build bridges across national boundaries creating a global network for science. They also can inspire students to experiment on local animals and habitats, expanding scientific knowledge into new areas. If you're interested in running one of these courses, more information will be provided in the coming months.

Another important initiative is that the ISN will now be administering the **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 young people



Robert Capranica

¹http://schools.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=4910

²http://www.sfn.org/index.aspx?pagename=FellowshipAndAwards_rmntp

³<http://www.scholarpedia.org/article/Category:Neuroethology>

early in their careers. Beginning this year, the International Society for Neuroethology (ISN) will award this prize, which will continue to bear the Capranica name. More information about this prize can be found in the newsletter.

The next International Congress for Neuroethology will be held in 2012 in College Park Maryland (<http://icn2012.umd.edu/>). The Program Committee chairs are Andrea Simmons and Hans-Joachim Pflüger. They are working with the rest of the Program Committee and the Local Organizing Committee, which is headed by Art Popper to put together a fine meeting. If you would like to put together a symposium, please submit your proposal by May 1st.

The ISN Executive Committee and Council are working on several other initiatives, which I will report to you in the next Newsletter. These are exciting times for the ISN. If you have further ideas for things that the ISN can be doing, please forward them on to me.

In this issue of the Newsletter, we have several articles about the use of Social Media for neuroethology. As you will read, the ISN is now associated with Facebook, Twitter, and CiteULike. We are also in the process of revamping our website to take better advantage of new internet technology. In addition, I would like to solicit articles for the online encyclopedia Scholarpedia.org in the area of Neuroethology³. Unlike Wikipedia, Scholarpedia is peer reviewed and citable. This is an opportunity for experts in Neuroethology to write up-to-date articles that can be shared with the community for free. This is of obvious value for international colleagues. I encourage everyone to take a look at it and contact me if they are interested in writing an article.

As the ISN continues to expand globally, Social Media can help bring us together to create a close knit community. These electronic platforms can also be used to take our message beyond the ISN to others in the world. Determining how to utilize these tools to better our science and our community is an ongoing task.

On behalf of the ISN, I would like to express our heartfelt grief and concern to our colleagues in Japan and those of Japanese origin around the world who were affected by the tragic events resulting from the earthquake and tsunami. We have faith that the Japanese people will eventually overcome this catastrophe. Please let me or other members of the Society know how we can assist our colleagues during these trying times.



Proposed Amendment to the ISN Bylaws Concerning Terms of Officers and Council

Rationale:

Currently, ISN officers and Council members begin their terms at the start of the calendar year. This means that there can be a period of several months between the announcement of the election results and the change over. There is no reason that the newly elected officers need to wait so long to assume office. Therefore, it is proposed that this waiting period be eliminated and the elected officials begin their terms immediately upon announcement of the results.

6. EXECUTIVE COMMITTEE AND OFFICERS OF THE SOCIETY

[Last paragraph, last sentence]

Change:

“The terms of office of the Secretary and new President-Elect shall commence at the end of the calendar year of the ISN Congress.”

to

“The terms of office of the Secretary and new President-Elect shall commence **as soon as the voting results are tabulated and announced, which shall be no later than** the end of the calendar year of the **International** Congress.”



A Farewell to Professor Héctor Maldonado

By Daniel Tomsic

Professor of Behavioral Physiology
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On December 25, 2010, Professor Héctor Maldonado passed away in the city of Buenos Aires; he was 83 years old. Till the last moment, Hector was working in his laboratory, doing experiments, supervising his students, generating new projects and publishing research articles. Hector

was an extraordinary man. He was born and educated in Argentina. He graduated with a law degree (a scent of youth he used to say) and, while working as a lawyer, began to study Biology at the University of Buenos Aires.

In the early sixties he received his PhD with JZ Young in London, being part of the octopus community that worked at the Sztazione Zoologica in Naples during the most fertile period of that history. In 1963, Hector returned to Argentina and began teaching physiology at the University of Buenos Aires. In 1966, a military strike forced him and many other professors to abandon the country. He lived many years in Venezuela where he carried out an extensive series of seminal studies on insect vision, in particular, in the praying mantis. He also continued spending long periods working in the Sztazione Zoologica, a place he always liked to return.

With the return of democracy in 1983, Héctor returned to Argentina. As Chair of the Biology Department, University of Buenos Aires, he transformed the school program, appointing young professors and promoting the creation of a large number of new and modern courses in different areas of biology. His course in Behavioral Physiology, which he taught until last year, influenced several generations of students, some of whom became recognized neuroethologists living in his home country and abroad. In 1983, Hector founded the Laboratory of Neurobiology of Memory and began to work on the crab *Chasmagnathus granulatus*, which has become one of the most recognized invertebrate models for studies of learning and memory. His discoveries on crab memory led him to test the universality of his hypotheses, leading to publications addressing memory reconsolidation in humans.

Héctor was a great scientist, an excellent teacher and mentor. His studies on learning and memory in the octopus, mantis and crab, in particular, represent important contributions to our understanding of the neural bases of animal behavior. Hector was, indeed, the founder of Neuroethology in Argentina, where he left a flourishing school. He was also a cherished friend who will be sorely missed.



SOCIAL MEDIA FOR NEUROETHOLOGY

ISN joins Facebook

By Jason R. Gallant

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People far and wide have been hearing about Facebook, and for good reason! As of July, 2010, 1 in 13 people on the planet are active members of the online social networking site. Perhaps more staggering is that

the average user of Facebook voluntarily produces 90 pieces of social content for the website a month! Facebook, in this manner, is truly revolutionary in that it has changed the way that Internet users interact with websites. Like many successful enterprises, the principle of Facebook is a simple one; active members are connected to other active members that they know. Each time the user logs on, rather than being confronted with a barrage of information that has a range of relevance to the user, the site serves an ongoing feed of information regarding the activity users in his/her social network. Facebook takes advantage of our inherent social curiosity to keep 500+ million users coming back almost daily. While much of the information contained in Facebook is personal (pictures of pets, birthday wishes, etc.), Facebook has become increasingly present in the professional sphere as well, probably thanks to its early beginnings as a means of connecting students at elite U.S. colleges and universities.

In practice, Facebook has become the 21st century equivalent of a business card and online photo album. Rather than a wallet-sized piece of paper containing essential details, one's Facebook page is a standardized, ever changing reflection of one's online persona. This manner of interacting has become particularly compelling for students and postdocs in the ISN, who use Facebook, among other Internet tools, to remain connected with colleagues they meet at professional meetings. My graduate school tenure began with the Facebook "revolution", and following numerous conferences (such as the ISN meetings in Nyborg, Vancouver and most recently Salamanca), I find myself frequently using Facebook to connect with student colleagues that I've met during a conference. As such, I've been able to keep tabs on what is going on in their lives: everything from weddings to job changes. We have also been able to exchange articles of mutual interest both politically and scientifically.

