SAEnewsletter

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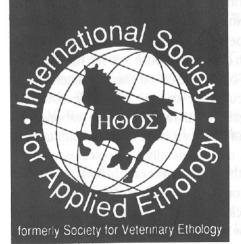
Looking Forward

♦ his issue of the ISAE Newsletter marks the start of a new stage in the life of our society. First because you will find enclosed a draft for the new Constitution and second because in addition to the registration material which has already been sent to you, you will find some details about the first ISAE meeting to be held outside Europe.

Following decisions which were taken at the last AGM in Edinburgh, the Council has prepared further proposals for changes in the Constitution of ISAE. In particular the aims of our society are now laid down in more detail. Some details concerning administration have also been changed, amongst others. As was announced earlier, the Council hopes that decisions about this new Constitution can be taken at the AGM to be held this year in Pittsburgh. We hope that this will be an extra reason for you to attend this meeting! If it happens that you will not be able to come, and you have ideas about the Constitution, please do not hesitate to present them to anyone who will be able to represent your views during the discussion in Pittsburgh.

I am very happy that we have the opportunity to hold our 1992 Congress in the USA. The combined ASAS-ISAE meeting will offer us an excellent opportunity to continue the exchange of research which is carried out in the many countries of the world. I have been informed that presentation of papers originating from 15 different countries is planned. We may feel honoured that of the two papers which will be presented at the opening session, one will be concerned with applied ethology and animal welfare. Although the ISAE gathering is part of the larger ASAS event, Harold Gonyou, our local organizer, will make sure that we have enough opportunities to discuss with each other outside the conference rooms. A special ISAE location for refreshments is planned and a separate ISAE dinner cruise has been organized. I hope to meet many ISAE members in Pittsburgh!

Herman Wierenga, President



What's in a name? (continued)

Our newsletter is obviously read by the writer in the UK's Veterinary Record who writes under the name of Totaliser and responded in a January issue to our change of name. Totaliser notes in passing that ISAE can be pronounced 'I say!' but suggests that one reason for the name change may be that our acronym no longer stands for Swine Vesicular Enterovirus. ISAE apparently has no bacteriological or viral connotations: are there any readers who disagree?

The only hidden meaning I have come up with is that in the appropriate alphabet ISAE is the feminine Greek word for Equal. Can anyone better that?

Whether because of the change of name or for other reasons, our Membership Secretary and I have noted a small but steady increase in enquiries and applications from around the world, particularly North America and Australasia. I am sure that this will continue more strongly during and after the Pittsburgh meeting.

Mike Appleby

ISAE Office Bearers

President:

Senior Vice-President: **Junior Vice-President:**

Secretary:

Assistant Secretary:

Membership Secretary:

Treasurer:

Editor:

Legal Assessor:

Council members:

Regional Secretaries:

Harold Gonyou Mike Appleby Henrik Simonsen Carol Petherick Mike Mendl Ian Horrell Bill Jackson Elisabetta Canali. lean Faure. Jan Ladewig, Lindsay Matthews

Herman Wierenga

Bo Algers

Frank Ödberg. Jeff Rushen Mike Appleby. Harry Blokhuis, Marie-FranceBouissou, Harold Gonyou,

L.C. Hsia,

Andrew Luescher, Lindsay Matthews. Willem Schouten.

Klaus Zeeb

ISAE news

Nordic Winter Meeting, November 1991

This meeting, organised by Anders Lund and others in Sweden, was attended by about 22 people. These were mainly from Scandinavia, but also included researchers from other European countries who are associated with Swedish institutes. There was a considerable amount of discussion, particularly in connection with the main lecture on multivariate statistics and their use in ethological research, which carried on well into the night.

Abstracts of the meeting are enclosed.

UK Winter Meeting, December 1991

The usual midwinter 'London meeting' was removed to St Catherine's College, Cambridge, this year, where James Serpell arranged a day-long symposium devoted largely to companion animals, with a couple of extras to fill in the interval between the tea break and the appointed hour for English beer to start flowing. In view of the inclusion of the abstracts with this newsletter it would be superfluous to summarise the content of papers. I shall therefore confine myself to a few general comments.

