

Contents

<i>Plenary lectures</i>	1
1 Priorities in Cervid conservation: Why science, zoogeography and history do matter.	
V. Geist	2
2 Deer responses to global environmental changes.	
M. C. Forchhammer	2
3 Emerging disease in wild and captive Cervids.	
M. R. Woodbury and J. R. Campbell	4
4 Seasonal versus non-seasonal reproduction in deer: From the arctic to the tropics.	
G. A. Bubenik	16
5 Fallow deer, lekking and alternative mating strategies in San Rossore, Italy: insights from a long term study.	
M. Apollonio	17
6 Recent progress in antler regeneration and stem cell research.	
C. Li and J. M. Suttie	18
7 Conservation of tropical deer: what does the future hold?	
W. J. McShea	19
<i>Deer management</i>	21
8 Three years of roe deer (<i>Capreolus capreolus</i>) radio-tracking in a Mediterranean environment.	
A. J. Ferreira and C. Silva	22
9 Seasonal home range shift of red deer in a forest-agriculture area, Hungary.	
L. Szemethy, Zs. Biró, K. Katona, K. Mátrai, Sz. Orosz, and N. Bleier	22
10 Space use patterns of Persian fallow deer following reintroduction.	
S. Bar-David, D. Saltz, A. Dolev, A. Perelberg, and T. Dayan	23
11 Population size and demographic variables of red deer in Bydgoszcz National Forest, central Poland.	
P. Beszterda	24

12	Management of red deer in Poland: field data versus official hunting statistic.	
	B. Bobek, T. Mamok, J. Mikoś, W. Rembacz, A. Standio, and R. Wasilewski	24
13	Over-abundance of deer: Is shooting the answer?	
	D. C. MacMillan	25
14	Slaughter records as a body condition indicator or reindeer - How can records be improved?	
	A. Olofsson, B. Åhman, and Ö. Danell	26
15	The management of reindeer in the Mongolian Tsaatan culture.	
	J. C. Haigh and M. G. Keay	29
16	Can supplementary feeding improve productivity in reindeer husbandry?	
	B. Åhman and Ö. Danell	30
17	Twenty years of impact of the Chernobyl accident on reindeer management and meat production in Sweden and Norway.	
	B. Åhman and L. Skuterud	32
18	Economic sustainability of farmed venison production in the UK.	
	M. H. Davies and D. G. Chapple	35
19	Public perception of deer management and control strategies.	
	M. I. Malins	36
20	Preferences of red deer for subtropical pasture species.	
	G. M. Dryden and K. J. Whelan	37
21	Evaluation of forage herbs for farmed red deer: feeding value and trace elements.	
	S. O. Hoskin, P. R. Wilson, M. Ondris, and A.-H. Bunod	38
22	Habitat Utilization by Himalayan Musk Deer (<i>Moschus chrysogaster</i>), Sambar (<i>Cervus unicolor</i>) and Barking Deer (<i>Muntiacus muntjac</i>) at Kedarnath Wildlife Sanctuary, Western Himalaya.	
	S. Sathyakumar, S. N. Prasad, G. S. Rawat, and A. J. T. Johnsingh .	39
23	Feeding habits of red deer in Hungarian forested and agricultural areas.	
	K. Katona, L. Szemethy, K. Mátrai, N. Bleier, and Sz. Orosz	40