It was in this spirit that I created the ISN Facebook Group as a means for the student/postdoctoral community of neuroethologists to maintain a distinct online identity in Facebook, as well as to provide a forum for exchanging information. As time has gone on, graduate students have become post-docs, and faculty members. As its popularity has grown, professors, undergraduates interested in neuroethology, and even organizations with overlapping interests (the Grass Foundation, AAAS, Society for Neuroscience) have made contact with our Facebook ISN page and have shared relevant information ranging from great places to apply for neuroethology programs, to recently

published papers and meetings. The group now is officially recognized as part of the online presence of the International Society for Neuroethology with more than 240 members, and as such we have been increasing the content of the Facebook page to provide information about relevant meetings, papers, and upcoming jobs and events in the ISN community at large. The group is open to any member of Facebook that is either a member of the ISN community, or is curious to know more about Neuroethology. All members can share and post information that they think is relevant to the group. Our presence on Facebook may seem redundant to some, given our official website and Twitter feed. I feel confident that Neuroethology's presence on such a large network of people connected for personal and professional reasons, serves our society in two distinct ways. First, it increases the visibility of our organization. By including the ISN group page on Facebook, our friends, family and colleagues can learn more about our organization, which in turn serves our goals of promoting neuroethology. Second, and more tangibly, since Facebook is predominantly used by high-school and college age students, our visibility on this popular site will undoubtedly encourage new members to learn about and potentially become involved in neuroethology research, as has occurred on several occasions through online discussions with undergraduates.

Interested in joining? Signing up for Facebook is easy—all you need is an email address. Visit www.facebook.com. Follow the simple signup instructions to get started. Facebook will prompt you to make connections based on online collections of email addresses you may already have (such as in Yahoo! or Gmail), or you can choose to seek people out by searching for them. Once you've entered the basics, seek out our Neuroethology Group! Search "International Society for Neuroethology" or simply follow this link:

<http://www.facebook.com/group.php?gid=2221421261>.

Once you've found our page, be sure to click "join" to receive updates! See you on Facebook!

Author's Note: Every discussion of Facebook deserves a brief consideration of online privacy: remember that each user provides the information available on Facebook—the user may choose to list minimum details, such as their professional/scholastic affiliations, or may choose to actively document each aspect of their life. The choice as to the level of detail shared remains the user's. But know that Facebook uses this information to generate traffic and advertising revenue—listing windsurfing as an interest may potentially target the user for advertisements about windsurfing, for

instance. A second thing to consider is that Facebook is quickly evolving into an online “operating system”—the company has been actively encouraging web developers to write applications and integrate the Facebook’s social network data into its content. This may be as benign as allowing you to invite your friends to an online game of Scrabble, or as invasive as reading particular details about your browsing history or relationship status to provide targeted content or advertising. To this end, Facebook has recently come under intense scrutiny regarding its policies on privacy and security of information. In response, Facebook has enacted global privacy settings that make it simple to control the amount of information that strangers, advertisers, and external websites can glean from Facebook. These settings are easily changed by visiting your Privacy settings page. Still the best practices remain that if you want information kept private—don’t share it online!



SOCIAL MEDIA FOR NEUROETHOLOGY (cont)

Should You Be Blogging?

By Björn Brembs

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The title of this essay is re-used (as is much of what scientists do and write about) from an article in Cell by Laura Bonetta (doi:10.1016/j.cell.2009.10.017) where she describes the Twitter service and some of the scientists using it. She leaves it open if scientists should tweet, but I will be answering my question right away: yes, you should be blogging.

A few years back, David Glanzman, Professor at the Department of Integrative Biology and Physiology at UCLA, once asked me: “I see you write a blog. I read it every now and then, but I’ve never understood why you do it. I’ve never seen any reason why I or any other scientist should start a blog.” Back then, I tried to answer it, but I don’t think I did a very convincing job. I’ll use this article to try and provide some more coherent and compelling reasons.

There are a number of good reasons why scientists should be blogging. For one, a blog is a good way to bring early ideas into a coherent form and maybe get a discussion going in order to develop the idea into a potential research plan. As such, a blog can also help establish primacy, at least in terms of ideas. However, I usually have many more ideas than I could possibly try experiments on. Maybe someday someone will stumble over these ideas and thinks they’re worthwhile, an

additional benefit of a blog: get ideas and hypotheses out there for others to pick up. An increasing sector of the public is also developing an interest in how science works and what we, as fellow scientists, think of the scientific discoveries of other colleagues.

Blog posts about peer-reviewed research are aggregated at <http://researchblogging.org>. I also think that the public deserves some insight into the work of scientists, as they pay most of what we do. I also blog about my own research and write about our discoveries before they appear in the scientific literature: I post PDFs of posters and presentations and provide summaries of the content. Not only does this help establish primacy (this time for the experiments and the data) if there ever were a dispute, I also think that this sort of openness is a good way to improve the way we do science.

I agree with Rosie Redfield, Professor at the University of British Columbia in Vancouver Canada, who said in an interview:

(<http://tomato.biol.trinity.edu/blog/2011/01/looking-to-our-leaders-an-interview-with-rosie-redfield/>)

“My other reason for writing a research blog is that openness fosters good science. That is, I believe that the more openly we do science the better the science is going to be. One example of the benefits of open science that we now take for granted comes from back in the 1970s. When the very first DNA sequences were being determined, the National Library of Medicine made a decision to set up what became Genbank, and journals made the decision to require that authors who published DNA sequences had to deposit this data in GenBank, where other people could have access to it free of charge. This was a pivotal decision, but they could just as easily have decided that sequences should be treated as confidential information so the researchers who generated them get all the benefits. This decision to be open was responsible for all of the research that used these sequences and all of the genetic resources we have today.”

Science, in a lot of ways, is simply a market or ecosystem of ideas. The more transparent and open this market is, the faster ideas can find each other and produce new ideas and discoveries. Much of human history is characterized by an increasing information-flow between people accelerating the rate of discoveries and developments. Using the internet to connect billions of people is the afterburner on which the development of mankind will fly beyond the 21st century. Keeping your ideas from other scientists is akin to throttling the fuel supply to the afterburner.

But the ever increasing speed of innovation and research is only one aspect: another is the process by which we make sure each new scientific report is reliable. Again, Rosie Redfield’s widely read blog kick-

started the criticism and scrutiny of a paper published in Science reporting the discovery of an arsenic-based life-form in Mono Lake. Blogging is starting to establish itself as an alternative mode of communicating science not just to the public, but also within the scientific community. Can you afford to be silent any longer?