The bulk of material on companion animals was concerned, as might be expected, with dogs (4 papers to set the day going) and cats. However, there was a broad and interesting range to both the conceptual orientations and the techniques employed. At one extreme was a paper concerned with endocrinological correlates of aggression, in particular, with both gonadal and adrenal steroids and their control systems (by Knol and others). At the other were two papers of a sociological nature dealing with the long-term human response to pets: one (by Watt and Waran) collated data on the characteristics of those prosecuted for cruelty, while the other (by Paul) investigated relationships between responsibility for the care of pets as a child and adult attitudes to animals and, more generally, ecological issues.

More in the mainstream of ethological research were papers on the basic nature of social relations in dogs (by Wickens and Bradshaw) and cats (Brown and Bradshaw), on animal-human interactions (Netto and others; McCune) and on housing in rescue shelters (Hubrecht). Species variety was provided by deer (response to handling; Price) and 'chooks' (response of hens to strangers and its effects on spacing; Grigor).

The civilised charms of a Cambridge college made a very pleasant change from the grime and noise of London, especially for those of us with Cambridge connections. However, the majority seemed to feel that the accessibility of London argued in favour of a return there in 1992. But the meeting was a great success, with the practical arrangements excellent (almost all!), and James Serpell is to be congratulated on the organization.

Ian Horrell

Council of Europe

ISAE has been asked by the Council of Europe to nominate a representative to attend meetings concerning the European Convention for the Protection of Vertebrate Animals used for Experimental and other Scientific Purposes. At the ISAE Council meeting in December 1991 it was decided to nominate Professor Frank Ödberg. He has agreed and so he will henceforward be representing us in this capacity. It is, of course, convenient for all concerned that Frank is based not a million miles from Brussels!

ISAE Membership

New Members

New applications for membership continue to come in on a regular basis and we are very pleased to welcome the following people to the Society:

Dr T. Tennessen, Dept. Animal Science, Nova Scotia Agricultural College, Truro, Nova Scotia, Canada B2N 5E3

Mr H.J. Herrmann - Kirchstr. 4, 3430 Witzenhausen 9, Germany

Dr A. Hargreaves - Animal Science Group, School of Agriculture, University of Western Australia, Nedlands, WA 6009, Australia

Dr H.M. Vermeer - Research Institute for Pig Husbandry, P.O. Box 83, 5240AB Rosmalen, The Netherlands

Ms J. Campbell - 1a Central Avenue, Wigston, Leicester LE8 2AB, England

Dr J.J. McGlone - Dept. Animal Science, Texas Tech University, Lubbock, TX 79409-2141, USA **Dr J-P. Signoret** - INRA Laboratoire de Comportement Animal, 37380 Nouzilly, France

Dr A. Baldi - Instituto di Alimentazione Animale, Facolta' di Medicina Veterinaria, Via Celoria 10, 20133 Milano, Italy

Ms C. Lindberg - Dept. Animal Husbandry, Langford House, Langford, Bristol BS18 7DU, England

Mr D. Lay Jr. - Texas A&M University, Animal Science Department, Room 241 Kleberg, College Station, TX77843, USA

Dr M. Foster - Psychology Dept., University of Waikato, Private Bag 3105, Hamilton, New Zealand **Mrs T.A. Abbott** - Cambac JMA Research Ltd., Unit 4, Wards Farm, Greenmore Lane, Woodcote, Reading, Berks RG8 0RB, England

Niwako Hata - Igusa Animal Hospital, 29-10, Igusa 3-Chome, Suginami-ku, Tokyo 167 Japan

Prof. H. Richner - IZEA, Universite, 1015 Lausanne, Switzerland

Mr A.W. Sainsbury - The Institute of Zoology, Zoological Society of London, Regents Park, London NW1 4RY, England

