British Veterinary Zoological Society

Proceedings of the November Meeting 2007
10th and 11th November, 2007

The University of Nottingham School of Veterinary Medicine and Science

Recent Advances in Comparative Medicine

Proceedings Editor: Victoria Roberts
BVZS GUIDELINES FOR MEETING ABSTRACTS

PLEASE NOTE: From the November 2007 meeting all abstracts and extended abstracts will be linked to CABI. This is an important step in helping the Society and members work reach a wider audience. While the society encourages authors to include as much relevant data as possible, it is the author’s own responsibility to restrict their data as necessary in order not to prejudice any future peer-reviewed publications they may have planned. While previous humorous biographies have been included, inline with the links with CABI, please adhere to the biography guidelines and keep these to a professional nature. At present BVZS meetings and abstracts are NOT peer-reviewed.

Submissions should preferably be in word (.doc) format, 12 font Times New Roman, single line spacing, not justified.

Biography: This should include the author’s qualifications and institution/ practice/ affiliations, as well as a summary of any particular achievements, career, highlights, or relevant current projects. Please keep the biography to a professional nature. Maximum of 100 words.

Title: Submission should include a title of not more than 15 words, and the names, qualifications and affiliation/ institution of each author.

Abstracts: Abstracts should be a minimum of 200 words, and a maximum of 750 words. A reference list may also be included. Abstracts, with references should not be longer than 1 page.

Extended Abstracts: These should be in the format: SUMMARY, INTRODUCTION, MATERIALS AND METHODS, RESULTS, DISCUSSION, REFERENCES; or if this is a case report or case series: SUMMARY, INTRODUCTION, CASE REPORT, DISCUSSION, REFERENCES. Review articles should preferably be in the format: SUMMARY, REVIEW, CONCLUSION. This may be altered depending on the reviews nature, but must include a SUMMARY and CONCLUSION. The text should be concise and should be a maximum of 2000 words, and not exceed 4 pages in length, including illustrations and references. The summary should not exceed 200 words.

Tables and Illustrations: Tables should be kept to a minimum and should be created in Word. The legend should clearly explain what data the table is presenting, without the need to refer back to the text. Tables should not duplicate information presented in figures. Digital images should be GIF, TIFF, or JPEG files, at a minimum resolution of 300 dpi. Please label them to correspond with the list of numbered figure captions; for example ‘Figure 3.jpg’ or ‘Figure 7B.jpg’, etc.

Style: Measurements should be expressed in the metric system or in SI units. Temperatures should be given in ºC. Centrifugation speeds should be given in g. All abbreviations should be spelt out in full the first time they are used in the text. Medicines should be referred to by the generic name (Recommended International Non-Proprietary Name), as used in the sixth edition of The Veterinary Formulary (London, Pharmaceutical Press 2005) and listed on the website of the Medicines and Healthcare Products Regulatory Agency, followed by the proprietary name and manufacturer in brackets when first mentioned; eg, fenbendazole (Panacur; Intervet). Parasitic infections should be referred to according to the Standardised Nomenclature of Parasitic Diseases (SNOPAD) guidelines, which are summarised by the World Association for the Advancement of Veterinary Parasitology. Spelling should be in British English. Manuscripts should be written in the third person.


Personal communications should be cited within the text and follow the form ‘A. B. Smith, personal communication’.

Last updated: August 2007, Romain Pizzi
British Veterinary Zoological Society

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PROGRAMME

Main Sessions: Saturday
(Parallel Sessions below)

08.00-08.45  Registration and coffee

08.45-09.00  Welcome: President of the British Veterinary Zoological Society, Edmund Flach and Gary England, Dean of Nottingham Veterinary School

09.00-10.30 Session 1  Comparative Anaesthesia, Analgesia and Fluid Therapy
Chair: Suzetta Billington

- Analgesia in exotics: a review and update: Jonathan Cracknell (Z/W and E) 15
- Inhalation anaesthesia in iguanas: Šárka Trnková (E) 25
- Light anaesthesia in terrapins and lizards: Zdenek Knotek (E) 28
- Comparative techniques in ventilation of different species: Keith Simpson (E) 30
- Capnography – the only monitor you will ever need: Richard Hammond (A) 32
- The effects of infection with Mycobacterium bovis on the health and condition of free-living badgers (Meles meles) in south-west England: Alexandra Tomlinson (Z/W) 33

