

**Annual Report 2009, Naturalis Research  
Department of Terrestrial Zoology – Reptiles and Amphibians**

Researcher / Curator

Arntzen, Dr. J. W. (Pim)

Associates

Bickham-Baird, Dr. A. (Amy)

Galis, F. (Frietson)

Ross, F. D. (Franklin)

Sparreboom, Prof. M. (Max)

Collaborations with Institute of Biology of the University of Leiden

Ziermann, Dr. J. M. (Janine) is postdoctoral scientist on a three year NWO-ALW grant, with co-supervisor Prof. M.K. Richardson

Vonk, Drs. F. (Freek) is IBL 'top-talent' PhD.-student and collaborating in the Naturalis/ILB snake genomics project

PhD-students

Espregueira Themudo, G., (Goncalo), PhD-student in combination with University of Porto, Portugal (co-supervisor Prof. N. M. Ferrand, CIBIO, Vairao)

Wielstra, B. (Ben), PhD-student in combination with the ITC, Enschede (co-supervisors Dr. B. Toxopeus and Prof. A. Skidmore)

Students

Jonge, J. de (Jos), Institute of Biology, University of Leiden (co-supervisor Dr. H. Slabbekoorn)

Lammers, Y. (Youri), student at 'Hogeschool Leiden' (co-supervisor Drs. H. van Bostelen)

Samson, M. (Melvin), Institute of Biology, University of Leiden (co-supervisor Dr. H. Slabbekoorn)

Academic visitors and fellows

Aljančič, G. (Gregor) from Ljubljana, Slovenia

Bancila, R. (Raluca), Martin Fellow from Bucarest, Romania

Hartel, T. (Tibor), Temminck Fellow from Sighisoara, Romania

Tzankov, N. (Nikolay) from Sofia, Bulgaria

### Presentations and publicity

Seminar 'Molecular genetic testing of landscape ecological hypotheses: a case study on dispersal in Triturus newts', Estacion Biologica de Donana, Sevilla, 15 January, hosted by Dr. J. A. Godoy. Same seminar at the University of Antwerp on 18 March, hosted by Dr. R. van Damme, and at the University of Rennes May 5, hosted by Prof. J. van Alphen.

'De leguaan die Darwin over het hoofd zag'. B. van Raaij. De Volkskrant 10/01/2009: 5.

### Fieldwork

Fieldwork in Donana National Park, Spain from 14-23 January, in central Portugal and in Douro International Park, northeastern Portugal from 27 March to 10 April, at Tonnetjesdelle, de Veluwe, The Netherlands on 15 April, in Mayenne, France from 26 April to 8 May and again in central Portugal from 10-25 May and around Ljubljana, Slovenia for the study of Proteus from 3-6 August.

### Meetings

12<sup>th</sup> Congress of the European Society for Evolutionary Biology, Torino, Italy, 24-28 August

15<sup>th</sup> European Congress of Herpetology of the Societas Europaea Herpetologica, Izmir, Turkey, 28 September to 5 October

### Thesis examinations

Thesis evaluation Rodriguez, C. G. (2009) Condiciones ecologicas de la distribucion de anfibios en el Parques Nacional de Donana. Universidad de Salamanca and Estacion Biologica de Donana

### Education (teaching)

Contributions to the IBL courses 'Biodiversity' with a ca. 10-day practical in November on 'Morphological and molecular phylogeny of the Chamaeleonidae'. Idem, 'Trends in Time and Space' with lectures and a practical on 'Hybrid zones' on 8 December.

### Editorial and review

Editor in chief of Contributions to Zoology. Reviewer for Amphibia-Reptilia Notes, Conservation Genetics, Diversity, Journal of Biogeography, Molecular Ecology, Northwestern Journal of Zoology, Salamandra and Zoologische Mededelingen.

### Applications for funding

Allocated - Conservation Genetic Resources for Effective Species Survival (CONGRESS - ENV.2009.5.1.0.2). Principal Investigator Prof. M. Bruford, Cardiff, UK.

Rejected - Tracing natural selection and adaptation with landscape genomics.

Rejected - pre-proposal TOP application with Prof. P. van Welzen NWO-ALW  
'Dispersal Pathways through the Malay Archipelago'  
Running - NWO-ALW open program application on 'Lion (Panthera leo)  
phylogeography', Principal investigator Dr. H. H. de Iongh, CML-University Leiden.