24	Detection of needles: tool for evaluation of diet quality in wild ruminants. J. Kamler, M. Homolka, M. Heroldová, M. Barančeková, and J. Prokešová	41
25	Environmental factors affecting Scots pine debarking by red deer in south-western Poland. J. Borkowski and P. Nasiadka	41
26	New technique for estimation Cervidea hiding cover. A. J. Ferreira and A. M. Oliveira	42
27	Calving sites fidelity in free-ranging moose. J.-P. Tremblay, E. Solberg, B.-E. Sæther, and M. Heim	43
28	Spatio-temporal distribution of white-tailed deer relative to prescribed burns on rangeland in south Texas, USA. M. G. Meek, S. M. Cooper, M. K. Owens, and A. L. Wappel	44
29	Sexual segregation and differences in quality of diet in white-tailed deer (<i>Odocoileus virginianus mexicanus</i>) in a tropical dry forest in Mexico. A. Buenrostro, S. Gallina, and G. Sánchez-Rojas	45
30	Sex comparison of linear body measures of growing red deer calves (<i>Cervus elaphus hippelaphus</i>). B. Dmuchowski, M. Snochowski, and A. Krzywiński	46
31	The influence of management system of farmed fallow Deer (<i>Dama dama</i>) on selected production traits during winter season. B. Dmuchowski, J. Starz, A. Demiaszkiewicz, and R. Niżnikowski	47
32	Deer home range overlap and habitat heterogeneity in Northeastern Mexico. J. Bello, S. Gallina, M. Equihua, and N. Corona	47
33	Influence of ranging strategy on home range size: red deer hinds in a forest-agriculture habitat. Zs. Biró, L. Szemethy, and K. Katona	48
34	New project on red deer <i>Cervus elaphus</i> in Sweden. A. Jarnemo	49
35	Mapping of male red deer <i>Cervus elaphus</i> movements in southern Sweden. A. Jarnemo	49

36	Importance of floodplain forest for deer management. J. Prokešová, M. Barančeková, and M. Homolka	50
37	Gross composition and protein fractions of milk from fallow deer (<i>Dama dama</i>). G. M. Pisani, M. Malacarne, C. S. Soffiantini, P. Franceschi, P. Formaggioni, E. Piasentier, A. Summer, and P. Mariani	51
38	Estimating in vitro digestibility of wild sika deer (<i>Cervus nippon yesoensis</i>) in Hokkaido, Japan. C. Yayota, K. Nishitani, K. Ueda, Y. Yanagawa, Y. Matsuura, M. Suzuki, H. Hata, and S. Kondo	52
39	Comparison of physical condition of two Red deer (<i>Cervus elaphus</i>) populations. A. J. Ferreira and R. M. Ramalho	53
40	Distribution, abundance and management of the two native deer in Italy. L. Carnevali, F. Riga, and S. Toso	53
41	Interspecific competition between large herbivores: the fallow deer - roe deer case. P. Kjellander	54
42	Current knowledge of the Central American red brocket deer (<i>Mazama temama</i> Kerr, 1792) in Mexico. J. Bello-Gutiérrez	55
43	Energy requirement of captive grey brocket deer (<i>Mazama gouazoubira</i>) determined by weight equilibrium and double-labeled water. A. Berndt, M. Z. Moreira, J. M. B. Duarte, J. Barbosa, and D. P. D. Lanna	56
44	Modelling the influence of resources on the distribution and aggregation of red deer hinds during the rut: implications for mating system and management. J. Pérez-González, A. M. Barbosa, and J. Carranza	56
45	Red deer as a newcomer in Estonian fauna. T. Randveer and E. Niittee	57
46	Comparison of different weaning times of farmed Hungarian red deer (<i>Cervus elaphus hippelaphus</i>) calves. Z. Pados, J. Szabó, J. Nagy, Sz. Nagy, and Z. Zomborszky	58
47	A photographic guide for aging fallow deer <i>Dama dama</i>. A. M. De Marinis, C. Gozzi, V. Marasco, and S. Toso	59

Diseases of deer	61
48 Recent advances in health and welfare of farmed deer in New Zealand.	
P. R. Wilson	62
49 Health and production challenges facing intensive deer farming industries.	
P. R. Wilson	63
50 Chronic wasting disease in North America - A deer farmer's perspective.	
C. Tedford	64
51 Chronic wasting disease in Canadian wildlife: An expert opinion on the epidemiology and risks to wild deer .	
C. Maxwell	65
52 Epidemiological investigations of Johne's disease in deer.	
J. C. Glossop, P. R. Wilson, C. Heuer, and G. Nugent	66
53 Johne's disease in farmed deer in New Zealand.	
C. G. Mackintosh, J. F. T. Griffin, and G. W. de Lisle	67
54 Insights into the pathogenesis of Johne's disease in red deer (<i>Cervus elaphus</i>).	
C. G. Mackintosh, J. Thompson, J. F. T. Griffin, and G. W. de Lisle	68
55 The efficacy of oral and pour-on ivermectin and pour-on moxidectin in farmed red deer.	
S. O. Hoskin, W. E. Pomroy, P. R. Wilson, M. Ondris, and P. Mason	69
56 An internatinal review of Leptospirosis in wild and farmed deer.	
M. A. Ayanegui-Alcérreca, P. R. Wilson, C. Heuer, J. M. Collins-Emerson, C. G. Mackintosh, A. C. Midwinter, and F. Castillo-Alcala	70
57 Epidemiology of Leptospiral infections with Serovars Hardjobovis, Pomona and Copenhageni in farmed red deer (<i>Cervus elaphus</i>) in New Zealand.	
M. A. Ayanegui-Alcérreca, P. R. Wilson, C. G. Mackintosh, J. M. Collins-Emerson, C. Heuer, A. C. Midwinter, and F. Castillo-Alcala	71