10.30-11.00 Coffee

11.00-12.30 Session 2  Comparative Reproduction
Chair: Yedra Feltrer

- Human ART (30 minutes): Simon Fishel (H) 34
- Contraception across taxa & new GnRH analogues (30 minutes):
  - Cheryl Asa (Z/W) 37
- Hippo castration: Matt Brash (Z/W) 40
- Relaxin in wild felids: Florine de Haas van Dorsser (Z/W) 41

12.30-14.00 Lunch

14.00-15.30 Session 3  Primate viruses & zoonoses
Chair: Mark Stidworthy

- Herpes, retro and hepatitis viruses in Non-human Primates (NHPs) (30 mins):
  - Henk Niphius (Z/W) 45
- Herpes B in Macaques in Thailand: Sorn Routh (Z/W) 46
- Herpesvirus in an interim quarantine facility: David Gardner-Roberts (Z/W) 48
- LCMV exposure across species at Twycross Zoo: Nic Masters (Z/W) 50
- Mountain Gorilla Veterinary Project Employee Health Programme:
  - David Gardner-Roberts (Z/W) 51

1530 – 1600 Tea

16.00-17.30 Session 4  Wildlife / EID / Surveillance
Chair: Becki Lawson

- Renal calculi in otters (Lutra lutra) in South West and Southern England:
  - Vic Simpson (Z/W) 54
- Emergence and ecology of zoonotic henipaviruses: Andrew Breed (Z/W) 55
- The use of impression smears during routine post mortem examinations for diagnosis and disease monitoring in birds: Edmund Flach (Z/W) 56
- Respiratory pathogens of free-ranging whales in the Gulf of California - A pilot study: Karina Acevedo-Whitehouse (Z/W) 57
- Use of Haliaeetus species as Biomonitor of Environmental Health:
  - Simon Hollamby (Z/W) 58
- Bluetongue in Europe - Impacts on British Zoos: Matt Hartley (Z/W) 60
### Parallel Sessions Saturday

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<td>09.00-10.30</td>
<td>Wetlab</td>
<td>Making, staining and examining blood smears</td>
<td>Mike Hart</td>
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<tr>
<td>09.00-10.30</td>
<td>Masterclass</td>
<td>What is your diagnosis? (Comparative haematology and biochemistry case reports)</td>
<td>Michael Waters</td>
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<td>11.00-12.30</td>
<td>Wetlab</td>
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<tr>
<td>14.00-15.30</td>
<td>Wetlab</td>
<td>Fun Faecal Findings: Comparative Faecal Analysis</td>
<td>PALS</td>
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### Main Sessions Sunday

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<tr>
<td>09.00-10.30</td>
<td>Comparative Therapeutics</td>
<td>NSAIDs in green iguana: Zdenek Knotek (E)</td>
<td>Zdenek Knotek (E)</td>
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<td>Assessment of cardiac structure &amp; function: Malcolm Cobb (Z/W)</td>
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<td>Comparative antibiotic use in reptiles: Kevin Eatwell (E)</td>
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<td>Hypothyroidism in a Red Panda: Tim Bouts (Z/W)</td>
<td>Tim Bouts</td>
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<td>Update on rabbit dentals: Brigitte Reusch (E)</td>
<td>Brigitte Reusch</td>
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<td>Comparative endosurgery: Romain Pizzi (Z/W)</td>
<td>Romain Pizzi</td>
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<td>10.30-11.00</td>
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<td>11.00-12.30</td>
<td>Comparative nutrition</td>
<td>Circulating concentrations of vitamins A &amp; E in avian species; evidence for dietary relationships?: Andrea Fidgett (E)</td>
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<td>Vitamin D in tortoises: Kevin Eatwell (E)</td>
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<td>Enriching ungulate rations at Chester Zoo: Andrea Fidgett (E)</td>
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<td>Nutrition in passerines: Brian Stockdale (E)</td>
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<td>Recognising Avian Malnutrition: Neil Forbes (E)</td>
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<td>Gout in reptiles. Additional Aspects: Peer Zwart (E)</td>
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<td>12.30-14.00</td>
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<td>14.00-15.30</td>
<td>Open</td>
<td>TB (M. tuberculosis) in Kolmården Zoo, Sweden - experiences with novel serodiagnostic TB tests across species (30 minutes): Torsten Moller (Z/W)</td>
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<td>Carnivore pathology: Laura Pugh (Z/W)</td>
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<td>New Exhibits Don’t Just Happen: Andrew Routh (Z/W)</td>
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<td>A High Incidence of Hepatobiliary Tumours in Bile-Tapped Ursus thibetanus: Phill Elliot (Z/W)</td>
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<td>Use of Mexican kissing bugs: André Stadler (Z/W)</td>
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### Poster
- Gastrointestinal pathogenic parasites and bacteria investigation of wild hainan gibbons and captive buff-cheeked gibbons: May Py Tse