Dr M. Seabrook - University of Nottingham, Rural Business Research Unit, Sutton Bonnington, Loughborough, Leics. LE12 5RE, England

Ms N. Bartle - University of Nottingham, Dept. Agriculture & Horticulture, Sutton Bonnington, Loughborough, Leics. LE12 5RE, England

Dr L.L. Jeppesen - Institute of Population Biology, University of Copenhagen, Universitetsparken 15, DK-2100 Københaven 0, Denmark

Ms L. Mørch - Skule Baardsøns 6T. 14, N-7016 Trondheim, Norway

Prof. E.O. Price - Dept. Animal Science, University of California, Davis, California 95616-8521, USA

Miss M.E. Follensbee - 151 Glasgow St. N., Guelph, Ontario, Canada N1H 4W7

Dr J. Broucek - Research Institute of Animal Production, Hlohovskáz, 94992 Nitra, CSFR

Membership Directory

I have just about finished putting all of the membership details onto a new computer system. Thanks must go to Mark Rutter for his time and expertise in developing the new system for storing and accessing membership information. If there are still members who have not completed and returned their Membership Directory Survey form and wish to have details included in the new directory then please return your form (which was included with the last

Newsletter) as soon as possible, and preferably by early July. If you have lost your form and want another then please contact me. Members who do not return a form will just have the information that I hold on them at present (name and address) put into the directory. The directory will be circulated to other members of ISAE, but if you do not wish to have an entry then please contact me. I am hoping that the directory will be ready for distribution with the next Newsletter in Oct/Nov.

Changes of Address

As I have been transferring information from the survey forms to the computer I have noticed a number of address changes of members of which I have not been specifically notified. I have changed these on our current computer system, but I suspect that I have not noticed all (as we now have over 400 names and addresses on the mailing list). Would members please notify me (preferably in writing) of any changes of address. I have been notified of the following changes:

Ms P.F. Nielsen - Sveasvej 5 3.Tu., 1917 Frederiksberg C', Denmark

Dr C. O'Connor - "Ronnoco", Seadown No.3 R.D., Timaru, New Zealand

Mr M. Ranson - Farm Animal Dept., RSPCA, Causeway, Horsham, West Sussex RH12 1HG, England Mr D. van Liere - Groenkampen 67, 9407 RK Assen, The Netherlands

Ms U. Knierim - Gasslestr. 4, 3400 Göttingen, Germany

Ms A. Hanlon - MLURI, Glensaugh, Laurencekirk, Kincardineshire AB2 1HV, Scotland

Dr S.M. Rutter - AFRC IGER, North Wyke Research Station, Okehampton, Devon EX20 2SB, England

Membership Subscriptions

This is a reminder that **subscriptions are due on June 1st**. Members who are 2 years (or more) behind with their subscriptions will have their names put to Council at the next meeting in August and will be removed from the mailing list if Council agree (and there is no reason to believe that they will not!). If you are planning to go to the Congress in Pittsburgh and intend to pay there then I would appreciate it if you would let me know.

Once again, I emphasise that you know when your subscriptions are due from the date which is to

the right of your name on your address label i.e. if that date is 1991 that means subscriptions were due on June 1st of that year, which means that you will be 2 years in arrears on June 1st this year. If there is an alphabetic code with no numbers on your label, then no payment is expected, but if the code is S/O 1992 this simply means that we expect to receive payment via a standing order through your bank. Below is a list of all **those who face deletion now** as they are currently over 2 years in arrears (last payment received in 1989):

Ambrosen T. - Denmark

Attrell B. - Sweden

Bubier N.E. - England

D'Urso G. - Italy

Ekesbo I. - Sweden

Gravas L. - Norway

Hogsved O. - Sweden

Hultgren J. - Sweden

Imlah P. - Scotland

Kiley-Worthington M. - England

Kooyman J. - The Netherlands

Mayer E. - Israel

Pollard-Williams S. - England

Preston A.P. - Australia

Stangel G. - Sweden

Steinwall L. - Sweden

Sveberg G. - Norway

Svedberg J. - Sweden

Vincent I. - England

Wilkins D.B. - England

Those below will be 2 years in arrears at June 1st this year:

Albright J.L. - USA

Baldi C. - Italy

Barbera S. - Italy

Bouissou M.-F. - France

Cancedda M. - Italy

Carenzi C. - Italy

Ciruzzi B. - Italy

Di Modugno G. - Italy

Feenstra A. - Denmark

Fölsch D.W. - Switzerland

Gallo R. - Italy

Gustafsson B. - Sweden

Herlin A. - Sweden

Hobroh B. - Norway

Jonasen B. - Denmark
Kelly E.P. - Ireland
Kjaestad H.P. - Norway
Landsberg G. - Canada
Lehner P.N. - USA
Luescher U.A. - Canada
McCune S. - England
Mendolia C. - Italy

Olsen A.B. - Norway Pedersen V. - Denmark Perea V.M. - Spain Phillips C.J.C. - Wales

Murphy M. - Ireland

Raastad T. - Norway

Robert S. - Canada Rowsell H.C. - Canada

Salavessa J. - Portugal **Saloniemi** H. - Finland

Saville C.A. - England

Serpell J.A. - England

Sevi A. - Italy

Sparagetti M.A. - Italy

Steiger A. - Switzerland **Symoens** J. - Belgium

Terlouw C. - Scotland

Vanderheyde H. - Belgium

Vergara P. - Spain

Webster A.J.F. - England

Widowski T. - Canada

Zannelli C. - Italy

This is the last time such lists will be made up as it is very time-consuming; it is up to members to keep a check on when their subscriptions are due.

If you have any queries regarding membership information or subscription payments then please get in touch.

Carol Petherick, Membership Secretary

other news

The Edinburgh MSc in Applied Animal Behaviour and Animal Welfare

The very first postgraduate course in Applied Animal Behaviour and Animal Welfare began at Edinburgh University in October 1990. The course comprises two parts: there is a 9 month taught section, after

which a student who has attained a certain standard is allowed to embark on a research project for a period of 3 months. The taught section of the course includes many subjects; for example, development of behaviour, motivation, neurobiology, stress physiology, human-animal interactions, wildlife management, animal welfare legislation and animal welfare philosophy. The type of projects carried out by the students vary considerably, but the following are examples of 1991 titles: Effects of environmental enrichment for farmed deer; Influence of different stockmen on the behaviour and heart-rate of dairy cows in the milking parlour; Behavioural problems of dogs in an animal shelter.

As you might imagine, there have been many enquiries about the course and almost as many applications. We have almost completed our second teaching year and are busy dealing with applications at this time. Last year we had over 25 very keen applicants, but unfortunately we were only able to find funding for 12. This year we have already received approximately 35 applications (and it is still only April!) and it is unlikely that we will be able to find funding for all of these. It seems a shame that many of these enthusiastic applicants will have to be told that they have not been successful in obtaining a place on our course because of lack of funding, so if you know of potential sources of funds we would be pleased to hear from you.

So far, all the students on the course have been European. However, it is hoped that in the future interest in the course may also be shown in other areas such as the USA, Canada, Australia and New Zealand.

If you are interested in obtaining information about the course, please write to Dr N. Waran, IERM, University of Edinburgh, School of Agriculture, West Mains Road, Edinburgh EH9 3JG, UK.

Natalie Waran

Situation situation

The Department of Animal Sciences at the University of Illinois will begin recruiting candidates for a faculty position in Applied Ethology shortly. Anyone interested should contact Dr Dennis Campion, Head, Department of Animal Sciences, University of Illinois, Urbana, IL 61801, USA, to obtain a formal position announcement.