Publications impact (per 10/12/2009)

Web of Science 1805 citations (increase of 183 relative to the same time last year)  
Hirsch-Index Web of Science 23, Google Scholar 27

**Amy Baird**

Poster presentations

'The geographic structure of hybridization in crested newts'. European Society for  
Evolutionary Biology meetings, Turin, Italy, 24-28 August

Manuscripts reviewed

Manuscripts reviewed for the journals Ecotoxicology and Systematic Biology

**Frietson Galis**

International Collaborations

Prof. Russell Lande, Royal Society Professor, Imperial College, Silwood Park, UK

Prof. Lauren Chapman, McGill University, Montreal, Canada

Dr. I. Van der Sluys, McGill University, Montreal, Canada

Prof. Stefan Van Dongen, University of Antwerp, Belgium

Prof. David Carrier, University of Utah, USA

Collaborations in the Netherlands

Dr. Annemie Ploeger, Developmental Psychology, Department of Psychology,  
University of Amsterdam

Dr. Liliane Wijnaendts, Clinical Pathology, Free University Medical Center,  
Amsterdam, The Netherlands (VUMC)

Dr. Bauke Ylstra, Micro-array core facility, cancer centre, VUMC

Dr. Marcel Mannens, Clinical Molecular genetics, Amsterdam Medical Centre (AMC)

Dr. Jet Blik, head DNA diagnostics lab of clinical genetics, AMC

Dr. Mariëlle Alders, Clinical genetics, AMC

Dr. E. Teske, Veterinaire oncologie van kleine huisdieren, Utrecht, The Netherlands

Prof. Johan A. J. Metz, mathematical biology, IBL

Dr. Tom J. M. van Dooren, Animal ecology IBL/NCB

Dr. P Nikkels, Pediatric pathology, Utrecht Medical Centre, Utrecht, The Netherlands

### Editorial boards

Associate editor of Evolution, Editorial board Journal of Experimental Zoology B. (Molecular Developmental Evolution), The Open Evolution Journal, Animal Biology, Embryology domain of Scientific World

### Boards and committees of Societies

President of the European Society for Evolutionary Developmental Biology (EED), Member of the scientific committee for the 3rd meeting of the EED in Paris 2010, Member of the program committee for the 3rd meeting of the EED in Paris 2010

### Study visits

May-June Visiting professor University of Rennes-1

### Academic visitors

Prof. Russell Lande, Royal Society Professor, Imperial College, Silwood Park, UK  
Dr. Jessica Bots, University of Antwerp, Belgium  
Prof. Stefan Van Dongen, University of Antwerp, Belgium

### Teaching and supervision

Post-doc - Dr. Jessica Bots, co-supervisor Prof. S. Van Dongen University of Antwerp, Msc-students - J. Bakker and I. Varela, Institute of Biology, University of Leiden. Contribution to the IBL courses 'General Research Skills' for Msc-students with four lectures.

### Manuscripts reviewed

Animal Biology, Evolution, Journal Morphology, Journal experimental Zool. B and reviewing for the French national funding agency ANR

### Presentations

International Conference on 'Evolutionary biology 2009: phylogeny, speciation, co-evolution, development, genomes, life histories, plasticity... What is new?' Rennes, France, June 2009

Symposium on 'Molecular tools in paleobiology: trees, clocks and linking geno/phenotype' at the annual meeting of the Society for Vertebrate Paleontology, Bristol, UK, September 2009

Workshop on Human Evo-Devo, at the Konrad Lorenz Institute for Evolution and Cognition Research (KLI) Altenberg, Vienna, September 2009.

Symposium 'Through the looking glass' on asymmetry, handedness and mirror images in nature. National Centre for Biodiversity Naturalis, Leiden, The Netherlands, November 2009

Publications impact (per 10/12/2009)

Citations Web of Science 850 (increase of 63 relative to the same time last year)

H-Index Web of Science 16

### **Franklin Ross**

Nothing this year

### **Max Sparreboom**

#### Presentations

'Reproductive Behaviour of Salamanders' at the University of Bielefeld, Department of Behavioural Biology, on 27 January

'Reproductive Biology of Salamanders' at the University of Damascus, Department of Zoology, Syria, on 2 February

'Salamander Behaviour and Phylogeny' at the University of Kyoto, Graduate School of Human and Environmental Studies, Japan, on 31 July

'Verbreitung, Ökologie und Gefährdung von Salamandra infraimmaculata und Ommatotriton vittatus in Nordwest-Syrien', (with Bogaerts, S., Pasmans, F. and Almasri, A.) at the meeting of the DGHT-AG Urodela, Gersfeld on 10 October