58	Anthelmintic use and internal parasite control in farmed deer in New Zealand. F. Castillo-Alcalá, P. R. Wilson, W. E. Pomroy, and S. O. Hoskin	72
59	Subdural occurrence of <i>Elaphostrongylus cervi</i> and <i>Setaria cervi</i> in red deer of West Hungary. L. Sugár, Sz. Kovács, and A. Kovács	73
60	Disease problems in Mongolian reindeer. J. C. Haigh, M. G. Keay, V. Gerwing, J. Erdenbaatar, and M. Nansalmaa	73
61	Histopathology of fluorotic coronal dentine of roe deer (<i>Capreolus capreolus</i>) and red deer (<i>Cervus elaphus</i>) teeth. H. Richter, A. Richards, and H. Kierdorf	74
62	Mineral composition and requirements for growth of farmed red deer in New Zealand. F. Castillo-Alcalá, P. R. Wilson, and N. D. Grace	75
63	Recent advances in understanding therapy with Copper Oxide Wire Particles in New Zealand Farmed deer. P. R. Wilson, F. Castillo-Alcalá, and N. D. Grace	76
64	Nasopharyngeal bot fly, Oestridae larvae in red deer in Hungary. L. Sugár, Sz. Kovács, and A. Kovács	77
65	ITS2 sequences of <i>Dictyocaulus</i> lungworms from red and fallow deer in Hungary: molecular evidence for a new genotype. Z. Ács, L. Sugár, and Z. Péntes	78
66	Fascioloidosis of red deer and its therapy in "Szigetköz" region in the North-West of Hungary (1998-2005). B. Egri and E. Giczi	78
67	Coprological monitoring of Trematodes in free-ranging red deer population at eastern Croatia. A. Slavica, T. Florijančić, Z. Janicki, D. Konjević, K. Severin, R. Beck and K. Pintur	79
68	Sub-clinical parasitism, weaning date, growth of deer fawns and reproductive performance of hinds . J. M. Mwendwa, M. L. W. J. Broekhuijse, S. O. Hoskin, W. E. Pomroy, and P. R. Wilson	80
69	Investigation of the sanitary status of red deer (<i>Cervus elaphus</i>) culled in the Italian Alps between 2001 and 2005. E. Andreoli, I. Bertoletti, A. Bianchi, E. Heinzl, E. Scanziani, and S. Mattiello	81