In the last few years, realizing the shortcomings of the traditional way in which we communicate science, I've started to comment more and more on the various movements driving publishing reform: open access in particular, but also less visible movements such as those pushing to drive publishing away from journals and towards a single, de-centralized, peer-reviewed, open-access database of all scholarly literature and primary data. In these years, I've learned that the publishing industry rakes in just under five billion US\$ each year in adjusted operating profits from scholarly publishing and related activities. I think these tax-funds could be more effectively invested in implementing the existing, modern communication technologies assisting scientists in the filtering, sorting and discovering of scientific publications, rather than to line the pockets of international shareholders. I use my blog to voice these opinions and to drive the spread of these ideas through the scientific community. It is exciting to see that these sorts of strategies work even on a much grander scale throughout the world today; spreading ideas brings change even to the most rigid regimes.

The communication technologies mentioned above do already exist. I'd like to highlight a social service which incorporates a few crucial aspects of these technologies, FriendFeed. FriendFeed is a service which shares all of the features of Twitter but few of its limitations and provides many additional features valuable for scientists, in particular more effective filtering of scientifically relevant information. In her Cell article, Laura Bonetta quotes Jonathan Weissman, a Howard Hughes Medical Institute investigator at UCSF: *"I could see something similar to Twitter might be useful as a way for a group of scientists to share information. To ask questions like 'Does anyone have a good antibody?' 'How much does everyone pay for oligos?' 'Does anyone have experience with this technique?'"* It is precisely for such and many more purposes that scientists use FriendFeed, which allows the collection of many kinds of contributions, not just short text messages. In fact, I receive many more comments on my blog posts on FriendFeed than I do on my blog itself. Comments to each contribution are archived in that context (and without a time limit), providing a solid base for fruitful, threaded discussions.

In your user profile, you can choose to aggregate any number of individual RSS or Atom 'feeds', including scientific publications you bookmark in your online reference manager (e.g. CiteULike or Mendeley), your blog entries, social bookmarks (Google Reader, del.icio.us, etc.), and Tweets; and any other items you wish to post directly to your feed. You then look for other users whose profiles are relevant to your work and subscribe to them. Every individual item posted in your subscriptions will then appear on your personalized FriendFeed homepage, plus optionally a configurable subset of the feeds you subscribed to. You can choose to bookmark ('like') any of these items (Facebook copied this 'like' functionality just before it bought FriendFeed), comment on them, and share discussion threads in various ways.

At first, this aggregation of information and threaded discussions might seem daunting. However, the stream of information can be channeled by organizing it into separate sub-channels ('lists'; similar to but more versatile than 'folders' in email), according to your personal preferences (e.g. one for search alerts). In addition to individual users, you can also subscribe to 'rooms' that revolve around particular topics. For example, the "The Life Scientists" room currently has 1,477 members and imports one feed. Another very useful room is the "References Wanted" room, where colleagues are sharing hard to obtain scientific publications. Usually, a request for a paper is answered within 1-2 hours, sometimes even in only minutes. There are currently 282 subscribers to this room.

The feature that makes FriendFeed truly useful is its social filtering system. Active discussions move to the top of your FriendFeed homepage with each new addition, which automatically brings them to the attention of you and everyone else who reads those feeds. In a sense, the most current and the most popular entries compete for attention at the top, making notifications unnecessary. This means that your choice of both rooms and subscriptions affects and filters the content you see. In that way, for instance, you could set your preferences such that you would only see papers with a certain minimum number of 'likes' among your colleagues. Alternatively, you can opt to hide items with zero likes or comments, ensuring that only those that someone found interesting will reach you.

Thus, I find blogging already valuable for my research, especially when combined with social technology such as FriendFeed: I can get ideas and opinions out there and get feedback, comments and criticisms from other scientists. I've met new colleagues

this way and developed new ideas, concepts and interests because of them. I have even been invited to write articles, present at conferences and join editorial boards because of my blog. My work as a scientist would be poorer without blogging.

Acknowledgments: The FriendFeed portion of this article has been partially modified and re-used from a blog post which has received input from a number of FriendFeed users and was jointly blogged not only by me but also by Allyson Lister and Daniel Mietchen: <http://bjoern.brembs.net/comment-n579.html>



SOCIAL MEDIA FOR NEUROETHOLOGY (cont)

Super Short Science What Twitter Can Do For You

By Zen Faulkes

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“I don’t see the point.”

That’s most people’s first reaction to Twitter (<http://twitter.com>), an online platform that limits messages to 140 characters – including spaces. People think that you can’t say anything worth saying in 140 characters, or that people using it must have attention deficit disorder.

My first reaction wasn’t much different. It took me a few months to understand Twitter, and to realize that Twitter is conversation. Like any good face to face conversation, it’s not a good idea to talk about yourself relentlessly. You have to contribute, listen, and respond. The more you engage in conversations, and the more people with whom you cultivate those conversations, the more rewarding it becomes.

The trick to getting the most out of Twitter is to find those good conversationalists. If you want to use Twitter as a tool to help your science, you have to find fellow scientists. Twitter has a “Who to follow” feature that makes suggestions based on some of the things you tweet about and who you follow. It leans a little towards the already well-connected.

You will get some extra help in cultivating that list every Friday, when many put recommendations of people providing interesting content by using the

“#FollowFriday” or “#ff” tags. You will also see new people in your timeline, as the people you follow retweet posts by other people on Twitter. And when you keep seeing the same person in your timeline over and over, it’s usually because they have something worth saying.

There is a certain amount of serendipity involved in creating your list of people you follow. And it takes times to figure out the conventions and establish those conversations.

While Twitter’s 140 character limit might seem daunting to developing good conversations, many tweets are links to more substantial pieces. Link shortening services like <http://bit.ly> turn very long links into short ones that let you get in a comment or two with the link.

My experience with the Twitter users I’ve developed conversations with is that they are very generous with offering ideas and responding to requests for help. For instance, I’ve occasionally wanted to read a paper in a journal that our library doesn’t subscribe to. A link to the abstract tagged with “#icanhazPDF” on Twitter (the deliberate misspelling is a bit of humour) has put papers in my inbox faster than my interlibrary loan service could ever hope to match.

Twitter also changes the pace of science news and post-publication discussion. When NASA held a press release on a new paper arguing that a bacteria had been discovered that could incorporate arsenic into its DNA, the discussion on Twitter was informed, highly critical, and above all, fast. Stories on “arsenic life” that appeared some weeks later that didn’t take the discussion into account felt uninformed. It makes for a great way to find interesting papers and controversies for journal club or classes.

Despite my initial puzzlement, Twitter has become one of my most valuable online tools. Being on Twitter can be like walking around the hallways of a good scientific conference: you never know who you’ll meet and can’t believe you haven’t talked to before, it’s informal, it’s chatty with just a tinge of backroom gossip... and if you pay attention, you can learn a lot.

Getting started:

@Neuroethology – The Twitter feed for ISN features both society announcements and recently published papers in neuroethology.

@BoraZ – Bora Zivcovic is one of the most respected advocates of science online, including Twitter. He organized several Science Online conferences and created the highly regarded The Open Laboratory Science Blogging Anthologies. He is an incredible

booster, and is so well connected that others joke that he reads the entire internet every day.