'Tylototriton taliangensis in Sichuan' at the meeting of the DGHT-AG Urodela, Gersfeld on 10 October

#### Fieldwork

Excursion to NW Syria to study Salamandra infraimmaculata and Ommatotriton vittatus during the breeding season, from 30 January to 8 February

Excursion to NE Turkey to study Mertensiella and other Urodeles, from 6 to 13 June

Excursion to Japan and Korea to study Karsenia, Onychodactylus, Andrias and Cynops, from 30 July to 12 August

#### Manuscripts reviewed

Manuscripts reviewed for the journals Current Herpetology and Zootaxa and for the book 'De amfibieën en reptielen van Nederland. Nederlandse Fauna 9' by R. Creemers and J. Van Delft (eds.). Nationaal Natuurhistorisch Museum Naturalis, Leiden.

### **Janine M. Ziermann**

#### Students

Gregor Aljančič on the embryology of salamanders from 30 November to 3 December

#### Presentations

'Developmental mechanisms of bodyplan evolution in a morphocline of salamanders' on 6 October, seminar at the Institute of Biology, Leiden University and 'Evolution and development in amphibians' on 8 October, seminar at the Master-Orientation Course at the Institute of Biology, Leiden University

## Fieldwork

Tonnetjesdelle, de Veluwe, The Netherlands, 15 April and 23 June, Mayenne, France, 30 April - 5 May and Kranj, Slovenia, 3-6 August.

## Meetings

First BioSyst EU / 11<sup>th</sup> GfBS Meeting in Leiden, The Netherlands 10-14 August

## Manuscripts reviewed

Manuscripts reviewed for the journals Contributions to Zoology and Journal of Morphology

## **Publications**

### Papers in SCI-listed journals

**Arntzen, J. W.**, R. Jehle, F. Bardakci, T. Burke and **G. P. Wallis** (2009) Asymmetric viability of reciprocal-cross hybrids between crested and marbled newts (Triturus cristatus and T. marmoratus). Evolution 63: 1191-1202. DOI: 10.1111/j.1558-5646.2009.00611.x. For supplementary information see: <http://www.repository.naturalis.nl/record/289893>.

**Arntzen, J. W.**, T. A. Burke and R. Jehle (in the press) Estimating the propagule size of a cryptogenic population of crested newts (Triturus cristatus). Animal Conservation.

Babik, W., M. Pabijan, **J. W. Arntzen**, D. Cogalniceanu, W. Durka and J. Radwan (2009) Long-term survival of a urodele amphibian despite depleted MHC variation. Molecular Ecology 18: 769–781 DOI: 10.1111/j.1365-294X.2008.04057.x.

**Baird, A. B.**, D. M. Hillis, J. C. Patton, and J. W. Bickham (2009) Speciation by monobrachial centric fusions: A test of the model using nuclear DNA sequences from the bat genus Rhogeessa. Molecular Phylogenetics and Evolution 50: 256-267.

**Baird, A. B.**, G. B. Pauly, D. W. Hall and T. J. LaDuc (2009) Records of the porcupine (Erethizon dorsatum) from the eastern margins of the Edwards Plateau of Texas. Texas Journal of Science 61: 65-67.

Balkenhol, N., F. Gugerli, S. A. Cushman, L. P. Waits, A. Coulon, **J. W. Arntzen**, R. Holderegger, H. H. Wagner and participants of the Landscape Genetics Research Agenda Workshop 2007 (2009) Identifying future research needs in landscape genetics: where to from here? Landscape Ecology 24: 455-463; DOI:10.1007/s10980-009-9334-z.

**Espregueira Themudo, G., B. Wielstra and J. W. Arntzen** (2009) Multiple nuclear and mitochondrial genes resolve the branching order of a rapid radiation of crested newts (Triturus, Salamandridae). *Molecular Phylogenetics and Evolution* 52: 321-328 and 53: 359 (erratum).

**Espregueira Themudo, G., W. Babik and J. W. Arntzen** (2009) A combination of techniques proves useful in the development of nuclear markers in the newt genus Triturus. *Molecular Ecology Resources* 9: 1160-1162. DOI: 10.1111/j.1755-0998.2009.02574.x.

**Galis, F., J. W. Arntzen** and R. Lande (in the press) Dollo's Law and the irreversibility of digit loss in Bachia. *Evolution*.