Harold Gonyou

International Society for Anthrozoology

The aim of ISAZ, which was inaugurated in 1991, is to promote the study of all aspects of human-animal relationships by the encouragement and publication of research, the holding of meetings and other activities. Membership is open to all who are interested in academic or scholarly research in this area. The first major scientific meeting is to be held in Montreal, Canada, in July 1992, prior to the Animals and Us conference (see Meetings, below). Further information can be obtained from Dr J.W.S. Bradshaw, ISAZ Secretary, Department of Biology, University of Southampton, Southampton SO9 3TU, UK.

Certification of Applied Animal Behaviourists

Members may be interested to know that the Animal Behavior Society has launched a scheme for certification of applied animal behaviourists. There are two levels: Associate Applied Animal Behaviourist and Applied Animal Behaviourist, each with specific standards and criteria. There is a fee for initial application, which appears to be non-refundable even if certification is not granted, and an annual fee thereafter. I am not sure whether this scheme is intended primarily for North Americans or is intended to be worldwide, but I have already seen such certification quoted by a North American colleague. ABS suggests that those studying companion animal behaviour, farm animal behaviour, behaviour of animals in zoos and others who apply animal behaviour principles to solutions of animal behaviour problems may wish to enquire further from Dr John C. Wright, ABS Board of Professional Certification, Department of Psychology, Mercer University, 1400 Coleman Ave., Macon, GA 31207, USA.

Mike Appleby

Two Hundred Years of British Farm Livestock

This book by Stephen Hall and Juliet Clutton-Brock, contains over two hundred colour pictures. It is produced under the aegis of the Rare Breeds Survival Trust, whose publicity describes it as 'beautiful... a treasure' and says that it is reprinted due to popular

demand. It costs £25, payable to: Natural History Museum Publications, Cromwell Road, London SW7 5BD, UK.

(ISBN 0 565 01077 8)

articles

Five minute philosophy: applied ethological economics

This is the first in a series of articles in which prominent members of the society are asked to expound on ideas which concern them, off the cuff and without being held to account for the exact details. Correspondence in response will be welcomed.

Behavioural problems in intensive husbandry have been investigated by ethologists for some decades. In some cases the causes of these problems were readily found and recommendations for improvement were given. These recommendations were followed in those cases where the direct benefit was clear. This is not surprising for a field in which long term planning is not the rule and eventual problems are often pushed forward. The appreciation of results from ethological research depends on (a) the direct economic benefit and (b) their impact on the status quo.

I shall give an example. If an ethologist should find that anosmic pigs grow better, flushing the nostrils with silver nitrate would soon become as common as tooth clipping and tail docking. A different reaction might be expected if research showed that giving piglets more space and straw would improve their later reproduction as sows. The response would probably be: This is an interesting finding but we need more research.

The positive side of this sort of reaction is that we can go on testing hypotheses which have highly predictable outcomes.

More worrying is that the importance of behavioural problems is played down by some researchers. For example: mink show very intense stereotypies before feeding. Stereotypies are regarded as clear signs of former or acute behavioural problems. They are defined as behavioural patterns which are (1) fixed in form, (2) performed repeatedly, (3) idiosyn-

cratic and (4) lacking an obvious goal. In analyzing stereotypies in mink, the patterns were found not to be fixed when measured on a scale of 1/10th of a second. The conclusion was that these patterns were not stereotypies; ergo, there is nothing wrong with keeping mink in cages. Another popular way of arguing is that because stereotypies are sometimes found in wild or free-ranging animals they are part of the repertoire of the animal. Animals in the wild do indeed perform stereotypic behaviour, but not for hours and hours, day after day.

By selecting information, any husbandry system can be made acceptable.

Willem Schouten

Legal Scene

Case: conservation of wildlife

The French Minister by order set the start of the 1987 shooting season in the Nord region for waterfowl as July 18th. At that date some of the relevant species had not finished breeding. It was held that the order conflicted with the Directive and should be annulled. (Rassemblement des opposants a la chasse, 1990, 2 CMLR 831, French Conseil d' Etat)

UK Statutes and Orders

Badgers Act 1991 (c36) and Badgers (further protection) Act 1991 (c35): these Acts provide for further protection of badger setts and punishment for use of dogs.