@edyong209 – Ed Yong is an award-winning popular science writer who has a nose for interesting research and a knack for great one-liners about them.

<http://twitter.com/#!/SciSeeker/scienceseeker-members> -

A list of active science bloggers on Twitter.



SOCIAL MEDIA FOR NEUROETHOLOGY (cont)

Neuroethology on CiteULike

By John Bender

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The Internet Revolution has quickly taken over the world, including the staid world of academia (though not without some resistance). The last time I moved, connecting the Internet in the new place was a higher priority than fixing the leaky plumbing. The Internet has changed the way we communicate with each other, the way we find information, and even the way we read and write research papers. Physical issues of journals are rare enough to be notable, and hard-copy reprints are completely a thing of the past. But with the exponential proliferation of journals and published papers, how is one to sift through the muck and efficiently extract nuggets of insight and wisdom?

If the Internet caused this problem, it has also provided solutions. One of the new ways to unearth exciting and relevant papers is through the social-networking model. CiteULike.org is one of the leading websites built for scientists to browse, share, and recommend papers in the recent literature. It allows members to easily import and export complete citations, organize and search their virtual libraries by author or keyword, and link PDFs to individual entries. On top of these features, it enables users to form communities based on common interests, sharing references to new or classic papers. In some ways this is an ideal medium for neuroethologists, who might otherwise be scattered geographically and possibly isolated within their own departments. In fact, CiteULike has a Neuroethology group, and the Society would like this group to become one of the ways that our membership can interact and grow in between our semiannual meetings.

Joining CiteULike is almost unbelievably painless. Browse to citeulike.org and click on the “Join” button, then enter a username, password, and email address (I

suggest using the secure login page linked at the top of the form). Once you’re logged in, choose “Search Groups” from the CiteULike menu at the top, search for “neuroethology”, then click “Join this group”. That’s all that’s required to begin connecting with neuroethologists around the world. The group menu includes “Library” and “Search” options for you to browse through the neuroethology literature, as well as forums or bulletin boards for questions and discussion. In addition, the group’s page includes an RSS feed if you’d like to monitor neuroethology papers in your RSS reader.

Naturally, a healthy community requires producers as well as consumers. CiteULike makes it easy for you to be both. Many journals’ websites now include buttons that will allow you to add an article to your personal CiteULike library with a single click. Springer Publishing is a sponsor of CiteULike, so the *Journal of Comparative Physiology*, one of the two official Neuroethology journals, is included in this category, and the other official journal, the *Journal of Experimental Biology*, has a CiteULike feature, as well. In either case, to add a citation to your library, browse to the article’s abstract page and find the CiteULike button (on *JCP*, the button is hidden in the green “<”-shaped menu above the journal’s name; on *JEB*, it’s in a list below the abstract). Even for websites such as PubMed, arXiv, and JSTOR, which don’t have built-in support for CiteULike, it’s still quite easy to add citations to your library. In the CiteULike menu, choose “Browser Button” and follow the instructions.

Once you choose to add an article to your library by any method, you’ll be redirected to a page where you can select where to post it (check the “neuroethology” box if desired) and attach a PDF if you want, either of which can also be performed later. As an ancillary benefit, you’ll be able to export the formatted citation for this paper at any time from the paper’s page in your library.

If you’ve done all this, you’re now contributing to the growth and connections of neuroethologists across the globe. You also have a way to store, monitor, and access papers in your own online library and in the shared library of the Society for Neuroethology. Please post your own publications as they appear and other relevant ones as you encounter them. It will require very little individual effort from each person to produce and be part of a large, interesting, and thriving community of neuroethologists – as long as you have an Internet connection.



Donald M. Wilson (1932-1970) “The point that must be reached”

By **SCOTT N. CURRIE**

Department of Cell Biology & Neuroscience,
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When I cover the historical foundations of the “central pattern generator” (CPG) concept in my behavioral neurobiology course, I begin as others have, with the Scottish physiologist Thomas Graham Brown in the early 20th

century (Brown, 1911) and the later conflicting views of Erich von Holst (1939) and James Gray (1950). Then I come to the classic locust flight studies of Donald Wilson that laid the groundwork for subsequent cellular and synaptic analyses of the flight circuit (e.g., Robertson and Pearson, 1985). Don Wilson was a hugely influential figure in the emergence of neuroethology as a discipline, and in the use of invertebrate “simple systems” for neuro-behavioral research in the 1960s. He remains especially well known for his first locust flight paper (Wilson, 1961a) that conclusively demonstrated the existence of a flight CPG – a central neural network that could produce rhythmic, patterned motor activity on its own, even when deprived of all movement-related sensory feedback. When I discuss landmark papers in the course, I like to say a few words about the people who conceived and carried out the experiments – along with a photograph or two, if possible. But in the case of Don Wilson, there were no photographs, only a few scattered references in the literature to his accidental death at a young age and his devotion to rock-climbing. (The climbing also made for a coincidental connection with T. Graham Brown, who was himself a highly accomplished mountaineer.) None of the former Wilson colleagues and students that I began contacting in 2007, then again in 2010, knew of any photos. Then I got an e-mail back from Robert Wyman (Yale Univ), the *Drosophila* neurogeneticist who earned his Ph.D. with Wilson at UC Berkeley. Wyman mentioned that there had been press coverage of Wilson’s rock climbing adventures, including his first ascent of Spider Rock in the 1950s, and that I should search the internet for “Spider Rock” and “Don Wilson” – Bingo! There was the tip of a photographic and anecdotal iceberg: wonderful Wilson climbing and rafting photos and stories, beginning at the excellent

“Supertopo.com” rock climbing web-forum. Ultimately, that site enabled me to identify and contact several of Wilson’s former climbing and rafting partners and obtain digitized photographs along with permission to use them. I also obtained many background stories along with references to climbing books and magazine or newsletter articles. (Recently, I discovered that nearly all of these had already been compiled by Steve “Crusher” Bartlett for his gorgeous “Desert Towers” book, published in 2010.) Along the way, I also learned a few things about Wilson’s involvement with the Free Speech Movement at Berkeley from W. Jackson Davis and Ingrid Waldron, and his Idaho rafting accident in the summer of 1970. The result presented here is a brief and off-center biographical sketch that, basically, forms filigree around a set of really nice outdoor photographs. Because Don Wilson’s most important contributions to behavioral neurobiology have been well reviewed elsewhere in recent years (e.g., Edwards, 2006; Mulloney and Smarandache, 2010), I hope to be forgiven for emphasizing his non-academic activities.