#### Peer-reviewed but not SCI

Bogaerts, S., F. Pasmans, **M. Sparreboom** and M. Biricik (in the press) Notes on a breeding population of Neurergus strauchii Steindachner 1887. *Salamandra*.

#### Book chapters

**Arntzen, J. W.** and G. Smit (2009) Triturus cristatus (Laurenti 1768) - noordelijke kamsalamander. Pp. 105-113 in R. Creemers and J. Van Delft (eds.). *De amfibieën en reptielen van Nederland*. Nederlandse Fauna 9. Nationaal Natuurhistorisch Museum Naturalis, Leiden.

**Arntzen, J. W.**, K. Grossenbacher and I. Martinez-Solana (submitted) Introduction to the genus Alytes (introductory chapter for 'Handbuch Amphibieën und Reptilien Europas).

**Sparreboom, M.** (2009) Thirty-six new species entries on Website 'Salamanders of the Old World' <http://science.naturalis.nl/salamanders>

#### Papers submitted

**Arntzen, J. W. and B. Wielstra** (submitted) Where to draw the line? A nuclear genetic perspective on proposed range boundaries of the crested newts Triturus karelinii and T. arntzeni.

**Bancilă, R., I. van Gelder, E. Rotteveel, J. Loman and J. W. Arntzen** (submitted) Fluctuating asymmetry is a function of population isolation in island lizards.

**Curado, N. and J. W. Arntzen** (submitted) Amphibian pond loss as a function of the landscape in Pas-de-Calais, France over three decades.

**Hartel, T., K. Öllerer, A. Baldi, P. Tryjanowski, D. Cogălniceanu, C. Gil, C. Moga and J. W. Arntzen** (submitted) A message from rural landscapes of Central-Eastern Europe.

**Hartel, T., K. Öllerer, A. Baldi, P. Tryjanowski, C. Moga, D. Cogălniceanu, C. Gil, D. Rusti and J. W. Arntzen** (submitted) Spatial ecology in Central - Eastern Europe: is the habitat - matrix approach useful to conserve biodiversity ?

**Hartel, T., O. Schweiger, K. Öllerer, D. Cogălniceanu and J. W. Arntzen** (submitted) Amphibian distribution in a traditionally managed rural landscape of Eastern Europe: probing the effect of landscape composition.

**Hartel, T., S. Nemes, K. Öllerer, D. Cogălniceanu and J. W. Arntzen** (submitted) Fragmentation models may not accurately predict the distribution of amphibians in traditionally managed rural landscapes of Eastern Europe: the case of the Northern Crested Newt *Triturus cristatus*.

Lanza, B., E. Gentile and **J. W. Arntzen** (in the press) Vertebral numbers in the Caudata of the western Palaearctic (Amphibia). *Atti Museum Trieste N. S.*

Laurin, M., **J. W. Arntzen**, A. M. Bauer, S. E. Evans, A. Kupfer, D. Marjanović, H. Müller, L. Olsson, J.-C. Rage & D. San Mauro (submitted). *Amphibia C. Linnaeus 1758*, converted clade name.

Laurin, M., **J. W. Arntzen**, A. M. Bauer, S. E. Evans, A. Kupfer, D. Marjanović, H. Müller, L. Olsson, J.-C. Rage & D. San Mauro (submitted). *Lissamphibia E. Haeckel 1866*, converted clade name.

Vörös, J. and **J. W. Arntzen** (submitted) Weak population structuring in the Danube Crested newt, *Triturus dobrogicus*, inferred from allozymes.

**Wielstra, B., G. Espregueira Themudo, Ö. Güclü, K. Olgun, N. A. Poyarkov and J. W. Arntzen** (submitted) Cryptic crested newt diversity at the Eurasian transition.

### Student reports

**Jonge, J. de and M. A. Samson** (2009) Call variation in the European scops owl: a playback study in Portugal. University of Leiden, MSc Biology, track Evolutionary & Ecology Sciences, Institute Biology Leiden (IBL), department Behavioural Biology and Naturalis, department Terrestrial Zoology. Pp. 45

**Lammers, Y** (2009) Nuclear biogeography – an exercise into the historical biogeography of the human alpha satellite. Hogeschool Leiden en Naturalis. Pp. 11.