70	General comparison of taxonomic characters distinguishing two closely related species of deer lice - <i>Solenopotes burmeisteri</i> and <i>S. capreoli</i> (Phthiraptera, Linognathidae).	82
	V. Bádr, P. Štindl, and J. Preisler	82
	<i>Genetics and Evolution</i>	83
71	Landscape features affect gene flow of Scottish Highland red deer (<i>Cervus elaphus</i>).	84
	S. Perez-Espona, J. McLeod, F. J. Perez-Barberia, C. G. I. Jiggins, and J. Pemberton	84
72	Sex biased dispersal in an expanding red deer population.	84
	H. Haanes, K. H. Røed, and O. Rosef	84
74	A molecular phylogeny of the evolutionary radiation of New World deer (<i>Odocoileinae</i>, <i>Cervidae</i>): Implications for biogeography and the evolution of antlers.	85
	S. M. Carr, E. D. Richards, H. D. Marshall, and J. M. Smith-Flueck	85
75	Genetic distinctiveness of isolated and threaten Tsaatan reindeer herds in Mongolia.	86
	K. H. Røed, J. C. Haigh, V. Gerwing, and M. Keay	86
76	Conservation genetics of Argentinean pampas deer populations.	87
	S. González, M. Cosse, V. Raimondi, M. L. Merino, B. Galvan, and J. E. Maldonado	87
77	Genetic characterisation of roe deer (<i>Capreolus capreolus</i>) population of Parma Apennines.	88
	C. S. Soffiantini, G. M. Pisani, M. Malacarne, G. Gandolfi, A. Sabbioni, and J. Tagliavini	88
78	Aplotypic characterization of roe deer by asymmetric PCR and SSCP analysis.	88
	J. Tagliavini, S. Casagrande, M. Malacarne, and P. Mariani	88
79	Phylogeography of Iberian red deer populations and their relationships with main European red deer lineages.	89
	J. L. Fernández-García, J. G. Martínez, L. Castillo, and J. Carranza	89
80	The artificial occurrence of the fallow deer, <i>Dama dama dama</i> (L., 1758), on the island of Rhodes (Dodecanese, Greece): insight from mtDNA analysis.	90
	M. Massetti, A. Cavallaro, E. Pecchioli, and C. Vernesi	90

81	Comparative anatomy of three Asian ruminant animals. J. Kimura and K. Fukuta	91
82	Characterization of the growth curve of red deer (<i>Cervus elaphus scoticus</i>) in a herd in Central Mexico. A. C. Delgadillo, R. López, H. H. Montaldo, J. M. Berruecos, A. Luna, and G. C. Vásquez	92
83	Mitochondrial DNA variability and polymorphism of ISSR-PCR markers in the reindeer population of Eastern Siberia. N. V. Kol, O. E. Lazebny, and I. A. Zakharov	95
84	A new conservation genetic union from Pampas deer (<i>Ozotoceros bezoarticus</i>) in Southern Brazil. F. G. Braga, S. González, and J. E. Maldonado	96
85	DNA microsatellite analysis for parentage control of red deer in Czech Republic. M. Ernst	97
	<i>Management of endangered deer</i>	99
86	Status, ecology and conservation of barasingha (<i>Cervus duvaucelii duvaucelii</i>) in Terai grasslands of Northern India. J. A. Khan and A. Kaleem	100
87	Swamp deer in Uttarakhand state, India. S. P. Sinha, S. Chandola, and B. C. Sinha	101
89	Swamp deer (<i>Cervus duvauclii</i>) habitat evaluation using remote sensing and GIS in Suklaphanta Wildlife Reserve, Nepal. T. B. Thapa	103
90	Population Ecology of Hangul (<i>Cervus elaphus hanglu</i>) in Dachigam National Park, Kashmir, India. A. Khursheed, S. Sathyakumar, and Q. Qureshi	104
91	Microsatellite variation of Hainan Eld's deer (<i>Cervus eldi hainanus</i>) in China: Implications for conservation. Q. Zhang, Y.-L. Song, D.-X. Zhang, and Z. Zeng	105
92	Social structure of the reintroduced Persian fallow deer (<i>Dama mesopotamica</i>) population: integrating three observation methods. A. Perelberg, S. Bar-David, U. Roll, A. Dolev, and D. Saltz	105
93	Ecology and conservation of the huemul in southern Chile. R. Gill, C. Saucedo, and D. Aldridge	106