Dangerous Dogs Act 1991 (c65): prohibits possession of dogs specifically for fighting. Pit Bull Terriers and Japanese Tosas are named. Order No.1743 names other breeds and Order No. 1744 discuses compensation for destroying dogs.

Deer Act 1991 (c54): creates offences of poaching deer, taking or killing deer at night and taking or killing certain deer.

Welfare of Pigs Regulations 1991 No. 1477: prohibits the tethering of pigs and the keeping of any pigs in a stall or pen unless the stall or pen meets specified requirements.

Veterinary surgeons qualifications (EC recognition) (German Democratic Republic Qualifications) Order 1991 (No. 1218): amends the Veterinary Surgeons Act 1966 so that holders of GDR qualifications may practise in the UK subject to registration.

Book: 'Agricultural Trade, Protectionism and the Problems of Development'

by J.A. McMahon. The Leicester series of monographs on European and international trade law, Leicester University Press (Pinter Publishers) £45.00. ISBN 0-7185-1323-1.

Bill Jackson

Book Review

Lives in the Balance. The Ethics of using Animals in Biomedical Research Eds. Jane A. Smith and Kenneth M. Boyd. £19.50. Oxford University Press, Oxford. pp. xvi+352. 1991. ISBN 019 854744 7

A Working Party (WP) of the Institute of Medical Ethics met from 1986-89 in order to discuss the issues of using animals in research. Chaired by a theologian, the members included biologists, philosophers, toxicologists, a Home Office Inspector and officers of animal welfare societies. The diversity of their views is reflected in the book's scope and wide-ranging content; it is successful in its declared aim of providing access to facts and arguments which will assist the reader in coming to his or her own informed moral judgements.

The book contains so much factual information that it would serve as a useful sourcebook for investigating the use of animals in research. Although the major part is concerned with the UK there is a substantial section dealing with the situation in other countries. Among the interesting statistics for the UK are the categories of establishment both were most licencees work (69% in universities and polytechnics) and where most animals are used (61% in commercial firms). Of all animals used 94% are rodents, while 49% are used for medical and veterinary purposes and 21% for fundamental research. In the Netherlands procedures are classified by their severity: for example. blood sampling or force feeding are regarded as minor, cannula insertion or caesarian section as moderate and prolonged food deprivation or LD50 tests as severe procedures. The WP was critical of this rather simple classification on the grounds that a great deal depended on the precise experimental details and on the skill and experience of the experimenter. Though this is true it nonetheless

provides useful guidelines for an initial cost-benefit analysis.

Possible criteria for identifying pain, stress and anxiety in different classes of animal are set out. Mammals and birds satisfy virtually all of the criteria for feeling pain, while the lower vertebrates probably experience it to a lesser degree; there may even be some evidence of it in cephalopods, but not in other invertebrates. The situation for stress and anxiety is more uncertain: the WP concluded that animals might possibly experience them in direct proportion to the size of their forebrains.

The most valuable part of the book is probably the part dealing with cost-benefit analyses. The questions which should be asked when assessing the likely costs to animals and the potential benefits which may flow from the experiments are discussed in great detail. Although many of the judgements are highly subjective (how does one assess the value of carrying out fundamental research?) the mere exercise of setting costs against benefits is in itself worthwhile in making scientists think about the implications of what they are doing. Careful analysis can result in ways of making procedures less stressful for animals while increasing the value of the results.

The discussion of animal rights and the moral basis of experimentation is disappointing. The WP divided essentially into two groups: those who saw an insoluble ethical conflict in the use of animals and those who considered that possession of awareness and self-consciousness by human beings placed them in a morally-unique position. The main contribution philosophy can make in this area is to encourage clarity of thought but, probably because of an attempt to represent fairly all points of view, the key arguments disappeared under a cascade of verbiage. At the end I felt like Omar Khayam who

"did eagerly frequent
Doctor and Saint and heard great argument
About it and about but still I came
Out at the same door as in I went."