Posters and conference abstracts

**Arntzen, J. W.** (2009) Atlas data – what's next. Page 7 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Arntzen, J. W.** (2009) Molecular genetic testing of landscape ecological hypotheses. Page 64 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Baird, A. B., G. Espreguira Themudo and J. W. Arntzen** (2009) The geographic structure of hybridization in crested newts. Poster 16-21 in the 12<sup>th</sup> Congress European Society for Evolutionary Biology, Turin 2009

Chang, Y. H., **N. A. Poyarkov**, A. Vassilieva and J. S. Lai (2009) Reproduction biology, behavior and ontogeny in the Formosan salamander Hynobius formosanus (Caudata, Hynobiidae) from Taiwan. Page 141-142 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

Chang, Y. H., **N. A. Poyarkov**, M. Kuroo-o, J. S. Lai and K. Y. Lue (2009) Phylogenetic position of the Taiwanese salamanders (genus Hynobius, Hynobiidae, Caudata) inferred from molecular, morphological and karyological data. Page 108 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Curado, N.**, K. Musters and **J. W. Arntzen** (2009) Amphibian pond loss is linked to landscape changes in Pas-de-Calais, France. Second European Congress of Conservation Biology, September 1-5, 2009 at the Czech University of Life Sciences, Prague.

Dolotovskaya, S. I., **N. A. Poyarkov**, R. A. Nazarov and V. F. Orlova (2009) Systematics and phylogeography of the Middle Asian racerunners (Eremias, subgenus Dimorphea, Reptilia, Squamata, Lacertidae). Page 67 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

Dunayev, E. A., **N. A. Poyarkov**, V. A. Matrosova, E. N. Solovyeva, T. Dujsebayaeva and K. Munkhbayar (2009) Phylogeographic pattern in Phrynocephalus guttatus - Phrynocephalus versicolor species complex (Reptilia: Agamidae) from Central Asia. Page 158 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Lammers Y. and J. W. Arntzen** (2009) Nuclear biogeography – an exercise into the historical biogeography of the human alpha satellite. Hogeschool Leiden.

**Poyarkov, N. A.**, D. N. Tarkhnishvili and **J. W. Arntzen** (2009) Around the Black Sea – comparative phylogeographic patterns in four groups of salamanders (Salamandridae, Caudata). Pages 73-74 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Poyarkov, N. A.**, M. Kuro-o, J. Che, K. Iizuka, M. S. Min and D. R. Vieites (2009) Molecular differentiation and cryptic diversity in the Asian clawed salamanders, genus Onychodactylus (Amphibia, Caudata, Hynobiidae). Page 117-118 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

Solovyeva, E. N., **N. A. Poyarkov**, E. A. Dunayev, T. Dujsebayaeva, R. A. Nazarov, J. K. Munkhbayar and H. Cheatsazan (2009) Taxonomy and phylogeography of the sunwatcher toad-headed agama species complex (Phrynocephalus helioscopus and Phrynocephalus persicus, Reptilia, Agamidae). Page 77-78 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Wielstra, B. and J. W. Arntzen** (2009) The phylogeny of the crested newt *Triturus cristatus* superspecies based on complete mitochondrial genome sequences: a hard or a soft polytomy ?. Page 83 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Wielstra, B.**, A. G. Toxopeus, A. K. Skidmore and **J. W. Arntzen** (2009) Uniting phylogeography and ecological niche modeling: a case study on the Southern Crested Newt Triturus karelinii (Amphibia: Caudata). Page 84 in Book of Abstracts of the 15<sup>th</sup> European Congress of the Societas Europaea Herpetologica, Kusadasi – Aydin, Turkey, 28 September – 2 October 2009

**Wielstra, B.**, A. G. Toxopeus, A. K. Skidmore and **J. W. Arntzen** (2009) Testing for ecological speciation in crested newts. Conference: Niche Evolution: a unifying concept

for systematics, ecology, paleontology and conservation biology, Zurich, Switzerland, <http://www.systbot.uzh.ch/niche/>

**Wielstra, B.**, A. G. Toxopeus, A. K. Skidmore and **J. W. Arntzen** (2009) **TITLE** 12<sup>th</sup> Congress of the European Society for Evolutionary Biology, August 24 – 29, 2009, Turin, Italy, <http://www.eseb2009.it/uk/>

Publications by third parties (Associates or linked to Naturalis through Fellowships or through material from the collection, but without Naturalis address)

De Lisle, H. F. (2009) Catalog of the genus Varanus (Reptilia: Squamata: Varanidae) with new designations of a neotype and a lectotype. *ZooNova* 1: 8-32.