W. Jackson Davis has a hand-written note from Don Wilson framed on the wall of his home-office. It’s a Kafka aphorism that was found on Wilson’s desk shortly after his death was announced in June 1970, and it reads “*From a certain point onward there is no longer any turning back. That is the point that must be reached.*”

Early scientific training: Donald Melvin Wilson was born in Seattle on October 6, 1932 and spent all of his early life in southern California, graduating from high school in Los Angeles in 1950, receiving his BS and MS degrees in biology from USC in 1954 and 1956, respectively, and his Ph.D. in zoology from [Theodore Bullock](#)’s laboratory at UCLA in 1959 (all dates confirmed by Nancy Wilson). His doctoral thesis was entitled, “Nervous control of muscle in Annelids and Cephalopods” and helped to earn his reputation as an outstanding young comparative neurobiologist when it was published as back-to-back papers in the *Journal of Experimental Biology* (Wilson, 1960a, b). This research focused on motor control in two groups of annelids (polychaetes and leeches) and two of cephalopods (octopi and squid), and included observations on the muscular effects of giant axon stimulation in polychaetes (*Neanthes brandti* and *N. virens* Sars) and squid (*Loligo pealeii* and *L. opalescens* Berry). The work was conducted at UCLA during the academic year, and at the Marine Biological Lab in Woods Hole (*L. pealeii* experiments) and the Friday Harbor Marine Lab

(*N. brandti*) during the summers of 1957 and 1958, respectively. Wilson extended that interest in giant axon function in two additional papers that were not part of his thesis. These included (1) one of the earliest studies to correlate Mauthner cell activity with fish startle behavior (Wilson, 1959; using the African lungfish, *Protopterus* because of the huge size of its Mauthner axons) and (2) an account of the electrical connections between lateral giant fibers in the earthworm (Wilson, 1961b). On all four of these papers, Wilson was sole author, which speaks to his drive and self-direction, but also recalls Ted Bullock's encouragement of independence in all his students.

Central pattern generation in the control of locust

flight: After finishing his Ph.D., Wilson moved to [Torkel Weis-Fogh's lab](#) in Copenhagen for post-doctoral work (Sept. 1959 – Oct. 60), where he began his locust flight experiments. He used an ingenious setup which permitted the synchronization of wing muscle or nerve recordings with stroboscopic photographic records of wing position during flight. The insects flew in-place, suspended at the end of a pendulum in front of a wind-tunnel. The other end of the pendulum acted as the arm of a double-throw switch that controlled the wind velocity via a servo-mechanism, so that the strength of the animal's forward flight controlled wind speed.

The essential result of Wilson's 1961 JEB paper was that the basic flight motor pattern remained intact following partial or complete deafferentation of the wings, showing that movement-related sensory feedback was not necessary for the construction of normal motor patterns, and indicating the existence of a central pattern generator for neurogenic flight in the locust. This was at a time when Sherrington's "chain-reflex" hypothesis for motor pattern generation, in which simple sensory reflexes triggered each other sequentially to form complex motor patterns (Sherrington, 1947; p.182), was still widely favored (Hoyle, 1980; Bullock, 1995; Edwards, 2006; Stuart, 2007; Mulloney and Smarandache, 2010).

After returning from Copenhagen, faculty appointments followed at Yale (Oct. 1960 – Aug. 61), UC Berkeley (Sept. 1961 – June 68), and Stanford (July 1968 – June 70). The term "central pattern generator" (actually, "central *nervous* pattern generator") was coined in another significant paper written with one of Wilson's early graduate students at UC Berkeley, Robert Wyman. This article showed that random or rhythmically timed electrical stimulation of the thoracic nerve cord in decapitated and wing-deafferented locusts still evoked coordinated motor output that resembled normal flight motor patterns. Coordinated flight activity began only after many stimuli, exhibited a wind-up of cycle frequency over multiple seconds until it reached a

constant level (about 20 Hz), then displayed many cycles of after-discharge following stimulus-offset. All of these effects are strikingly similar to the non-linear summation of subliminal stimuli and prolonged motor after-discharge that Sherrington (1947) described for hind limb scratch motor patterns in low-spinal dogs – and suggested a similar build-up and storage of excitation in a central neural network.

Wilson's relatively brief time at Berkeley (~6.5 years) also resulted in some of the earliest computational and analog electronic models of pattern generating neural networks (Wilson, 1966, Wilson and Waldron, 1968). In addition, there were analyses of neuromuscular control in myogenic Dipteran flight (Nachtigall and Wilson, 1967), models of interlimb coordination during 8-legged locomotor gaits in tarantulas (Wilson, 1967), and elegant studies that assessed the role of movement-related sensory feedback in modulating centrally driven motor patterns, and compensating for perturbations (Wilson and Gettrup, 1963; Wilson, 1968a). In one of these papers (Wilson, 1968a), he nicely summarized the complementary roles of the CPG and sensory feedback in constructing adaptive behavior: *"In the locust flight control system proprioceptive reflexes and exteroceptive inputs supplement and complement the information built into the CNS. Hence, even though the ganglia are pre-programmed to produce a nearly normal motor output pattern, that pattern can be modified to meet current needs. It seems to me that the CNS has programmed into it through the genetic and developmental processes, nearly everything that it is possible for it to know before actual flight occurs. The sensory inputs supply only the genetically unanticipatable information such as wind direction and position of the horizon."* "... Overall it appears that the flight control system is a very safe one, having a multiplicity of complementing mechanisms. It is centrally pre-programmed, perhaps to the fullest extent possible, but it also has a superimposed set of reflexes which can simultaneously relate the animal to its environment, compensate for bodily damage, and correct errors in its central programme. As a result it can tolerate a high degree of damage and still carry out a very demanding activity."

Rock Climbing (SEE FIGS 1-3 at END):

Wilson began rock climbing as an undergraduate biology major at USC (Frank Hoover, pers. commun.) and developed in to a world-class climber by the mid 1950s, when he was in his early twenties. He is still well known amongst the rock-climbing cognoscenti for a number of extremely hairy first ascents, with small teams made up of the early hot-dogs of the sport (Royal Robbins, Jerry Gallwas, Mark Powell, Bill "Dolt" Feuerer, Chuck Wilts, Warren Harding). His records began with several important Yosemite climbs in the early to mid 1950s, including "Open Book" at Tahquitz (Idyllwild, CA) in 1952 and a famous first attempt at the NW face of Half Dome in Yosemite in 1955 – an

attempt that attracted the interest of the Saturday Evening Post. During this period, Wilson also helped devise the YDS (Yosemite Decimal System) with Royal Robbins and Chuck Wilts, which permitted the precise gauging of difficulty levels for “free climbs” (without aids) on a 5.0-5.9 scale, and he co-authored the “Climber’s Guide to Tahquitz Rock” with Wilts in 1956, which detailed the YDS for the first time. He remains best known in climbing circles for his first ascents of several sandstone desert towers in the “[Four Corners](#)” region of the southwest. These included “Spider Rock” (March 1956) in Canyon de Chelly, Arizona, “Cleopatra’s Needle” (Sept. 1956) in the Valley of Thundering Water, New Mexico and the “Totem Pole” (June 1957) in Monument Valley, Utah. All these desert spire climbs occurred during a 15-month period in which Wilson finished his M.S. degree at USC and began full-time work toward his doctorate at UCLA (Burton, 1956; Wilson, 1957a, 1957b, 1958; Breed, 1958; Sherrick, 1958; Roper, 1970; Jones, 1976; Gallwas, 2007, 2010; Bartlett, 2010). Following the Totem Pole ascent, the Desert Tower team (Wilson, Gallwas, Powell, Feuerer) went their separate ways. Don and Nancy Wilson traveled by VW Bug to Woods Hole, Massachusetts so that Don could spend the rest of the summer of 1957 at the Marine Biological Lab. After that, he completed his Ph.D. at UCLA with Ted Bullock, then moved to Copenhagen to post-doc with Torkel Weis-Fogh and begin his seminal locust flight studies. After his return to the United States in a series of faculty positions, he continued to climb for pleasure with friends and family, but no longer pursued records.

