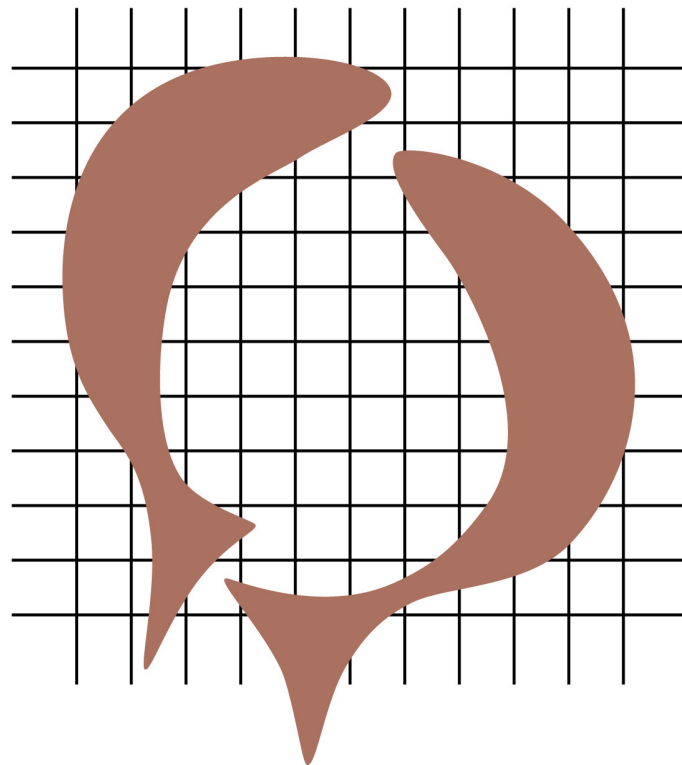


NVG NEWSLETTER
22th year no. 2, December 2013

Nederlandse Vereniging voor
Gedragsbiologie

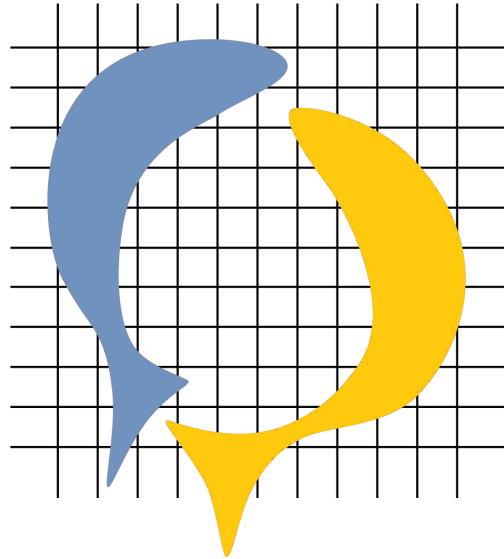


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NETHERLANDS SOCIETY FOR BEHAVIOURAL BIOLOGY

The Netherlands Society for Behavioural Biology aims at strengthening behavioural biology in the Netherlands and the direct surroundings. We strive for top quality in all of the behavioural sciences with respect to teaching, research, and public debate. The society organizes a yearly meeting and distributes this biannual newsletter.



Council members:

Prof. Dr. Simon Verhulst (Chair)
Dr. Ruud van den Bos (Secretary)
Dr. Jeroen Stevens (Belgium)
Dr. Kees van Oers (PhD workshop)
Dr. Liesbeth Bolhuis (Treasurer)
Dr. Martine Maan (NVG-meeting)
Dr. Hans Slabbekoorn (Newsletter)

More information available at:

<http://www.gedragsbiologie.nl>

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Membership fee: € 25,- per year for (PhD-)students and biologists in-between-jobs. Others: € 30,-.

Contributions newsletter:

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Editorial Preface

Behaviour is affected by molecular and cellular processes and knowledge about behaviour is key to understanding many evolutionary and ecological processes. Consequently, our discipline plays an important role in adjacent disciplines and there is plenty of opportunity for fruitful integration. And *they* also come to *us*: our NVG-meeting was "back to normal" with great presentations from our own and adjacent disciplines. And *we* can go to *them*: the NVG provides support for behavioural symposiums or workshops that you would like to organize at interesting meetings of others (Page 12). *They are us...* **Hans Slabbekoorn**

SOESTERBERG



~ Report from the last NVG-meeting at the Kontakt der Kontinenten by a special reporter.