### Parallel Sessions Sunday

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<td>09.00-10.30</td>
<td>Back to Basics</td>
<td>Avian structure and function - Eagle eyes, bird brains &amp; drumsticks</td>
<td>Bairbre O’Malley</td>
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<tr>
<td>11.00-12.30</td>
<td>Back to Basics</td>
<td>Let the scales fall from your eyes! - Reptile (snakes, lizards and chelonia) structure and function</td>
<td>Bairbre O’Malley</td>
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<td>14.00-15.30</td>
<td>Masterclass</td>
<td>Biopsy and Post Mortem Sampling: How to Make Sure You Get a Diagnosis</td>
<td>Ann Pocknell</td>
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Key: A = All, E = Exotics, H = Human, Z/W = Zoo & Wildlife
SPEAKERS

**Karina Acevedo-Whitehouse**
Karina is a veterinarian with graduate degrees in Marine Ecology (MSc) and Molecular Ecology (PhD), currently a research fellow at the Institute of Zoology. Her research, which broadly encompasses conservation epidemiology, relies on a combination of field work (mostly in the Gulf of California, California coast and the Galapagos) and molecular epidemiology techniques. Specifically, she aims to understand the contribution of vertebrate genetic architecture and gene expression on resisting environmental pressures. Her main lines of research are related to wildlife immunogenetics, DNA damage and health, and disease ecology of vertebrates.

**Cheryl Asa**
Cheryl has managed AZA's contraception program for 18 years, currently as Director of the AZA Wildlife Contraception Center and previously as co-ordinator of the AZA Contraception Advisory Group. She has also directed the Saint Louis Zoo's Research Dept. for 19 years, specializing in comparative reproductive processes, particularly in canids. The Wildlife Contraception Center manages contraceptive monitoring, research, and products for North American zoos and provides information and recommendations on its website. Cheryl has a PhD in Endocrinology and Reproductive Physiology from the University of Wisconsin-Madison and teaches Endocrinology at Saint Louis University and Animal Behaviour at Washington University in St. Louis.

**Tim Bouts**
After graduating at Ghent University, Belgium in 2000, Tim joined the department of Surgery and Anaesthesiology where he worked with horses and ruminants. On completion of the MSc in Wild Animal Health at ZSL London Zoo and the RVC in 2002, Tim began a residency in anaesthesia at Ghent University. Here, he developed an anaesthetic table for koi carps for doing laparoscopy. He moved back to the UK to Newquay to work in a first and second line mixed practice and a referral hospital for exotics which provided the veterinary care for Newquay Zoo, Blue Reef aquarium and the Cornish Bird of Prey Centre. Afterwards, Tim went to the UAE to become the Head of the Veterinary Department of the Endangered Wildlife Breeding and Conservation Centre in Al Ain, Abu Dhabi and was the chief veterinarian of Al Bustan Zoo in Dhaid Sjarsha until he joined ZSL as a veterinary officer based at ZSL Whipsnade Zoo in 2006.

**Matthew Brash**
Matt is a GP vet who works in North Yorkshire just outside York. He is the vet for Flamingoland zoo, as well as running three surgeries. This year has been particularly busy, as he has been having fun, building a very big, state of the art new surgery.

**Andrew Breed**
Andrew graduated in 1996 from Murdoch University’s veterinary school in Western Australia and has worked in private practice and zoos in Australia and the UK. He completed the MSc in Wild animal health at London, writing a thesis on Hendra virus in flying foxes. He is currently studying a PhD entitled “A risk assessment of the introduction of Nipah virus to Australia via flying foxes” (School of Veterinary Science, Australian Biosecurity CRC for Emerging Infectious Disease, University of Queensland, Brisbane, Australia). The project involves fieldwork in Papua New Guinea, East Timor, Indonesia, Malaysia and northern Australia; and is supported by the Australian Biosecurity CRC for Emerging Infectious Disease, University of Queensland and South Australian Museum.