A list of Wilson’s most significant climbs (FA = First Ascent; FFA = First Free Ascent):

- 1952 FFA, Open Book (the first 5.9), Tahquitz, Idyllwild, CA with Royal Robbins.
- 1952 FA Super Pooper, Tahquitz, with Chuck Wilts, John & Ruth Mendenhall
- 1953 2nd ascent of Sentinel North Face, with Royal Robbins and Jerry Gallwas (2 days)
- 6/1955 attempted Half Dome NW Face, Yosemite, with Jerry Gallwas, Royal Robbins, and Warren Harding (reached 450’ in 2.5 days) [See [Jerry Gallwas](#) talk about the attempt on YouTube.]
- 3/1956 FA Spider Rock, with Mark Powell and Jerry Gallwas
- 6/1956 FA Lower Cathedral Rock East Buttress, with Mark Powell and Jerry Gallwas (14 hours)
- 9/1956 FA Cleopatra’s Needle, with Jerry Gallwas and Mark Powell
- 12/1956 FA Kat Pinnacle NW Corner, with Mark Powell
- 1957 FA, Finger Rock, north face (a.k.a. Bill Williams Memorial, Arizona), with Mark Powell and Bill Feuerer
- 6/1957 FA Totem Pole (Monument Valley), with Mark Powell, Jerry Gallwas and Bill Feuerer

I include here some brief excerpts from Don Wilson’s own published descriptions of the three major Desert Tower climbs – Spider Rock, Cleopatra’s Needle and the Totem Pole. I especially like his approach to the “legend of Spider Rock” as a testable hypothesis. The

fifth and final officially permitted ascent of the Totem Pole was in 1975, when two climbers were hired by Clint Eastwood and Universal Studios to locate a suitable rock tower and “put the ropes up” for a climbing sequence in the film “[The Eiger Sanction](#)” (Bjørnstad and Wyrick, 1976; Bartlett, 2010). As part of a deal with the local Navajo council, the climbers removed all existing hardware from the tower at the end of filming, including the can (placed on the summit in 1957) containing the original summit-register of Wilson, Powell, Gallwas and Feuerer. The register now resides in the collection of the Bradford Washburn American Mountaineering Museum, Boulder, Colorado (Gallwas, 2010).

The First Ascent of Spider Rock [Don Wilson (1957) Sierra Club Bulletin 42(6): 45-49]: *“In Canyon de Chelly National Monument in northeastern Arizona is a great sandstone spire. According to the Navajos, who call it Spider Rock, its summit is the home of the Spider Lady. Navajo children are told that Speaking Rock across the valley informs the Spider Lady of their misdeeds and that she will take them to her home and devour them. The bleached rubble on the summit is supposed to be the bones of bad children.*

Since the truth of this last statement is testable, it was possible to disprove the legend of Spider Rock by examining the rubble at close range. Of the three tried means of reaching a summit two were impossible here. It was too small for an air-drop and too far away to throw a rope over. It could be reached only by classical mountaineering methods in a long-climb from the valley floor.”

[Spending the night bivouacked on a ledge.] “...After some canned sausages and gumdrops, we put all our clothing on, and tried to sleep as much as possible, not so much for rest as for shortening the period of consciousness of the cold. But as large as our ledge was, it was not smooth and a comfortable position was not possible. We were tied in, of course, to prevent rolling off, and it was this fact that later became dramatized in the newspapers to “they spent the night lashed to the cliff.” We watched the sunrise and then waited for the sun to hit us before breakfasting. It was only 200 more feet now.”

[On the summit.] “...During the hour we spent on top we built cairns, piling the “bones” into tow little monuments – not worried about our disturbing an old legend. For some time we enjoyed watching the spectators on the rim watching us. Meanwhile Aubuchon [the park Superintendent] drove to Chinle, telegraphed our families, and informed the newspapers. Spider Rock had been climbed.”

Cleopatra’s Needle [Don Wilson (1957) Sierra Club Bulletin 42(6): 63-64]: *“For several years we had known about a spectacular spire in New Mexico through pictures advertising a bus company. As we became familiar with sandstone climbing, we began to inquire where that spire was, how high, how fractured and how soft the sandstone. We found an article stating that the needle (they called it Spider Rock, possibly confusing it with the one in Canyon de Chelly) was 265 feet high and was in the Valley of Thundering Water near Fort Defiance, Arizona. Mark Powell visited the valley last spring and brought back an excellent report.”*

[Describing the soft rock and loose pitons.] “...I unsnapped from my top piton and descended onto the next. It began to pull out. Quickly I lowered myself to the next. It also

shifted. The fourth held my weight but now I could not reach back up to unsnap from the loose ones. I came down to the ledge knowing that tomorrow's leader had no pleasant task."

[On the summit.] "... Meanwhile on the summit, a ridge 10 feet long which we straddled, we became aware of a new annoyance. All around us thunder showers were brewing and we sat on a lightning rod over a plain. But the clouds dissolved and we had the late afternoon sun as we built a cairn and prepared our rappel anchor."

The Totem Pole [Don Wilson (1958) Sierra Club Bulletin, vol. 43 (9): 72]: "Several years of effort came to an end last June when Bill Feuerer joined Jerry Gallwas, Mark Powell and me to complete the first ascent of the Totem Pole in Monument Valley. This effort began with an agreement between the three to try to climb what they considered to be the three most important of the Southwest's desert spires: Spider Rock, Cleopatra's Needle, and the Totem Pole. At that time none of the desert's great sandstone spires had been attempted. Both of the first two were climbed on the first try. Spider Rock was highest, Cleopatra's Needle the softest and therefore least safe, but the last turned out to be the most difficult."

[Making the summit, the day after placing bolt screws in the rock.] "...The last morning we drove to the base of the talus in Jerry's jeep, and a caravan of spectators from the Post followed after breakfast. On the prussik lines we were harassed by gusts of wind which swung us 30 or 40 feet across the rock face. We reached the summit after about 13 hours of upward progress spread over the several days. As we descended, a little rain fell, reminding us of the lightning which had stopped the earlier party."