NVG-meeting 2013: "Back to normal"

By Bin-Yan Hsu, Groningen University

After the special meeting for the 20th anniversary of NVG in 2012, this year the annual NVG-meeting came back to its normal format, in which more PhD students were accepted to present their work. As a third-year PhD student, this was my third time attending this conference, but the first time having an opportunity to do an oral presentation. The experience was certainly great and actually so much better than I expected. I think this is not only because now people know my work and I got some good feedback, but also because presenting made me feel that I was really part of the conference and not just a bystander.

Since I joined this meeting for three times now, I noticed some interesting features that are apparently tradition or custom, and that yielded some thoughts that

may be interesting to share with you.

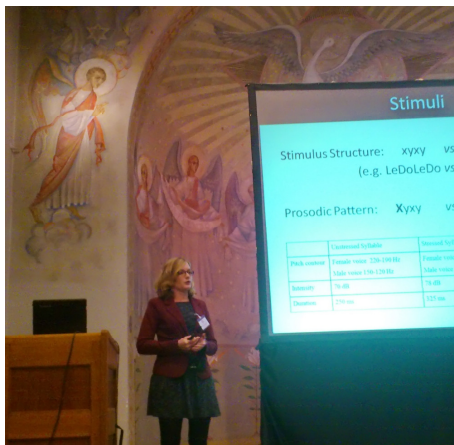
As you might expect, the NVG annual meeting always has very good invited speakers to give the plenary talks, which typically cover various fields in behavioural biology each year. This is always one of the most attractive parts of this meeting and all talks were great again this year. However, these talks are not easy tasks to both the speaker and the audience because the talks are always scheduled right after dinner. Being part of the audience, I, and probably you too, always have to fight with the consequences of digestive physiology to stay focused on the content of the talk. Although, it is very hard to evaluate how big the challenge really is, the speakers probably know best because it is certainly their challenge to keep the audience awake and kindly forgive those who are accidentally "unconscious".



Invited speaker Georgia Mason introduced by Bas Rodenburg (Picture Paul Koene).

Compared with the previous two years, there was something different with the programme this year: the talks seemed not to be arranged by their topics. I did not

know whether the organizing committee made this change intentionally, but I liked it because I was able to listen to talks of various topics in each session. Since the NVG-meeting is not a very big conference and lacks several parallel sessions at the same time, sorting the contributed presentations by subject might make people bored in case they are not interested in the topic of a particular session. Of course if bored people decide to skip particular sessions to go outside for some fresh air, topical sessions turn out to be an advantage instead. However, I am not such a "going-out" type and the variety in talks in each session inspired me very much. More importantly, if you are listening to a topic that you are not very interested in but the speaker successfully catches your attention, there must be something you can learn about doing an attractive presentation.



PhD-student Michelle Spierings presenting (Picture Andrew Spink).

In addition to the scientific part, everybody would agree that food and drinks are always important for a conference. There is actually an interesting custom

regarding the dinner of the NVG annual meeting: each year there is a European style and an Indonesian style buffet or dinner. In 2011 and 2013, the European dinner came on the first night and the Indonesian on the second, while the Indonesian came before the European in 2012.