94	Status, genetic structure and Conservation suggestion of Chinese water deer. M. Chen and E. Zhang	107
95	Spatial pattern characteristics of wapiti habitat fragmentation factors based on spatial autocorrelation and semi-variance analysis in Northeastern China. M. Zhang, G. Jiang, and J. Ma	108
96	Assisted reproductive technologies for endangered deer species. Y. Locatelli, J.-C. Vallet, X. Legendre, and P. Mermilliod	109
97	Diet composition and habitat selection of red deer during winter in Helan Mountains, China. Z. S. Liu and X. M. Wang	110
98	Conservation status quo and study progress of Siberian musk deer (<i>Moschus moschiferus</i>) in China. J. Wu and Y. Zhang	111
99	Agonistic and non-agonistic behaviour interactions in Indian blackbuck (<i>Antelope cervicapra L.</i>) during dominance hierarchy formation. T. Rajagopal and G. Archunan	111
	Reproduction	113
100	Gossypol-based contraception in male deer (<i>Cervus elaphus</i>). Z. Giżejewski, B. Szafranska, Z. Steplewski, G. Panasiewicz, and H. Koprowski	114
101	The hoarse vocalization and the inflatable laryngeal air sac of reindeer (<i>Rangifer tarandus</i>). R. Frey, A. Gebler, G. Fritsch, K. Nygrén, and G. E. Weissengruber	114
102	Patterns of long-term reproductive success in male and female white-tailed deer. R. W. DeYoung, K. L. Gee, S. Demarais, R. L. Honeycutt, and R. A. Gonzales	115
103	Observations on the reproductive behaviour of sambar deer (<i>Cervus unicolor unicolor</i>) in a bush enclosure in Victoria, Australia. W. M. Harrison, I. A. Moore, M. Draisma, and G. I. Moore	116
104	Sexual choice in lekking fallow deer (<i>Dama dama</i>): variable female strategies. S. Imperio, S. Focardi, F. Ronchi, and A. M. De Marinis	117

105	Variation in fawn production in a semi arid environment: An energetics approach. D. G. Hewitt and E. L. Monaco	118
106	Movements of female white-tailed deer during parturition and the rut in a high-quality, balanced sex ratio herd in Maryland, USA. L. I. Muller, K. A. Adams, M. C. Conner, and J. L. Bowman	119
107	Refrigerated storage impairs chromatin of Iberian red deer (<i>Cervus elaphus hispanicus</i>) epididymal spermatozoa kept inside the epididymis. A. E. Dominguez-Rebolledo, M. C. Esteso, M. R. Fernández-Santos, D. Matias, F. Martínez-Pastor, and J. J. Garde	120
108	Immunohistochemical expression of steroidogenic enzymes in the corpus luteum and placenta of sika deer (<i>Cervus nippon</i>) during pregnancy. Y. Matsuura, D. Hayakawa, Y. Yanagawa, M. Sasaki, H. Igota, C. Yayota, S. Kondo, N. Kitamura, T. Tsubota, and M. Suzuki	121
109	Objective quality control of frozen-thawed red deer spermatozoa by Computer-Assisted Semen Analysis - instrument settings. Sz. Nagy, E. Puskás, I. Péntek, and Z. Zomborszky	122
110	Immunohistochemical expression of androgen receptor (AR), estrogen receptor alpha (ER) and estrogen receptor beta (ER) in the caudal and metatarsal glands of sika deer (<i>Cervus nippon</i>). M. Suzuki, Y. Yanagawa, Y. Matsuura, S. Otsuka, D. Hayakawa, M. Sasaki, C. Yayota, H. Igota, S. Kondo, and N. Kitamura	123
111	Comparison of estrogen receptor and progesterone receptor expression during the estrus and pregnancy in uteri of sika deer (<i>Cervus nippon</i>). Y. Yanagawa, Y. Matsuura, D. Hayakawa, C. Yayota, M. Sasaki, S. Kondo, N. Kitamura, and M. Suzuki	124
112	Roaring trends in red deer: a preliminary analysis. A. Bocci, K. Attinault, and M. Telford	125
	<i>Behaviour and welfare</i>	127
113	Assessing the performance of a Persian fallow deer population 10 years after reintroduction. D. Saltz and S. Bar-David	128
114	Social competence in Chinese muntjac deer. A. Fischer and H. Hendrichs	129