**Malcolm Cobb**
Malcolm graduated from Cambridge in 1984 and spent four years in a mixed veterinary practice in Norfolk. He joined the Royal Veterinary College in 1998 and completed a residency in small animal internal medicine in 1991, gaining a Diploma in Veterinary Cardiology in 1993 and PhD in 1996. One year as a lecturer in small animal internal medicine at the Royal Veterinary College was followed by a move to LEO Animal Health. He obtained an MBA from Henley Management College and in 2004 took over as Country Manager of LEO Animal Health UK and Ireland. In September 2005 he took up
the position of Divisional Head of Veterinary Medicine at the new School of Veterinary Medicine and Science at the University of Nottingham.

Jonathan Cracknell
Jonathan is the RCVS Trust Resident in Zoo and Wildlife Medicine at the Zoological Society of London. After graduating from Glasgow Veterinary School in 2000, Jonathan has had a varied career following his interests in anaesthesia and conservation medicine. Starting in general practice, he moved to the Animal Health Trust as a clinical scholar in anaesthesia. From here he moved to join the RSPCA Wildlife Service, then to China to assist in the rehabilitation of Asiatic Black Bears from the bile trade. In Hong Kong he worked in exotic animal practice, moving back to the UK to pursue conservation and zoological medicine opportunities both at Port Lympne and the ZSL. His spare time is spent working in emergency clinics, supporting IAR with their Indian Dancing Bear Programmes, and attempting to set up a National UK Elephant Health Programme.

Florine de Haas van Dorsser
Florine graduated from Cambridge Vet School in 1999 and subsequently worked as veterinarian for the Breeding Centre for Endangered Arabian Wildlife in Sharjah, United Arab Emirates for 6 years. She gained a PhD from the University of Cambridge in 2006 for a thesis entitled ‘Reproduction in the Arabian Leopard’. She currently works at Imperial College in London.

Kevin Eatwell
Kevin graduated from Bristol University Veterinary School in 1995 and started off in mixed practice whilst developing clientele with exotic pets. He obtained his certificate in zoological medicine in 2001. Subsequently time was spent working as a locum for wildlife hospitals, a zoological garden and exotic pet practices. He now works at Birch Heath Veterinary Clinic a five vet practice with an 80% exotic animal caseload, including first opinion and referral work with seven premises with zoo licenses. The practice also provides a clinical pathology service for two independent laboratories and for a wildlife hospital receiving 5000 admissions per annum. The practice recently obtained the RCVS approved status for zoological medicine. He obtained his diploma in zoological medicine in 2006 taking reptilian species as his specialist paper. He became an RCVS recognised specialist in zoo and wildlife medicine in 2007. He has lectured internationally about reptiles and is widely published.

Phill Elliott
Phill graduated in 1993 from the Royal (Dick) School of Veterinary Studies. After some years in mixed domestic practice, he gained the MSc in Wild Animal Health with distinction in 2003. Several wildlife/exotics/conservation posts have followed, including assisting Vic Simpson at the Wildlife Veterinary Investigation Centre, clinical instructor with the Exotic Animal Service at the Dick and, most recently, at the China Bear Rescue Centre run by Animals Asia Foundation in Sichuan Province. He plans to return to Asia in the near future, to work in wildlife rehabilitation in Cambodia.

Andrea Fidgett
Following her Zoology degree, Andrea spent three years as a research assistant at Jersey Zoo. Investigating diet and mortality in endangered parrots there led to her ‘niche’ as a comparative wildlife nutritionist, via an MSc in nutrition and a PhD in avian ecology. Between further degrees she also designed multimedia software for teaching animal taxonomy and ‘ZOOTRITION’ diet management software for zoos. Based at Chester Zoo since 2002, she remains the only full-time nutritionist employed by a UK zoo and has lectured at universities and zoos in the UK, Europe, South Africa, India and China. As Chair of the Nutrition Group for the European Association of Zoos and Aquaria (EAZA), Andrea will host the 5th European Zoo Nutrition Conference in January 2008 and she is Editor-in-Chief of the conference proceedings, published as the book series ‘Zoo Animal Nutrition’.

Simon Fishel
Simon is Managing Director of the CARE Fertility Group, Nottingham and has worked in the field of Assisted Reproduction Technology/Assisted Conception for almost 30 years. He began his career at Cambridge University, working for several years with Professor Robert Edwards prior to the birth of the world’s first test tube baby, Louise Brown, in 1978. He became Deputy Scientific Director at the
world's first "test tube baby clinic" in 1980, working with the pioneers Robert Edwards and Patrick Steptoe until 1985. In 1992 he established the first Postgraduate course in IVF and ART at Nottingham University and was elected to an ad hominem Chair of Human Reproduction before eventually establishing the CARE Fertility Group in 1997. He is currently an Inspector for the Human Fertilisation and Embryology Authority (HFEA), an Advisor to Infertility Network UK, President of AceBabes, a member of many Professional bodies, consultant referee for several scientific and medical journals and author of over 200 peer-reviewed publications and three books.