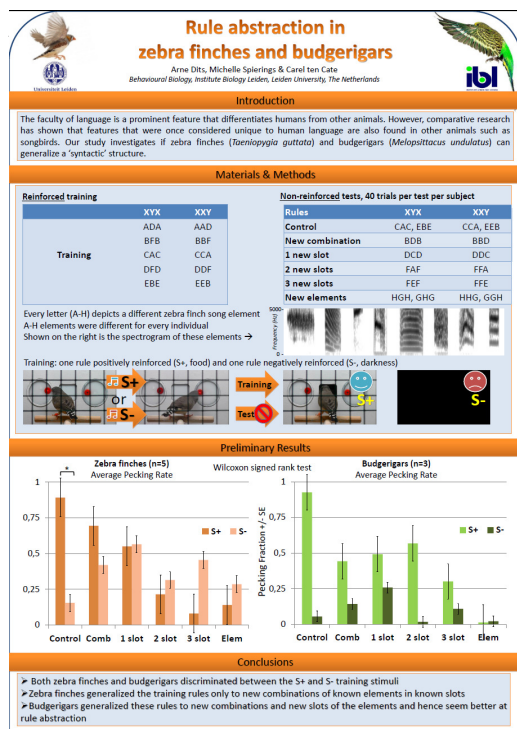


Based on this pattern, we will probably again have Indonesian first and European second in the meeting of 2014. I am quite curious if my prediction will be right. The availability of coffee and tea became a small issue to me to some extent this year. Somehow coffee and tea were no longer constantly available at the back of the conference hall, but only available in the "winter tuin" during coffee/tea breaks. Thanks to the Dutch culture, I have become very used (maybe addicted?) to have coffee all the time and limited availability of coffee then becomes a problem. Another small complaint I have was the location of lunch and dinner, which was sometimes not announced very clearly. Alternatively, my colleague and I were just not smart enough because we always went to the wrong places.

At last I have to mention the PhD workshop. Similar as in the previous years, the PhD workshop provided a great opportunity in a relaxed atmosphere to discuss matters with fellow PhD-students and senior scientists. This year was the first time that Kees van Oers took over this job from Kate Lessell. I think Kees did really a good job and I enjoyed it very much!

*** The first Brill-Baerends lecture** at the NVG meeting 2013 was given on the Wednesday evening by **Jacques Balthazart** from Université de Liège who spoke about many years of work on the copulatory behaviour of quail: “*Rapid changes in brain estrogen production and behavioral action*”.

Arne Dits of Leiden University won the 1st Prize of the best poster and poster performance



There were two runners-up with both excellent posters: **M. Aamir Aslam** of the Animal Breeding and Genomics Centre, Wageningen/UR Livestock Research, Lelystad/ University of Groningen. His poster was about: "Association of egg mass and egg sex in layer hens (*Gallus gallus*): gene expression analysis from germinal disc region of F1 follicle around time of meiosis"; and **Sanne Moorman** of the Cognitive Neurobiology group, Utrecht University. Her poster was about: "Lateralized memory-related neuronal activation during sleep in juvenile zebra finches".

Is being forced by your supervisor to write an article about scientific misconduct, scientific misconduct?

A report of the PhD-workshop 2013

By Lies Zandberg & Lysanne Snijders (both BHE WUR - NIOO)

An interesting PhD workshop was organized last November where Kees van Oers made his successful debut as organizer. The day started off by short individual talks of PhD-students about their projects, after which they had the opportunity to discuss problems they were facing in their study with other PhD-students. More often than not we experience similar problems and therefore discussing these amongst ourselves can be very insightful. And if we could not find the light ourselves there were also several experienced silverbacks to help us out: Kees van Oers, Martine Maan, Ulrika Candolin, Georgia Mason,

Martijn Egas and as a surprise appearance: Jacques Balthazart.

After this, Kees van Oers (a great Tim Birkhead impersonator) gave a presentation about scientific misconduct using the article "A Beginner's Guide to Scientific Misconduct". In advance, we were asked to fill out a questionnaire in which we had to rate cases on a scale from no misconduct to severe misconduct (and if we were guilty ourselves). For example: "dividing your research into the least publishable units" or "allowing your name to be put on papers to which you have made no reasonable contribution" and last but not least "exploiting the labour of graduate students and post-docs for personal gain". It became immediately apparent that many cases are not so easy to rate, which is probably also the biggest problem in preventing and judging scientific misconduct.



Next, we were subdivided into groups to discuss causes that could increase scientific misconduct, possible rules to judge misconduct and possible solutions to prevent it. Afterwards each group presented their thoughts.

Here we present a short summary:

Causes

The increased competitiveness in the academic world and the pressure to publish fast and high seems to push some people over the edge. There have been several recent cases in which researchers in top positions were found to be guilty of data massaging or making up completely fake data sets. Most of the times they blamed this on the increased pressure "to publish or else...". At the same time it took years before anybody noticed it. Replicating experiments and studies is often not considered a sexy and interesting topic and so scientists are often not really triggered to do it.