- 115 **The analysis of sexual segregation in fallow deer (*Dama dama*) on different time and space scales.**
S. Ciuti, S. Luccarini, and M. Apollonio 130
- 116 **Behavioural modifications of female ungulates during late pregnancy and early lactation: the case of fallow deer *Dama dama*.**
S. Grignolio, P. Bongi, S. Ciuti, E. Bertolotto, and M. Apollonio .. 131
- 117 **Pre-orbital gland opening in red deer (*Cervus elaphus*) calves: Signal of excitement?**
J. Bartošová-Víchová, L. Bartoš, and L. Švecová 132
- 118 **The effect of the birth weight on the calf's allosucking success in the red deer (*Cervus elaphus*) supports the compensation hypothesis.**
A. Dušek and L. Bartoš 132
- 119 **Do red deer (*Cervus elaphus*) grandmothers nurse their grandchildren?**
J. Bartošová-Víchová, L. Bartoš, J. Drábková, L. Švecová, J. Pluháček, R. Kotrba, A. Dušek 133
- 120 **When prey fight back: higher levels of aggressive defence by mule deer than whitetail females lowers vulnerability of mule deer fawns to coyotes early in life.**
S. Lingle, W. F. Wilson, and S. M. Pellis 134
- 121 **Why Help? The evolution of altruistic antipredator defence in mule deer.**
S. Lingle, D. Rendall and S. M. Pellis 135
- 122 **Cooperative anti-predatory behaviour in sympatric white-tailed, fallow, roe and red deer: Experimental confirmation using a dummy.**
R. Kotrba, L. Bartoš, J. Bartošová-Víchová, J. Panamá, V. Kšáda, P. Šustr, J. Pluháček, A. Dušek, D. Vaňková-Formanová, G. Illmann, E. Šmidová, and K. V. Miller 136
- 123 **Rutting encounter between males and female choice in fallow deer (*Dama dama*).**
B. Fričová, L. Bartoš, J. Bartošová-Víchová, J. Panamá, P. Šustr, and E. Šmidová 137
- 124 **Habitat selection and home range size of red deer (*Cervus elaphus*) in montane areas of Šumava National Park, Czech republic - preliminary results.**
P. Šustr and A. Jirsa 138
- 125 **Sex-specific strategies of dentine depletion in red deer.**
J. Carranza, C. Mateos, S. Alarcos, C. B. Sánchez-Prieto, and J. Valencia 138

126	Does a hind's rank affect duration of filial and non-filial calf's nursing in red deer (<i>Cervus elaphus</i>)? J. Drábková, J. Bartošová-Víchová, L. Bartoš, J. Pluháček, R. Kotrba, L. Švecová, and A. Dušek	139
127	ISAMUD: an integrated software environment for analysis and management of GPS telemetry data. F. Cagnacci, F. Urbano, C. Furlanello, M. Neteler, and L. Pedrotti	140
<i>Censusing and modelling populations</i>		143
128	Censusing and modelling of red deer (<i>Cervus elaphus</i> L.) populations in Poland by using "Invent" and "Antler-2000" software. B. Bobek, W. Frąckowiak, M. Gawor, M. Kolecki, D. Merta, and L. Wiśniowska	144
129	Estimating Red deer populations abundance in the Alps: successful experiments on night surveys. S. Focardi, B. Franzetti, A. Monaco, and L. Pedrotti	145
130	Whitetailed Deer Density Estimation Using Thermal Infrared Imaging. P. A. Tappe and R. E. Kissell	146
131	Estimating red deer <i>Cervus elaphus</i> populations: an analysis of variation and cost effectiveness of counting methods. M. J. Daniels	151
132	Simple Movement Models for Complex Animals in Heterogeneous Landscapes. J. M. Morales	152
133	Reconstruction of the male population of red deer in Hungary. S. Csányi	152
134	The second mass-mortality of an introduced sika deer population. H. Takahashi and K. Kaji	153
135	Fecal-pellet group count as index of sika-deer (<i>Cervus nippon</i>) population density on subalpine plateau in Japan. R. Goda, M. Ando, H. Sato, and E. Shibata	154
136	Comparison of four techniques to estimate roe deer abundance in Alpine areas. N. Putzu, V. La Morgia, and F. Bona	154