Campus Activism: While at U.C. Berkeley (1961-68), Wilson became one of the major faculty leaders of the Free Speech Movement, the aim of which was to give students the right to organize on campus in support of political causes. He was close friends with its fiery student-leader, [Mario Savio](#), and a number of graduate students and undergraduates in the Wilson lab during the mid-sixties were likewise active in the movement. Wilson named his laboratory the "Sympathetic Ganglion" (written on a plaque above the door) to indicate solidarity with the FSM (W.J. Davis, pers. comm.) and kept a bullhorn in the lab "with which to address student rallies" (Edwards, 2006). But political engagement on campus, and weekend rock-climbing excursions with the boss, were no excuse for lack of progress in research. Ingrid Waldron recalled that while Wilson was quietly supportive of her political activities for about a year, he then insisted that it was time to get to work and finish her thesis – advice that prodded her to "finish in a respectable five years, instead of six" (I. Waldron, pers. comm.). In July 1968, Wilson left U.C. Berkeley for Stanford, following a disagreement with his Department Chairman regarding the use of grades to alter military draft status (Mulloney and Smarandache, 2010, footnote 2). But, his activism continued at Stanford, where W. Jackson Davis (who was then a post-doctoral fellow in Don Kennedy's Stanford lab) remembered being "first tear-gassed by a

helicopter with Don (Wilson)... near the tower." (W.J. Davis, pers. comm.).

Rafting and the fatal accident: In the 1960s, Wilson took up white-water rafting with characteristic intensity. His death came on June 23, 1970 ([Hoover, 1970](#); [Kennedy et al., 1970](#); but was reported as Sunday, June 21 by Collins and Nash, 1978) at the age of 37 while rafting the Middle Fork of the Salmon River in North Central Idaho. The river was extremely flooded and especially turbulent that week from recent snow melts. Wilson led a party of nineteen people that included life-long friend Frank Hoover in four of Hoover's 10-man rafts (Hoover, pers. commun.; Collins and Nash, 1978). Wilson was at the oars of his raft. Only 2 hours after launching near Dagger Creek, they were entering Velvet Falls (where Sulphur Creek meets the Middle Fork; see [map 1](#), [map 2](#)) when one of the rafts flipped over, landing its crew in the water. (See recent [rafting](#) and [kayaking](#) videos of Velvet Falls.) Seeing this, Wilson ran his raft aground on an island in the middle of the river. He attempted to swim to shore from the island in order to assist those who had fallen over-board. His mistake, which probably resulted from rock-climbing habits, was to attempt the swim "belayed" by a rope attached to the raft, with its other end tied around his waist. When he entered the river, the powerful current immediately swept him down-stream and held him under water, taut at the end of the rope. By the time he was pulled in, he had drowned. Amongst the devastated survivors, some decided to hike back to the Dagger launch site, while others continued down river with Wilson's body for another 26 miles to over-night near the Indian Creek Airstrip. A light aircraft arrived the next day to pick the group up, and Wilson's ashes were later spread on the Middle Fork (Frank Hoover, pers. commun.; Hoover, 1970; Collins and Nash, 1978; Robbins, 2009). He was survived by his ex-wife, Nancy, and four children.

On Sunday June 21, Tom Brokaw (the future NBC News anchor) was rafting the Middle Fork with another group (Brokaw, 1970; Collins and Nash, 1978). Brokaw's closest friend was killed and the tour-guide forever lost at Weber Rapid (downstream from the site of Wilson's accident, referred to by Brokaw as "Webber Falls") when their McKenzie boat was swamped and sank in the white-water. Brokaw wrote about it a few months later in an article titled "That river swallows people. Some it gives up. Some it don't." (Brokaw, 1970). In the following excerpt, he mentioned the fate of a "Stanford professor" (Wilson): "That week the Middle Fork and the main Salmon swallowed six people. On the main Salmon two U.S. Forest Service employees drowned when their pickup truck was forced

off the road into the river, and a Detroit teenager was swept away when his kayak capsized. A Stanford professor drowned in the Middle Fork when he attempted to cross the river while attached to a rope. At the time we were unaware of the deaths. When word of our accident spread, two parties behind us which included Sir Edmund Hillary, the conqueror of Mt. Everest, and Frank Gifford, the sportscaster and former football star, got out of the river at the Flying B Ranch.”

The Middle Fork has more than forty sets of rapids, but when flooded by spring snow-melts, it becomes essentially one continuous rapid along its whole length, from Dagger Falls to the confluence with the greater Salmon River. A few summers later (June 1974), the U.S. Forest Service warned that any attempt to run the flooded Middle Fork was “suicidal” (Collins and Nash, 1978). The third week of June 1970 was the deadliest in the river’s modern history, and remains infamous amongst Middle Fork rafting guides ([Al Bukowsky](#), pers. commun.).

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Acknowledgements: Grateful thanks to many gracious people in and around academia who shared their recollections of Don Wilson, including his widow, Nancy Wilson, Robert Wyman (Yale Univ.), W. Jackson Davis (UC Santa Cruz, Emeritus), Brian Mulloney (UC Davis), John S. Edwards (Univ. Washington) and Ingrid Waldron (Univ. of Penn.). Thanks also to Frank Hoover (Wilson’s life-long friend and climbing / rafting partner), Jerry Gallwas (made many important climbs with Wilson in the 1950s) Steve Roper, Ken Boche (rafted with Wilson in 1969) and Don Lauria of the rock-climbing Diaspora, for permission to use their photographs and remembrances, and to Al Bukowsky (Solitude River Trips) for answering my questions.



Figure 1 (above) A: Don Wilson (on left) and Frank Hoover, c.1952-53, when Wilson was an undergraduate at USC. Check out the climbing footwear. From an article in Summit magazine, August 1956 (Photo by Niles Werner.). Original caption: “Off for a Sunday practice session of rock climbing are these members of the Angeles Chapter, Sierra Club Climbing Section. Well-known for their outstanding ability and agility on the rocks are Don Wilson and Frank Hoover. Don recently made a “first ascent” of Spider Rock in Canyon de Chelly National Monument, and Frank is presently Vice Chairman of the Angeles Chapter Rock Climber.” **B:** Wilson (lower right) belaying Hoover on [Old Woman Rock](#) in Hidden Valley Campground, Joshua Tree National Park. (From the Barbara Lilly Collection, Sierra Club Angeles Chapter Archives, photo by Niles Werner.)



Figure 3 (above) Totem Pole in Monument Valley, Utah. The first ascent team consisted of Don Wilson, Jerry Gallwas, Mark Powell and Bill “Dolt” Feuerer. **A:** From a distance, with Navajo looking on. **B:** Don Wilson leading a pitch on the afternoon of the 1st day. **C:** Gallwas climbing over the lip of the summit (upper arrow) and Wilson “prusiking” (ascending a rope via a prusik line; lower arrow). **D:** Powell leading (upper arrow) with Wilson belaying (lower arrow). All photos taken by Bill Feuerer (from the Dolt Collection, courtesy of Jerry Gallwas and Don Lauria.)