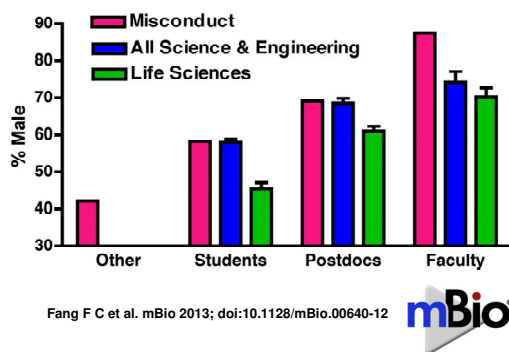
Rules

Rules are very difficult to set up because the severity in many cases hangs together with the motivation of the misconductor. Generating fake data is clearly seen as severe misconduct, but how severe do you judge creating unfair competition by getting/letting yourself be put on papers you could not present on a seminar? And is unwittingly making mistakes in statistics or citations just sloppy science or really misconduct? Even if the person tried very hard to prevent it? To draw hard lines in these grey areas seems almost impossible as every case is very context dependent.

Solutions

There is not much to do about causes and rules are complicated. The general feeling was therefore that solutions should be sought in prevention. These were amongst the things mentioned: a) Make

starting researchers aware of misconduct and what things they should certainly not allow with courses on ethics in science; b) Do not take credits for things you did not do; c) Set up a punishment system to discourage misconduct; d) Set up ethical boards inside graduate schools where people can go and report problems anonymously; e) Encourage and reward replication studies; f) Have an independent statistician judge your analysis; g) Increase communication and discussion amongst scientists.



Trust and honesty

Another issue that came up was: "Trust cannot be trusted". We have a peer-review system in which we trust reviewers to notice every possible misconduct. Of course this is definitely not a fool-proof system. Reviewers sometimes lack the skills or do not really have the time to accurately judge the manuscript for objective science. First authors should take responsibility to prevent unwittingly made mistakes as much as possible. But reviewers should also be honest if they feel they can not judge a manuscript properly. This last recommendation actually goes for all scientists: be

honest. We should be doing this job to achieve good science; therefore we should help and seek help to make it better. Only by being honest and reasonable about what we can do, are doing or did, we can improve our mistakes and do great science.

IN THE SPOTLIGHT



~ Special occasions, honorary lectures, prizes, grants and awards for outstanding behavioural biologists.



Dr. Ruud van den Bos

is our new secretary replacing Dr. Ir. Bas Roodenburg



Ruud van den Bos is researcher in organismal animal physiology at the Radboud University Nijmegen, the Netherlands. His research interest concerns the role of emotion and cognition in the organisation of

behaviour. Over the years this has comprised studies on humans and non-human vertebrates, developing cross-species specific tasks, studying the neural underpinnings of emotion and cognition, and trying to understand the relationship with awareness.

Ruud is also interested in applying knowledge of the workings

of the emotional and cognitive system(s) to the field of human and animal



welfare (e.g. stress and adaptation). His approaches include: Pavlovian and operant conditioning and decision-making tasks, such as the so-called Iowa Gambling Task, for which he developed the first rodent model.

Ruud also works with fish, which form a challenge to the studies of emotion and cognition. Fish neural circuitries are at first glance unlike those in mammals, but behaviourally similar outcomes are found in

several tasks. They are a suitable model system



to increase our understanding of brain-behaviour relationships regarding emotion and cognition.

Radboud Universiteit Nijmegen



Dr. Jeroen Stevens

is our new Belgian secretary replacing Prof. Marcel Eens



Jeroen Stevens is research associate in animal behaviour at the Centre for Research and Conservation of the Royal Zoological Society of Antwerp, Belgium. His research interests include: the role of dominance hierarchies

and power in societies of primates and other social mammals and male and female reproductive



strategies. He is also interested in applied ethology in zoos, especially the influence of visitors and enrichment on animal behaviour and welfare.