The debate about experimentation can all too easily become polarised - descending on the one hand to emotional assertions about intolerable suffering, or on the other to facile claims that any appreciable constraint will bring the progress of biomedical science to a standstill. This book demonstrates how, in spite of the uncertainties, a dis-

passionate approach can reconcile the two extremes. It deserves to be inspected by every scientist who carries out experiments on animals, though it is hard going and few will have the stamina to read every word.

Barry Hughes

meetings

ISAE Meetings

Nordic Winter Meeting, November 1992, Copenhagen, Denmark. This will be a 2 day event, with one full day of presentations and discussions on scientific papers and reports, open to everybody, and one day including an excursion and a round table discussion on 'Theoretical and practical assessment of behavioural needs.' Further information will be distributed in August, or contact Prof. H.B. Simonsen, Royal Veterinary and Agricultural University, Dept of Animal Science and Animal Health, Division of Ethology and Health, Bulowsvej 13-1870 Frederiksberg C, Denmark (Tel 45 35 28 28 28, Fax 45 35 36 18 78).

UK Winter Meeting, 2 December 1992, Royal Veterinary College, London. The main subject will be 'Behaviour and welfare of animals during handling and transport,' and there will also be a general session. Offers of papers, please, to Dr Natalie Waran, IERM, University of Edinburgh, West Mains Road, Edinburgh EH9 3JG, UK (Tel 031 667 1041, Fax 031 667 2061) by 7 September 1992.

ISAE/ASAS International Congress, 8-11 August 1992, Pittsburgh, USA. Details below.

ISAE/DVG/EAAP International Congress, August 1993, Berlin, Germany. This meeting will now be in Berlin instead of Gosen as previously planned.

ISAE International Congress, 1994, Foulum, Denmark.

International Congress 1992

Plans are proceeding well for the joint meeting of ISAE with the American Society for Animal Science in Pittsburgh, Pennsylvania, USA, 8-11 August. Over 80 abstracts have been submitted, from 15 countries, for

presentation at oral and poster sessions. ISAE will have a special information and welcoming booth at the registration area of the joint meeting. Activities will begin with the opening of the meeting and a reception on the evening of August 8th. Paper sessions will be held on August 9th-11th. The Annual General Meeting is scheduled for the morning of August 11th. The social excursion for ISAE, a dinner cruise on the three rivers of Pittsburgh, will be held on the evening of August 10th.

As outlined in the original mailing, the ISAE/ASAS meeting is going to be a very big event, with parallel sessions in a wide variety of subjects. These include topics from Aquaculture to Meat Science, from Breeding and Genetics to Ruminant Nutrition. Members of ISAE, however, are most likely to be involved with the sessions on Environment and Behaviour. These are spread over the three days from Sunday 9 August to Tuesday 11 August. The usual pattern is to be an invited 30-minute paper, followed by 12 or so 15-minute papers. There will be something there for everyone!

Sunday a.m.: Immunological function in stress;

conditioning and learning.

Invited paper: Minton and Blecha

Sunday p.m.: Stereotypic behaviour; social behav-

iour.

Invited paper: Terlouw

Monday a.m.: Short, general session.

Invited paper: Price

Monday p.m.: Perinatal and postnatal behaviour.

Invited paper: Algers
Tuesday a.m.: Posters

Tuesday p.m.: Management practices; spacing be-

haviour

Invited paper: McGlone

Registration materials and information on accommodation were mailed out to ISAE members recently. The conference is being held in downtown Pittsburgh at the convention center. Visitors may want to travel to other nearby sights before or after the conference. Washington DC can be reached by train, automobile or air. The Appalachian Trail, a major hiking path, runs through the mountains to the east of Pittsburgh. Niagara Falls and the Great Smokey Mountains National Park are two popular scenic areas within a day's drive of Pittsburgh. If members require additional information about the

meeting, alternative accommodation or travel in the USA, they should contact me at Dept of Animal Sciences, University of Illinois, Urbana, IL 61801, USA (Tel 217-333-2118, Fax 217-333-8286).