Edmund Flach
Edmund qualified from Cambridge in 1982 and then spent three years in general practice before undertaking the MSc in Tropical Animal Science at the Centre for Tropical Veterinary Medicine, Edinburgh. For the next five years he did field research on tick-borne diseases of cattle in Zanzibar and Morocco, before being accepted for the post of Veterinary Officer at the Zoological Society of London’s Whipsnade zoo. For 14 years he managed to juggle clinical work, pathology, teaching and research, but in 2006 opted to specialize in pathology and became ZSL’s Zoo and Wildlife Pathologist. He is now based at London zoo, but still works regularly at Whipsnade. Edmund gained his Certificate in Zoological Medicine in 1997 and Diploma (mammalian) in 2001. He has been on BVZS council for several years and is currently President. He also enjoys live music and plays in two bands; Paradox and Hazy Jane!

Neil Forbes
Neil heads the avian and exotic department at Great Western Referrals in Swindon, where he runs the only ECAMS approved residency in the UK. He gained his RCVS Specialist Status in 1992. Neil gained his FRCVS by examination in exotic bird medicine and 1996 and DipECAMS in 1997. He has lectured widely on the international circuit and contributed to over 20 books. Neil has received the Mackellar, Dunkin, Hunting Awards and the Dr TJ Lafeber Avian Practitioner Award. He is currently President of the European College of Avian Medicine and Surgery. Whilst he holds a part time lecturing post at Bristol University, he is primarily a clinician – doing the job, full time with birds.

David Gardner-Roberts
David graduated from Bristol in 2005, after which he finished an internship in small animal medicine and surgery, based in the US. David is the Regional Field Vet for the Mountain Gorilla Veterinary Project (MGVP, Inc.), Rwanda. He took up his position with MGVP, a US non-profit organisation, in October 2006. He is part of a team responsible for the medical management of the mountain gorilla populations in the Bwindi Impenetrable Forest in Uganda and in the Virunga massif in Rwanda, Uganda and the Democratic Republic of Congo (DRC). He also works in a similar capacity with the population of Grauer’s gorillas in the Kahuzi Biega National Park in the DRC and assists in the management of an interim quarantine facility for confiscated primates, based near to the Project’s headquarters in northern Rwanda. His spare time is devoted to looking after local pets and any other animal that ‘ain’t doin’ right’. He definitely needs to get out more.

Richard Hammond
Richard is a specialist in the area of veterinary anaesthesia and an academic clinician teaching throughout the course at Nottingham. He was awarded a PhD in 1999 in the area of Biochemical Pharmacology and then received both RCVS and European Diplomas in Veterinary Anaesthesia soon after. As well as having experience of clinical general veterinary practice, Richard has spent time working in the commercial operation of a major pharmaceutical company and as an academic educator at a number of other veterinary schools in the UK. Richard was awarded a Prize for outstanding contribution to teaching from the Royal Veterinary College in 2005 and fellowship of the Higher Education Academy for his work in curriculum design and integration. He joined the University of Nottingham as Associate Professor of Pharmacology and Anaesthesia in 2006 and is now Head of the Division of Surgery School of Veterinary Medicine and Science.

Mike Hart
Mike is a biomedical scientist who qualified in histology in 1963. He worked for 22 years at London Zoo where he learned and developed techniques needed for exotic animal haematology under the
tutelage of Dr. Christine Hawkey. Mike is currently employed by Greendale Veterinary Diagnostics. He is on the editorial board of ARAV, Comparative Haematology International and a specialist reviewer for Veterinary Record. He has lectured on comparative haematology at several UK universities and overseas institutions and conferences and been on several field trips here and abroad. He is an author or co-author on over 30 peer reviewed papers and non-peer reviewed articles. He is an honorary member of BVZS.

**Matt Hartley**
Following graduation in 1998, Matt worked as resident and consultant vet to several large UK zoos and in exotic pet practice. In 2001 he began a Masters degree in Wildlife Health and Population Management at the University of Sydney which included research on infectious diseases of wild wombats, platypus and koalas. He completed a 6-month temporary lectureship in Australia before being appointed as Head of Veterinary Services at Johannesburg Zoo, South Africa. This post allowed him to further develop his interests in free-ranging wildlife, conservation medicine and education. In December 2005 Matt was appointed as Wildlife and Zoological Veterinary Adviser for the Department of Environment, Food and Rural Affairs where he is currently responsible for development of the UK Wildlife Health and Welfare Strategy, manages zoo and wildlife disease surveillance and provides technical veterinary support across DEFRA.

