

Animal Welfare

Vol 10 No 4

2001

Articles

Behavioural enrichment in broilers

Transferring captive Asian elephants

Welfare of blue foxes

Lower row caging and behaviour

Preferences of beef cattle

Deflighting techniques in captive birds

*Resident–intruder behavioural interactions
in caged rats*

Short communication

*Behavioural repertoire of grouped female
laboratory rabbits*

Reports and comments

Book reviews

Books received

2000–2001 referees

Index to Volume 10



UNIVERSITIES
FEDERATION
FOR
ANIMAL
WELFARE

Animal Welfare

ISSN 0962-7286

Editor-in-Chief: James K Kirkwood

Editorial Assistant: Elizabeth Roberts

Typesetter: Samantha Griffin

Universities Federation for Animal Welfare

The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN, UK

Tel: 01582 831818 Fax: 01582 831414

Website: www.ufaw.org.uk

Section Editors

Farmed mammals and fish

Professor Berry M Spruijt

Animal Welfare Centre
Utrecht University
Yalelaan 17
3584 CL Utrecht, The Netherlands

Zoo and wild animals

Dr Miranda Stevenson

Ashlea
Dean Lane
Bishops Waltham
Hampshire SO32 1FX, UK

Ethics, philosophy and social science

Professor Peter Sandøe

Department of Animal Science and Animal Health
The Royal Veterinary and Agricultural University
Groenegaardsvej 8
DK-1870 Frederiksberg C, Denmark

General animal welfare studies

Professor David Fraser

Animal Welfare Program
Faculty of Agricultural Sciences and Centre
for Applied Ethics
University of British Columbia
2357 Main Mall, Vancouver, Canada V6T 1Z4

Editorial Advisers

Dr Robert Baker - ANZCCART, University of Adelaide, Australia

Dr M F Bouissou - INRA, Nouzilly, France

Professor D Broom - University of Cambridge, UK

Professor M Stamp Dawkins - University of Oxford, UK

Mr Roger Ewbank - Ealing, London, UK

Dr Michael Festing - University of Leicester, UK

Companion animals

Dr Dennis C Turner

Institute for applied Ethology and Animal Psychology
(IEAP)
Vorderi Siten 30
Postfach 8816 Hirzel, Switzerland

Laboratory animals

Professor Jann Hau

Department of Comparative Medicine
University of Uppsala
Box 570
75123 Uppsala, Sweden

Poultry

Dr Linda Keeling

Department of Animal Environment and Health
Swedish University of Agricultural Sciences
PO Box 234
SE-532 23 Skara, Sweden

Professor Benjamin Hart - University of California, Davis, USA

Mr C Barrie Hart - Berkhamsted, Herts, UK

Professor David Morton - University of Birmingham, UK

Dr James Serpell - University of Pennsylvania, USA

Professor John Webster - University of Bristol, UK

Professor Piet Wiepkema - Oosterbeek, The Netherlands

Animal Welfare (ISSN 0962-7286) brings together the results of scientific research and technical studies related to the welfare of animals kept on farms, in laboratories, as companions, in zoos or managed in the wild.

Subscription rates: Individuals £50/US\$100 per Volume; Corporate/Institutes/Libraries £70/US\$140 per Volume.

Orders: Can be made direct to UFAW and are accepted by Volume, which consists of four issues per year.

Papers: Instructions for authors are summarized on the inside back cover; comprehensive instructions are available from our website, or on request from UFAW. Manuscripts should be submitted preferably to the appropriate Section Editor, or to the Editor-in-Chief.

Animal Welfare is abstracted in *Biological Abstracts*; *CAB Abstracts*; *Current Contents/Agriculture, Biology and Environmental Sciences*; *Current Primate References*; *Focus on: Veterinary Science & Medicine*; *Humans & Other Species*; *Research Alert*; *SciSearch*; *Sociological Abstracts*; *Toxicology Abstracts*; *Veterinary Update*; is indexed in *Zoological Record*; and is covered by the *Science Citation Index*.

© 2001 UFAW

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the Publisher. **Opinions expressed by authors do not necessarily reflect the views of UFAW, its Council, Staff, Members or Associates, the Section Editors or the Editorial Advisers.**

Animal Welfare

ISSN 0962-7286

Volume 10 Number 4

November 2001

CONTENTS

ARTICLES

- The effect of a 'Freedom Food' enrichment on the behaviour of broilers on commercial farms** 347
A Kells, M S Dawkins and M Cortina Borja
- Introduction of foreign female Asian elephants (*Elephas maximus*) into an existing group: behavioural reactions and changes in cortisol levels** 357
J Schmid, M Heistermann, U Gansloßer and J K Hodges
- The effects of elevated platforms and concealment screens on the welfare of blue foxes** 373
J Mononen, S Kasanen, M Harri, J Sepponen and T Rekilä
- Lower-row caging in a two-tiered housing system does not affect the behaviour of young, singly housed rhesus macaques** 387
S J Schapiro and M Bloomsmith
- Preferences of housed finishing beef cattle for different floor types** 395
D E Lowe, R W J Steen and V E Beattie
- Deflighting procedures and their welfare implications in captive birds** 405
H Hesterman, N G Gregory and W S J Boardman
- The effects of intrusion on the behaviour of caged laboratory rats (*Rattus norvegicus*): consequences for welfare** 421
R Barclay

SHORT COMMUNICATION

- The behavioural repertoire of non-breeding group-housed female laboratory rabbits (*Oryctolagus cuniculus*)** 437
S D E Held, R J Turner and R J Wootton

REPORTS AND COMMENTS

- 445
- Humane endpoints for animals used in safety evaluation
Recommendations on methods for euthanasia
Consistency of judgements on animal research protocols
Report of the UK Animal Procedures Committee for 2000
The state of animal protection in North America and worldwide 2001
EU pig welfare rules: recent reports
The use of genetically modified animals
Motivation in laying hens: studies of perching and dustbathing behaviour
Housing for laboratory rats, mice, guinea pigs and rabbits
Live animal transport: recent reports

BOOK REVIEWS

- 453
- Performance Standards and Animal Welfare: Definition, Application and Assessment, Parts I & II*
Ethics, Animals and Science
The Domestic Duck
Animal Welfare
AATA Manual for the Transportation of Live Animals, 2nd edition
Parasitic Diseases of Wild Mammals, 2nd edition
Infectious Diseases of Wild Mammals, 3rd edition
Social Behaviour in Farm Animals
The Conservation Handbook: Research, Management and Policy
Who Cares for Planet Earth? The Con In Conservation

BOOKS RECEIVED

2000-2001 REFEREES

INDEX TO VOLUME 10

466
468
469

Published by

Universities Federation for Animal Welfare

The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN, UK

Tel: 01582 831818 Fax: 01582 831414