Jeroen started working as a volunteer for the Bonobo Research Group at Planckendael Wild Animal Park in 1994, at the age of 16. He got his MSc at Antwerp University through a study on male-male competition and inter-sexual strategies in captive bonobos at Wuppertal Zoo and Planckendael Wild Animal Park.

His PhD-project also concerned male reproductive strategies in captive bonobos, which was funded by IWT and for which he collected data in different European zoos (Twycross Zoo, Apenheul Primate Park & Planckendael Wild Animal Park). He successfully defended this PhD thesis at Antwerp University in 2005.

During his PhD-project, Jeroen also assisted in several projects in Antwerp Zoo and Planckendael Wild Animal Park on various animal species such as Asian elephants, Californian sea lions, chimpanzees, American bison, and Cape buffaloes.

As of 2007, he works as a staff member in the CRC to supervise students on behavioural research within the zoos of Antwerp and Planckendael.

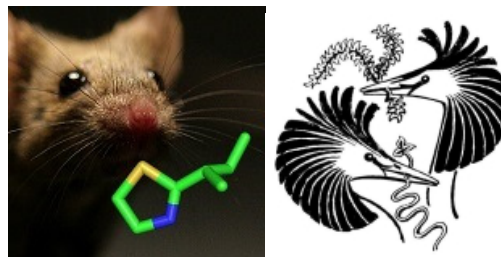


Bas Rodenburg & Marcel Eens:

Many thanks for your work for the NVG board!



**Behaviour Meets Biochemistry:
Animals Making Sense of
Molecules Making Scents**



18—20 February 2014: Charles Darwin House, London, UK

**A joint Biochemical Society /
Association for the Study of
Animal Behaviour Focused
Meeting**

There has been a persistent awareness of the role of the major histocompatibility complex (MHC) in control of individuality signalling and mate compatibility assessment, research over the past few years has revealed that there are other highly polymorphic gene clusters in the mammalian genome, encoding proteins that mediate chemical communication between individuals, either as pheromone binding proteins or as semiochemicals in their own right. This meeting will bring together experts in protein chemistry and evolution with behavioural ecologists, and will emphasise the biochemistry - behaviour axis.

Earlybird registration deadline:

20 January 2014.



SNEAK PREVIEW



~ Brief research reports with background, methodology, and preliminary insights into the findings of ongoing research.



Behavioural and physiological responses to environmental stress studied in zebrafish at Leiden University (IBL)

Post-doc **Christian Tudorache**, in collaboration with molecular cell



biologist Marcel Schaaf and behavioural biologist Hans Slabbekoorn, all at the IBL, currently

explore the unique opportunities of the zebrafish (*Danio rerio*) model system for integrative studies in behaviour and physiology.

All vertebrates exhibit physiological responses to a wide variety of stressors. The amplitude and profile of the response depend on the intensity, duration, controllability and predictability of the stressor. However, there is also individual variation in the response, termed coping style. Better understanding of the expression of coping styles could be of great value for medical applications, animal welfare issues and conservation.

Christian investigated the effect of repeated netting stress on proactive and reactive zebrafish. Fish were separated by coping styles according to the order of entering a novel environment from a darker enclosure. Subsequently, multi-day repeated netting stress was applied as stressor.

Full-body cortisol levels were determined at 0, 15, 30, 60 and 120 min after the last repeated stress event. The results show that reactive fish display i) increased basal cortisol concentrations after being repeatedly stressed, ii) higher cortisol secretion over time and iii) slower recovery of cortisol concentration towards basal levels after the last repeated stress event (compared to proactive fish).

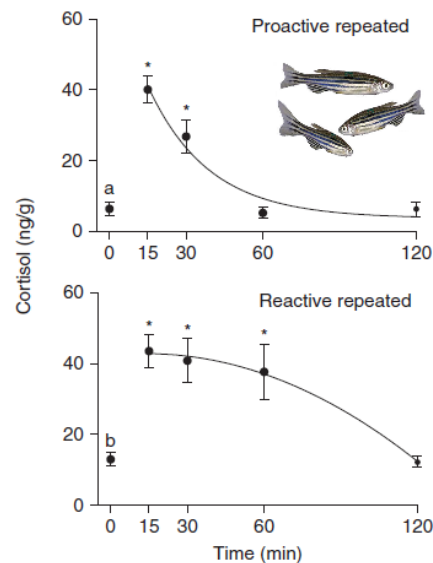


Fig.1: Cortisol recovery curves after repeated stress (from Tudorache et al. 2013).