**Simon Hollamby**
Simon Hollamby is a Lecturer in Zoo, Wildlife and Exotic Animal Medicine at Edinburgh University. He has worked since graduation from Sydney University in 1991 at various zoos and wildlife parks in Australia, the United States and New Zealand. He has completed an internship in zoo and exotic animal medicine and surgery at Lowry Park Zoo in Tampa, Florida and a residency in Wildlife Medicine, Management and Pathology at Michigan State University. He completed his master’s thesis in 2003 on the use of African fish eagles and marabou storks in Uganda as biomonitors of environmental contamination. His hobbies include anything to do with nature, gardening and beer sampling.

**Zdenek (Sid) Knotek**
Sid graduated with honours from Brno Vet University in 1982. He is head of the Avian and Exotic Animal Clinic on University of Veterinary and Pharmaceutical Sciences, Brno. His current focus involves medicine and surgery in exotic animals, especially in reptiles. Sid has, as part of his teaching activities, dealing with reptiles in other universities (Utrecht, Vienna, Kosice, Ljubljan). He is at present President of the European Association of Zoo and Wildlife Veterinarians (EAZWV), President of the Czech Association of Zoo and Wildlife Veterinarians (CAZWV), member of BVZS. Sid supervise the common teaching projects of Brno and Vienna Vet Universities, clinically orientated programme for students and veterinarians - Summer School for Exotic Medicine and Surgery, and ESAVS course – Exotic Pets Medicine and Surgery.

**Nicholas Masters**
Nic is a Veterinary Assistant with International Zoo Veterinary Group (IZVG). He graduated from Cambridge in 1999 having completed an elective evaluating the use of a portable draw-over vaporiser system for anaesthetising wild animals in the field. Nic joined IZVG in October 2005, having attained his Wild Animal Health Master of Science degree at the Institute of Zoology and Royal Veterinary College. His MSc research project investigating anaesthetic-related mortality in Great Apes has recently been published in *Veterinary Anaesthesia and Analgesia*. Since joining the practice, Nic has been the resident veterinarian at Twycross Zoo, one of the most diverse collections of primates in the world. Apes and monkeys comprise much of the caseload. He spends the remainder of his time providing veterinary care for other IZVG clients across the UK and abroad, covering all taxonomic groups. When not working Nic is at home reminding his wife and three young children what he looks like.

**Henk Niphuis**
Henk graduated in 1985 in HLO-zoology at the Gijsen Institute in Utrecht, the Netherlands. He started his carrier at the TNO Primate Centre which evolved in to the Biomedical Primate Center of today. He
accepted a position as senior research assistant for department of virology and is chairman for Primate Viral Diagnostics and one of the core managers of flow cytometry for SIV and HIV infections in primates within the BPRC. He was and is involved in rehabilitation programs for barbary macaques on Gibraltar, orangutans in Indonesia, pygmy chimps in the Republic of Congo and chimps (Jane Goodall Inst.) in Sudan and Ghana.

**Bairbre O’Malley**

Bairbre is Associate Lecturer in exotic species at the School of Agriculture, Food science and Veterinary medicine, UCD, Ireland where she lectures veterinary students and veterinary nurses. She also runs the only veterinary hospital in southern Ireland specialising in exotic pets where she sees first opinion and referral exotic cases. Her veterinary textbook ‘Clinical anatomy and physiology of exotic species’ (Elsevier) sells worldwide.

**Mary Pinborough**

Mary started in laboratory science in 1971 working in the human sector in London and obtained her ONC in 1973, a HNC in 1975 and then went on to do her special in Microbiology and Histopathology, which was completed in 1977. Mary has had a long interest in reptiles, keeping many rescue animals over the years; this in turn kindled her interest in veterinary diagnostics. She continued to provide diagnostic services within hospitals and progressed to managing Pathology Services within the private sector. In 2005 Mary jumped ship and moved full time into the veterinary sector. She is Technical Services Director of Pinmoore Animal Laboratory Services Limited, which provides international veterinary diagnostic services for small animal, zoo and exotic animal veterinary practices. PALS were set up in 2006 with the intention of providing an exemplary service for practitioners, specialising in exotic species, but applying the rigorous standards found in the human field with five exotic veterinarians providing back up services on site. Her hobbies include looking after her menagerie of reptiles including a 22 year old iguana, (her first rescue)!