Ericsson, R., **Ziermann, J. M.**, Piekarski, N., Schubert, G., Joss, J., Olsson, L. (2009) Cell fate and timing in the evolution of neural crest and mesoderm development in the head region of amphibians and lungfishes. *Acta Zoologica* 90: 379-387

**Galis, F.**, Ten Broek, C. M. A., Van Dongen, S., Wijnaendts, L. C. D. (in the press) Sexual dimorphism in the prenatal digit ratio (2D:4D) in humans. *Archives of Sexual Behaviour* online:10.1007/s10508-009-9485-7.

Grueber, C. E., **Wallis, G. P.** and Jamieson, I. G. (2008) Heterozygosity-fitness correlations and their relevance to studies on inbreeding depression in threatened species. *Molecular Ecology* 17: 3978-3984.

Grünewald, F. (2009) Museumcollecties ... RMNH 31998 and 31999 (Mesoclemmys heliostemma) McCord, Joseph-Ouni and Lamar, 2001. *Trionyx* 7: 16-21. Stored at <http://www.repository.naturalis.nl/record/321109>.

Grünewald, F. (2009) Museumcollecties ... RMNH 3231 (Dipsochelys dussumieri) Gray, 1831. *Trionyx* 7: 136-142. Stored at <http://www.repository.naturalis.nl/record/321110>.

Harris, J. M. and R. L. Goldingay (2009) Museum holdings of the Broad-headed snake Hoplocephalus bungaroides (Squamata: Elapidae). *Proceedings Linnean Society New South Wales* 130: 1-19.

Harvey, M. B. (2008) New and poorly known Dipsas (Serpentes: Colubridae) from northern South America. *Herpetologica* 64: 422-451.

Harvey, M. B. and D. Embert (2008) Review of Bolivian Dipsas (Serpentes: Colubridae), with comments on other South American species. *Herpetological Monographs* 22: 54-105.

Harvey, M. B., G. R. Fuenmayor, J. R. C. Portilla and J. V. Rueda-Almonacid (2008) Systematics of the enigmatic dipsadine snake Tropidodipsas perijanensis Alemán (Serpentes: Colubridae) and review of morphological; characters of Dipsadini. Herpetological Monographs 22: 106-132.

Koch, A., E. Arida, A. Schmitz, W. Böhme and T. Ziegler (2009) Refining the polytypic species concept of mangrove monitors (Squamata: Varanus indicus group): a new cryptic species from the Talaud Islands, Indonesia, reveals the underestimated diversity of Indo-Australian monitor lizards. Australian Journal Zoology 57: 29-40.

Kok, P. and G. R. Fuenmayor (2008) Typhlophis ayarzaguenai Señaris, 1998 is a junior synonym of Typhlophis squamosus (Schlegel, 1839). Amphibia-Reptilia 29: 555-558.

Morgan-Richards M., Smissen, R. D., Shepherd, L. D., **Wallis, G. P.**, Hayward, J. J., Chan, C-H., Chambers, G. K. and Chapman, H. M. (2009) A review of genetic analyses of hybridisation in New Zealand. Journal of the Royal Society of New Zealand 39: 15-34.

Ploeger, A., **Galis, F.** (in the press) Evolutionary approaches to autism: an overview and integration. McGill Journal of Medicine.

Ploeger, A., Raijmakers, M. E. J., van der Maas, H. L. J., **Galis, F.** (in the press) The association between autism and errors in early embryogenesis. Biol. Psychiat., in press.

Ploeger, A., van der Maas, H. L. J., Raijmakers, M. E. J., **Galis, F.** (2009) Why did the savant syndrome not spread in the population? A psychiatric example of a developmental constraint. Psychiat. Res. 166: 85-90.

Van Dongen, S., L. C. D. Wijnaendts Ten Broek, C. M. A. and **F. Galis** (2009) No association between asymmetry and the second to fourth digit ratio in human fetuses. Early Human Development. 85: 393-398.

Van Dongen, S., Ten Broek, C. M. A , L. C. D. Wijnaendts and **F. Galis** (in the press) Human fetuses and limb asymmetry: no evidence for directional asymmetry and support for fluctuating asymmetry as a measure of developmental instability. Anim. Biol.

Van Dongen, S., Ten Broek, C. M. A., L. C. D. Wijnaendts and **F. Galis** (2009) Fluctuating asymmetry heterogeneously reflects severe developmental disorders in human fetuses. Evolution 63: 1832-44.

**Wallis, G. P.** and Trewick, S. A. (2009) New Zealand phylogeography: evolution on a small continent. Molecular Ecology 18: 3548-3580.