137	Distance sampling and pellet group count to assess deer populations: an application to conservation and management in the Alps. L. Pedrotti, F. Cagnacci, I. Callovi and A. Tagliabò	155
138	Red deer (<i>Cervus elaphus</i>) space use and population dynamics in two Alpine National Parks. F. Filli, L. Pedrotti, and H. Gunsch	156
139	A population-dynamic study of red deer in Baranya, Somogy, Tolna and Zala counties from 1970 to 2006. R. Barna and L. Sugár	157
	<i>Antler biology</i>	159
140	Visualization and characterization of stem cells from the regenerating deer antler. H. J. Rolf, U. Kierdorf, H. Kierdorf, N. Seymour, J. Napp, H. Schliephake, and K. G. Wiese	160
141	Antlers may regenerate from persistent neural crestlike stem cells. J. G. Mount, M. Muzyłak, S. Allen, S. Okushima, T. Althnaian, I. M. McGonnell, and J. S. Price	161
142	Stem cells isolated from the regenerating antler express key markers of the osteogenic lineage. J. Napp, K. G. Wiese, U. Kierdorf, H. Kierdorf, N. Seymour, H. Schliephake, and H. J. Rolf	162
143	Mitogenic effects of androgens on mixed antler cell cultures. H. J. Rolf, K. G. Wiese, G. A. Bubenik, L. Bartoš, R. Kotrba, I. Lütjens and H. Schliephake	163
144	Antler growth in red deer stags (<i>Cervus elaphus</i>) depends on testosterone, but not IGF-1, LH, prolactin or cortisol. L. Bartoš, D. Schams, J. Šiler, S. Losos, and G. A. Bubenik	164
145	Fetal differentiation of the antler developing area in red deer (<i>C. elaphus</i>). P. M. F. Audenaerde and P. J. M. Simoens	164
146	Central vessels in roe deer antlers (<i>Capreolus capreolus</i>) - a histomorphological study. H. J. Rolf and C. H. Lohmann	165
147	Antler characteristics of the Sardinian red deer (<i>Cervus elaphus corsicanus</i>): a preliminary analysis. A. Caboni, C. Murgia, and S. Mattioli	166

148	What we can learn from antler composition and structure: from nutrition to management.	
	T. Landete-Castillejos, J. A. Estévez, A. J. García, F. Ceacero, E. Gaspar-López, D. Carrión, and L. Gallego	167
149	Post-velvet shedding antler histology of red deer (<i>Cervus elaphus</i>) living in the wild.	
	A. Dobrowolska and K. Górecka	168
150	Lengths of pedicles and antlers in Reeves' muntjac.	
	N. G. Chapman	169
151	Consistent interindividual variability in proliferation potential of antler cells cultivated <i>in vitro</i> under various treatments.	
	E. Kužmová, L. Bartoš, M. Tománek, R. Kotrba, and G. A. Bubeník	169
	<i>Responses of deer to global environmental change</i>	171
152	Biogeography of Cervidae in Peru.	
	J. Barrio	172
153	The influence of season, food intake, and social rank on cortisol secretion in red deer (<i>Cervus elaphus</i>).	
	F. Balfanz, C. Beiglböck, S. Huber, R. Palme, and W. Arnold	173
154	Defense of territories by rutting red deer stags, <i>Cervus elaphus</i>, in Patagonia, Argentina.	
	J. M. Smith-Flueck and W. T. Flueck	174
155	Spatial behavior paths of food search in roe deer (<i>Capreolus capreolus</i>).	
	S. Said, M. Pellerin, M. Le Corre, O. Widmer, and G. Van Laere	178
156	Carbon and nitrogen efficiencies in venison production.	
	M. H. Davies, D. G. Chapple, and B. Cottrill	179
157	Methane production by farmed red deer.	
	N. M. Swainson, S. O. Hoskin, and H. Clark	180
158	Why the Patagonian huemul deer in Argentina fails to recover: An ecological hypothesis.	
	W. T. Flueck and J. M. Smith-Flueck	181
159	Deer management and private hunting? Turning point for management system in Japan.	
	A. Takayanagi	186