**Romain Pizzi**

Since qualifying in 1999 in South Africa, where he was born and grew up, Romain has gained an MSc in Wild Animal Health, the RCVS Certificate and Diploma in Zoological Medicine, and Membership of the Australian College of Veterinary Scientists by examination in Small Animal Surgery. Former Veterinary Pathologist at the Zoological Society of London, he is currently Special Lecturer in Zoo and Wildlife Medicine at the University of Nottingham School of Veterinary Medicine and Science, Director of Zoological Medicine Ltd, and a presenter for Animal Planet TV. He is responsible for the exotic animal and endosurgery service at Inglis Veterinary Centre in Dunfermline, Scotland, and provision of veterinary care to the more than 2500 annual wildlife cases, including grey and common seals at Middlebank Scottish SPCA Wildlife centre. He performed the first successful canine thoracoscopic pericardiectomy in Scotland, with referrals even including a case from the Royal (Dick) School of Veterinary Surgery. Romain is an RCVS Recognised Specialist in Zoo and Wildlife Medicine.

**Ann Pocknell**

Ann graduated from the Ontario Veterinary College in 1989. Following 3 years in practice, she completed a Masters in Veterinary Pathology at the University of Saskatchewan and an advanced residency in zoological pathology at the University of Wisconsin-Madison. She is a diplomate of the ACVP and the RCPath (avian specialty). After 4 years as pathologist at London Zoo, Ann is now at Abbey Veterinary Services, a large diagnostic pathology laboratory in Devon. She remains actively interested in histopathology of avian, zoo and wildlife species. Hobbies include backgammon, poker, birdwatching, hiking and chocolate-tasting.

**Laura Pugh**

Laura is a fourth year student at the Royal (Dick) School of Veterinary Studies. She carried out a six week vacation project studying the *post mortem* reports of carnivores at Edinburgh Zoo this summer. She has previously helped with research at the Centre for Dolphin Studies in South Africa and enjoys attending conferences on more unusual veterinary species. She is involved in the Edinburgh Veterinary Zoological Society and is looking forward to completing the marine mammal
medic course this Autumn. She enjoys kayaking, SCUBA diving, climbing and cycling and will be the chairperson for the Dick Vet College Ball this year.

**Brigitte Reusch**

Brigitte graduated with honors from the RVC, London in 2002. She was appointed the first RWF Rabbit and Zoo animal resident in the UK in 2004, based at Bristol Zoo and University of Bristol. She now runs the Hare & Tortoise Veterinary Referrals, a Rabbit and Exotic Veterinary Referral service in the South West. She holds the RCVS certificate in Zoological Medicine. As a member of the RWF Health Liaison Team she writes regularly for *Rabbiting On*, the RWF quarterly owners’ magazine and has contributed to multiple rabbit texts including the second edition of the BSAVA Manual of Rabbit Medicine and Surgery.

**Andrew Routh**

Andrew Routh is currently the Chief Veterinary Officer for the Zoological Society of London. As well as having worked in clinical practice in the UK and with the veterinary management and rehabilitation of native wildlife species he has worked for zoological collections in Hong Kong and the USA.

**Arpassorn Routh**

Sorn graduated as a veterinary surgeon in 1992 from Kasetsart University, Bangkok, Thailand. After periods in clinical practice and as a lecturer at the University of Ubonratchatani she became involved with an NGO addressing the welfare and management of native species, such as black bear, sun bear, gibbons, macaques and elephant, held in captivity in Thailand. She has subsequently been involved in projects in Kalimantan with orphaned orang utan, with native species’ rehabilitation in the UK, behavioural studies of captive giant panda in Hong Kong and the rescue of cold-stunned sea turtles from the coast of New England, USA. She is currently based in the UK and most recently has been studying the behaviour of gorillas in a new exhibit.

**Keith Simpson**

Keith qualified from Bristol Veterinary school in 1986 and spent three years in mixed practice in North Devon and North Somerset before moving to South Devon to take up a small animal position. In 1994 he started Vetronic Services as a sideline while still in practice and undertook entrance to the Institute of Incorporated Engineers, completing his HNC in electronics and Institution membership in 1995. He remained in part-time practice until 2001, when the business demanded more attention then practice. Keith's main interests are in the development of ventilation equipment across a range of species and in the design of new monitoring equipment. He is now managing director of Vetronic Services Ltd. based in Newton Abbot in South Devon.