This study showed that different coping styles are associated with different cortisol responses during the recovery from stress over time and that coping styles can explain otherwise

unaccounted variation in physiological stress responses (Tudorache et al. 2013).

Various mutant zebrafish strains are available to further study underlying mechanisms that explain coping styles. One such strain studied in Leiden is the adult viable zebrafish mutant, gr^{s357} , in which a single basepair change completely disrupts the glucocorticoid receptor (GR) transcriptional regulation of its target genes. Fish homozygous for the gr^{s357} mutation display a hyperactivated HPA axis, blunted suppression of cortisol and increased depression-like behavior in response to mild stress. Also spatial behaviour differs: after a brief habituation period after introduction into the tank wild-type fish avoid the central area (index drops to 0.3), while mutants do not prefer the periphery (index remains around 0.5) and heterozygotes are intermediate. Diazepam and fluoxetine treatments, as well as social interactions, reverse the abnormal behaviour (Ziv et al. 2013).

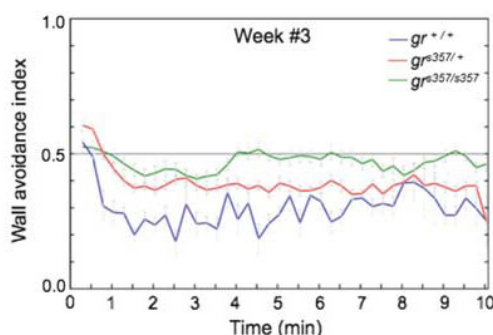


Fig.2: Spatial behaviour of wild-type and gr^{s357} mutant zebrafish (from Ziv et al. 2013).

The latest findings suggest that coping styles, as found in adults, are already distinct in zebrafish larvae at 8 days post-

fertilization in both behavioural and physiological measures. Also the mutant strains are currently investigated at this early stage in development and longitudinal studies are on their way.

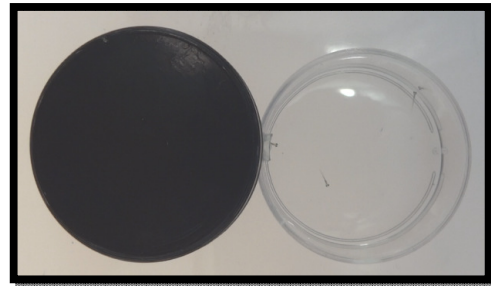


Fig. 3: Two proactive zebrafish larvae are out in the open and a third one is just getting out. This coping style splitting tool for larvae was developed and used by Leiden students: Mara Tromp, Anique ter Braake, Silvio Celetti and Luca Regnoli.

References:

Tudorache, C., Schaaf, M.J.M. & Slabbekoorn, H. 2013. Covariation between behaviour and physiology indicators of coping style in zebrafish (*Danio rerio*). *Journal of Endocrinology* 219: 251-258.

Ziv, L., Muto, A., Schoonheim, P.J., Meijsing, S.H., Strasser, D., Ingraham, H.A., **Schaaf, M.J.M.**, Yamamoto, K.R. & Baier, H. 2013. An affective disorder in zebrafish with mutation of the glucocorticoid receptor. *Molecular Psychiatry* 18: 681-691.



The 7th European Conference on Behavioural Biology (ECBB) is organized every even year in a European country by the local

Ethological Society in cooperation with the Committee of European Societies for Behavioural Biology (CESBB). The Czech and Slovak Ethological Society welcomes you to join VII ECBB held at the Czech University of Life Sciences Prague between July 17 and 20, 2014.

The ECBB hosts also the official summer meeting of **the Association for the Study of Animal Behaviour** (UK, <http://asab.nottingham.ac.uk/>) and of **the Ethologische gesellschaft** (Germany, <http://www.ethol-ges.org/>).