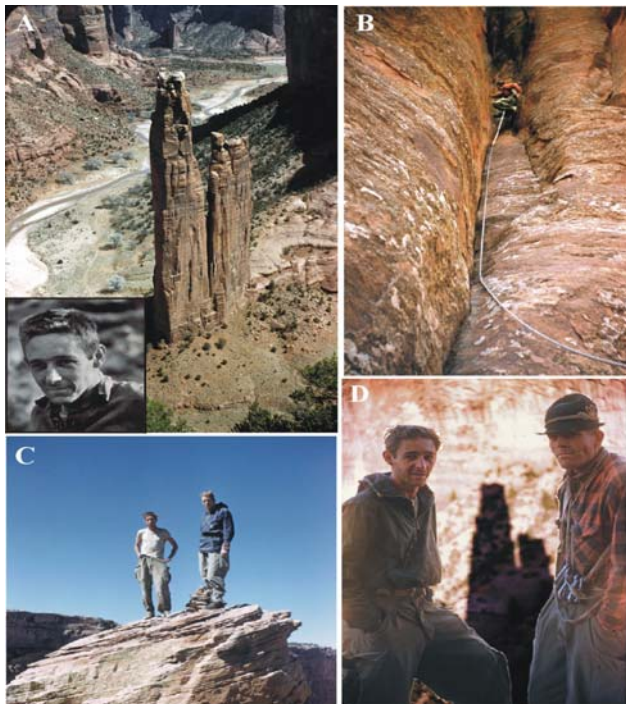


Figure 2 (above) Spider Rock, in Canyon de Chelly, AZ, is the tallest free-standing spire in the world (832 feet from the bottomland to the summit; approx. 2/3 the height of the Empire State Building). First ascent made by Don Wilson, Mark Powell & Jerry Gallwas in March 1956. **A:** Spider Rock, photographed from the Overlook by Jerry Gallwas during a 1955 reconnaissance trip. **Inset:** Donald Wilson, c.1956-57 (Ascent Collection, courtesy of Steve Roper.) Wilson was then a graduate student in Theodore Bullock’s comparative neurobiology lab at UCLA. **B:** Wilson ascending the “chimney” between the two spires. **C and D:** Wilson and Powell on the summit (Wilson on left. Note the shadow of Spider Rock in D). (All photos except inset in A courtesy of Jerry Gallwas. Gallwas, 2010)



Figure 4 (left) *Donald Wilson* in 1969, during a rafting trip on the Colorado river. **Upper:** Cataract Canyon, Glen Canyon National Recreational Area, Utah. **Lower:** With a captured toad. (Photos courtesy of Ken Boche). Wilson’s fatal rafting trip on the Middle Fork of the Salmon River in Idaho occurred about one year later at “Velvet Falls”, so named because the rapids make little or no sound until you are upon them (Collins and Nash, 1978).

ANNOUNCEMENTS

The 2011 International Society Neuroethology Capranica Prize

Call for Nominations



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 young people early in their careers. Beginning this year, the International Society for Neuroethology (ISN) will award this prize, which will continue to bear the Capranica name.

The prize consisting of \$1,000 (US) will be awarded to a promising young investigator who is the author of a paper published on line or in print during the 2010 calendar year, which 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, or importance for advancement of knowledge. The student must be first author on the submitted paper and must have played a major role in the inception and execution of the study. A secondary consideration shall be the accomplishments of the investigator such as other papers published, awards earned, leadership in societies and student organizations.

Eligible candidates must be either graduate students or postdoctoral trainees who have received their doctoral degree after 2006. Either the nominee or the advisor must be a member of ISN.

Applicants should submit (either by postal mail or by e-mail in PDF format) 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 cash prize will be awarded to the recipient and their name will be announced at the next International Congress of Neuroethology

*****All materials must reach the ISN office by April 30, 2011*****

Inquiries, as well as all application materials, should be addressed to:

Capranica Prize Selection Committee
International Society for Neuroethology
P.O. Box 1897
Lawrence, KS 66044, USA
Email address: lhardwick@allenpress.com

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 the above address.



2011 NEUROETHOLOGY GORDON CONFERENCE

The Co-Chairs (Jochen Zeil and Susan Fahrbach) of the 2011 Gordon Research Conference in Neuroethology are happy to announce that registration for this meeting is now open. View the program and register at:

<http://www.grc.org/programs.aspx?year=2011&program=neuroeth>

The 2011 Gordon Research Conference in Neuroethology will be held August 14-19, 2011 at Stonehill College in Easton, Massachusetts, USA. The conference will be preceded by a weekend Gordon Research Seminar in Neuroethology designed to foster professional development and networking among graduate students and post docs conducting neuroethology research. Registration for the Gordon Research Seminar is separate from that for the main conference, and can be accessed at:

http://www.grc.org/programs.aspx?year=2011&program=grs_neur

Please share this information with your colleagues, graduate students, and post docs.



CALL FOR ABSTRACTS

3rd Symposium on Acoustic Communication by Animals

August 1–5, 2011

Cornell University, Ithaca, NY

This four day workshop will bring together experts, students and others working in the field of acoustic communication by all species of animals. The topics will cover a wide range of subjects in this new and emerging field.

Participants may submit abstracts for poster or oral presentations. An extended abstract (up to two pages) is required and must be in English. The presentation type for each contributor (poster or oral) will be chosen by the organizers to fit the schedule.

For more information, or to submit abstracts, please visit the Symposium Website:

<http://www.certain.com/system/profile/web/index.cfm?PKwebID=0x2160313c2a&varPage=home>

Abstract submission deadline: April 8, 2011

Sponsored by:

Acoustical Society of America: <http://asa.aip.org/>

Office of Naval Research: <http://www.onr.navy.mil/>

Cornell University Bioacoustics Research Program:

<http://www.birds.cornell.edu/brp>

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MATERIAL FOR FUTURE NEWSLETTERS

Send news, job advertisements, meeting announcements and other related information for the next newsletter to the ISN secretary, [Karen Mesce](mailto:mesce001@umn.edu) (mesce001@umn.edu) All materials should be sent via email.

Advertisements for jobs and graduate/postdoctoral positions should be no more than 150 words.

Suggestions for *feature articles*, including autobiographical sketches, research group reports, and Neuroethological Viewpoints, should also be sent to the ISN secretary. Please do not submit full articles of this type without a response from the Editorial Board. Feature articles may be up to 1,500 words in length.

We also welcome research commentaries, book reviews, and other material that might be of interest to the ISN community. These should be no longer than 450 words in length, and should only be submitted after consultation with the editor.