**Vic Simpson**

Vic qualified in 1964 and, after a period in mixed practice in the Midlands, spent nearly ten years working in Africa. He worked in the MAFF/VLA Veterinary Investigation Service in Nottingham in 1973-4 and then in Cornwall from 1979-2001. His main interest had always been wildlife and in ‘retirement’ he set up the Wildlife VIC. Main career achievements include diagnosis of lead poisoning in swans due to anglers’ weights and a detailed study of the health status of otters. Current projects include studies on red squirrels, small mustelids, bats, barn owls and garden birds under the Garden Bird Health initiative.

**André Stadler**

André was inspired in wildlife & zoo biology and especially in mammal and bird biology since he saw Prof. Grzimek on television as young child. After his graduation from school he started his study of biology at University of Bochum with a focus on zoology and parasitology at the chair of special zoology of Prof. Schaub. During his studies he started his work experience at Wuppertal Zoo beside Dr. Schürer and Dr. Sliwa. After his degree in 2006 he became the volunteer assistant of Wuppertal Zoo and in September 2007 the new curator of Wuppertal Zoo. Aside of his work he started his PhD in 2006 with the topic “Use of blood-sucking bugs in zoological gardens”.

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Brian Stockdale
Brian qualified from Edinburgh in 1977 and has spent the last 30 years in private practice. Initially in mixed general practice where he gained expertise in bovine embryo transplant work and latterly in a small animal/exotic practice where the majority of his time is now spent with birds. Aviculture features highly in his life, especially breeding passerines, and he is currently honorary veterinary adviser to the British Canary Council.

Alexandra Tomlinson
Having graduated in 1992, Alex worked in general practice for seven years, followed by positions as a DEFRA VO and a university lecturer. After completing the MSc in Wild Animal Health at IOZ/RVC in 2004, she spent a stimulating year with Vic Simpson in Cornwall, getting to grips with wildlife pathology. She now works on wildlife diseases at the Central Science Laboratory and is in the throes of a part-time PhD on the correlates for infection with *M. bovis* in badgers, based at Woodchester Park in Gloucestershire.

Šárka Trnková
Šárka was born in Čáslav, Czech Republic. She started to study veterinary medicine at the Faculty of Veterinary Medicine, University of Veterinary and Pharmaceutical Sciences Brno in 1999. She is the author of a thesis “Haematology and plasma chemistry in green iguanas suffering with different diseases (in Czech)”. After graduating in 2006, she began her PhD study at the Avian and Exotic Animal Clinic, Faculty of Veterinary Medicine, University of Veterinary and Pharmaceutical Sciences, Brno. The main topics of her interest are clinical aspects of exotic medicine, especially anaesthesia and analgesia in reptiles. Šárka is a member of Czech Association of Zoo and Wildlife Veterinarians (CAZWV).

May Pui-Ying Tse
May is a 3rd year undergraduate veterinary student at Royal (Dick) School of Veterinary Studies, University of Edinburgh. After her first degree in the Hong Kong University of Science and Technology, with a great interest in animal care and wanting to be a vet had driven her to study abroad. With the contacts gained during extra mural studies back home, she initiated a summer project on Hainan gibbons, hope to get more information on these little known, valuable gibbons, to aid in the conservation of this species in China. Inspired by the summer project, she has a growing interest in the area of conservation work. Hobbies include scuba diving and photography.

Michael Waters
Michael completed the MSc in Wild Animal Health many years ago (in fact one of the original GPs) and is currently a lecturer in clinical pathology at the Royal Veterinary College where his work involves 100% non-domestic species.

Peer Zwart
Peer qualified from Utrecht in 1955. He did military service and was then an Inspector: Food of Animal Origin for one year. He has taught at the Veterinary Faculty Utrecht (1956-1990). Peer spent seven years at the Department of Tropical and Protozoan Diseases, of which half of the time was on diseases of zoo animals and exotic pets. His doctoral thesis was completed in 1963: "Studies on Renal Pathology in Reptiles". Peer’s pathology work includes time since 1963 at the Department of Veterinary Pathology, full time work on diseases of zoo animals, exotic pets and wildlife and in 1980, laboratory-animal-pathology was included. Since 1990, he has concentrated on pathology of birds, reptiles, amphibians and invertebrates. He is registered as a specialist in Veterinary Pathology and separately as Laboratory Animal Pathologist. Dipl. ECVP. He is an Honorary Member of the European Association of Zoo and Wildlife Veterinarians (EAZWV) (1997).