More information:

<http://ecbb2014.agrobiology.eu/>

Contact: ecbb2014@gmail.com



FINANCIAL SUPPORT OPPORTUNITY FOR MEETINGS AND SYMPOSIA IN BEHAVIOURAL BIOLOGY

AIM: The NVG wants to support small events with financial contributions if they yield a significant spread of interest, increase the understanding, or stimulate research ideas and collaborations in Behavioural Biology in the Netherlands or Flanders.

Guidelines follow below for applying and receiving financial support from the NVG for Behavioural Biology events (as

approved by the board on the 29th of June, 2012).

Budget & Decision Process:

- 1) A total of maximally €750 is available per budget year (Adjustments can only be determined at the annual meeting);
- 2) The possibility of support is advertised at the annual meeting and in the newsletter;
- 3) A board majority is required to award a support request;
- 4) Board members involved in a request are excluded from the decision making process;
- 5) Support decisions are communicated through a letter from the treasurer.

Eligibility & Applications:

- 1) Only NVG-members can apply;
- 2) Support requests need to be submitted at least six weeks before the event;
- 3) The application involves a brief explanation of how the event matches our aim;
- 4) The application should include a budget with costs, benefits and other co-sponsors.

Obligations & Reimbursement:

- 1) The applicant is obliged to inform NVG-members at least two weeks in advance about the NVG-supported event;
- 2) The applicant is obliged to write a brief report for the next newsletter about the event;
- 3) Payment takes place after the event, based on actual receipts, and after having received a newsletter report;
- 4) All documents will be provided to the audit committee for the annual financial report.

Conferences & Meetings

- **NAEM–2014**, Netherlands Annual Ecology Meeting of the Netherlands Ecological Research Network (NERN) and the Dutch - Flemish Ecological Society (NecoV), 11-12 February, Lunteren, the Netherlands: <http://www.nern.nl/NAEM-2014>
- **EHBEA–2014**, Annual meeting of the European Human Behaviour and Evolution Association, 6-9 April, University of Bristol, England: <http://ehbea.com/>
- **ENP–2014**, 12th Annual Dutch Endo-Neuro-Psycho Meeting, -22-23 May, Lunteren, the Netherlands: <http://enp2014.azuleon.org/welcome.php>
- **BGA–2014**, 44nd Annual meeting of the Behavior Genetics Association, 18-21 June, Charlottesville, VA, USA: <http://www.bga2k14cville.org/>
- **Evolution-2014**, joint annual meeting, 20-24 June, Raleigh, NC, USA: <http://evolution2014.org/>
- **ECBB–2014**, 7th European Conference on Behavioural Biology, 17-20 July, Prague, Czech Republic: <http://ecbb2014.agrobiology.eu/>
- **EED–2014**, 5th Congress of the European Society of Evolutionary Developmental Biology, 22-25 July, Vienna, Austria: <http://evodevo.eu/conferences/2014>
- **ISAE–2014**, 48th Congress of the International Society for Applied Ethology, 28 July - 1 August, Vitoria-Gasteiz, Spain: <http://www.applied-ethology.org/isaemeetings>
- **ABS–2014**, 51th Annual Conference of the Animal Behavior Society, 9-14 August, Princeton University, NJ, USA: <http://animalbehaviorsociety.org/absmeetings/51st-annual-meeting-of-the-animal-behavior-society>
- **ISBE–2014**, 15th International Behavioral Ecology Congress, 12-17 August, Hunter, City University of New York, USA: <http://cabi.hunter.cuny.edu/isbe2014c>
- **IOC–2014**, 26th International Ornithological Congress 18-24 August, Tokyo, Japan: <http://ioc26.jp/>
- **Measuring Behavior 2014**, Annual International Conference on Methods and Techniques in Behavioral Research, 27-29 August, Wageningen, the Netherlands: <http://www.measuringbehavior.org/mb2014/home>
- **NVG–2014**, Annual Meeting of the Netherlands Society for Behavioural Biology, 26-28 November, Soesterberg, the Netherlands: www.gedragbiologie.nl
- **Behaviour 2015**, Joint meeting of the International Ethological Conference (IEC), the Australasian Society for the Study of Animal Behaviour (ASSAB), and the Australasian Evolution Society (AES), 9-14 August, Cairns, Australia: <http://www.behaviour2015.org/>