Harold Gonyou

Other Meetings

Animal Behavior Society, 13-18 June 1992, Queen's University, Ontario, Canada. For the Applied Ethology session, contact Dr Tina Widowski, Dept of Animal and Poultry Science, University of Guelph, Ontario N1G 2W1, Canada (Fax 519-836-9873). For registration material, contact Dr K. Wynne-Edwards, Dept of Biology, Queen's University, Kingston, Ontario, K7L 3N6, Canada.

Development of sex differences and similarities in behaviour, 14-18 July 1992, Chateau de Bonas, Bordeaux, France. Contact Dr Marc Haug, Laboratoire de Psychophysiologie, Universite Louis Pasteur, 7 rue de l'Universite, 67000 Strasbourg, France.

Diseases of UK Fauna, 15 July 1992, Edinburgh, UK. Contact Hamish Macandrew, Unived Technologies Ltd, 16 Buccleuch Place, Edinburgh EH8 0LL, UK.

Research Methods for the study of Human-animal interactions, 21 July 1992, Montreal, Canada. Organized by the International Society for Anthrozoology to precede the Animals and Us meeting.

Animals and Us, an international conference on human-animal interactions, 21-25 July 1992, Montreal, Canada. Contact HABAC, PO Box 46066, 2339 Ogilvie Road, Gloucester, Ontario, K1J 9M7, Canada (Fax 613-745-1846).

Second International Ethological Youth Meeting, 26 July - 8 August 1992, Godollo and Kaposvar, Hungary. Contact Dr Tibor Keszthelyi, Godollo University of Agricultural Sciences, H-2103 Godollo, Pater Karoly ut 1-3, Hungary (Tel 28 10 200 x1543, Fax 28 20 997).

American Veterinary Society of Animal Behavior, 3 August 1992, Boston Mass., USA, in association with the American Veterinary Medicine Association. Contact Dr Gary Landsberg, Doncaster Animal Clinic, 99 Henderson Avenue, Thornhill, Ontario L3T 2K9, Canada (Fax 416-881-2752).

Eighth International Conference on Production Disease in Farm Animals, 25-27 August 1992, Bern, Switzerland. Contact Prof. Dr J. Blum, Inst of Animal Breeding, University of Bern, Bremgartenstr 109a, 3012 Bern, Switzerland.

Genetics and social structure of natural populations, September 1992, Gig-sur-Yvette, France. Contact Dr Michel Veuille, Laboratoire de Biologie et Genetique Evolutives - CNRS, 91198 Gig-sur-Yvette Cedex, France.

Genetics, neurogenetics and behaviour (Conferences Jacques Monod 1992), 5-9 October 1992, Roscoff, France. Contact Dr P. Roubertoux, Universite de Paris 5-CNRS, 45 rue des Saints-Peres, F75270 Paris Cedex 06, France.

Cytokines in Health and Disease (8th Annual Symposium on Biotechnology), 10-11 December 1992, London, UK. Contact Mrs B. Cavilla, Institute of Biology, 20 Queensberry Place, London SW7 2DZ, UK.

Fourth International Livestock Environment Symposium, 6-9 July 1993, Coventry, UK. Contact Chris Boon, Welfare Science Division, AFRC Institute of Engineering Research, Wrest Park, Silsoe, Bedford MK45 4HS, UK (Tel 0525 60000, Fax 0525 60156).

XXIII International Ethological Conference, 1-9 September 1993, Torremolinos, Spain. Contact Dr Anna Omedes, XXIII IEC, Ap. 98033 Barcelona, 08080, Spain.

Fourth European Symposium on Poultry Welfare, 18-21 September 1993, Edinburgh, UK. Contact Dr John Savory, AFRC Institute of Animal Physiology and Genetics Research, Roslin, Midlothian EH25 9PS, UK.

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