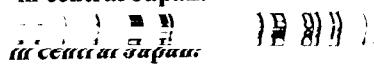
160	The biology of antler growth in endangered Bawean deer (<i>Axis kuhlii</i>). G. Semiadi, K. Subekti, B. Masyud, I. K. Sutama, and L. Affandy	187
161	The preservation of rusa stag semen using TRIS egg yolk diluent with different carbohydrate and storage temperature. W. M. M. Nalley , R. Handarini, G. Semiadi, M. R. Toelihere, T. L. Yusuf, and B. Purwantara	187
162	Semen quality of rusa stags (<i>Cervus timorensis</i>) during one antler cycle. R. Handarini, W. M. M. Nalley, G. Semiadi, M. R. Toelihere, S. Agungpriyono, B. Purwantara, and Subandriyo	189
Problems of deer overabundance		191
163	A test of localized management in a white-tailed deer herd. B. F. Miller, R. W. DeYoung, T. A. Campbell, B. R. Laseter, W. M. Ford, and K. V. Miller	192
164	Do wildlife warning reflectors alter white-tailed deer behavior along roadways? G. J. D'Angelo, J. G. D'Angelo, G. R. Gallagher, D. A. Osborn, K. V. Miller, and R. J. Warren	193
165	Cascading effects of long term chronic browsing on lifehistory traits in white-tailed deer. S. D. Côté, A. Simard, R. B. Weladji, and J. Huot	194
166	Regeneration dynamics of boreal forests along an experimental gradient of deer densities. J.-P. Tremblay, J. Huot, and F. Potvin	195
167	Impacts of cervids on invertebrate communities on forest floor in relation to deer species, density and site productivity. O. Suominen, I. L. Persson, and T. Saikkonen	196
168	Sustainable population density of red deer in Mediterranean ecosystems. J. Carranza, J. Torres, S. Alarcos, J. Pérez-González, C. B. Sánchez-Prieto, C. Mateos, L. Castillo, and J. Valencia	197
169	Influence of population density on white-tailed deer foraging behavior and activity budget. M.-L. Coulombe, S. D. Côté, and J. Huot	198
170	Trade-off between food and cover: summer movements and activity budget in white-tailed deer. A. Massé, S. D. Côté, and J. Huot	199

171	Relationships between moose (<i>Alces alces</i>) pellet groups and characteristics of forests.	200
	R. Heikkilä	
	<i>Conservation of free ranging populations: conflicts of interest</i>	207
172	Status, distribution and conservation of musk deer (<i>Moschus chrysogaster</i>) in Kedarnath Wildlife Sanctuary, Uttranchal Himalayas, India.	208
	O. Ilyas	
173	Seed dispersal by the reintroduced Persian fallow deer in the Judean Mountains, Israel.	209
	R. Zidon, D. Saltz, and U. Motro	
174	Deer management and monitoring of browsing impacts in Austrian national parks.	210
	R. Zink and F. Reimoser	
175	Wildlife trade in deer species: A need for developing wildlife forensic techniques.	210
	S. P. Goyal, A. Mandal, R. R. Singh, S. Mishra, and C. P. Sharma	
176	Habitat use of pampas deer (<i>Ozotoceros bezoarticus</i>) at agricultural areas in southern Brazil.	211
	F. G. Braga	
177	Impact of red deer browsing on the understory of Hungarian forests.	212
	N. Bleier, K. Katona, L. Szemethy, J. Székely, M. Nyeste, Á. Fodor, A. erhes, V. Kovács, and T. Olajos	
178	Effects of small barriers on habitat use in red deer.	213
	C. B. Sánchez-Prieto, J. Carranza, S. Alarcos, and C. Mateos	
	<i>Feeding ecology</i>	215
179	Botanical composition of taruka (<i>Hippocamelus antisensis</i>) diet during rainy season in Huascarán National Park, Peru.	216
	C. Gazzolo	
180	Habitat use by two large deer species (<i>Hippocamelus antisensis</i> and <i>Odocoileus virginianus</i>) and one small deer species (<i>Mazama bricenii</i>) in the Apolobamba Integrated Management Natural Area (La Paz-Bolivia).	217
181	Impact of deer browsing and other environmental factors upon growth and development of fir saplings (<i>Abies alba</i> Mill.) in the	

Bieszczady Mountains, southern Poland.

D. Merta and K. Kumór 218

- 182 **Why deer strip bark? -two case studies of bark stripping by sika deer in central Japan.**



M. Ando, Z. Jiang, and E. Shibata

219

- 183 **Influence of an extreme climatic event on the winter diet of red and roe deer in northeastern France.**

D. B. F. Storms, S. Said, J.-L. Hamann, C. Saint-Andrieux, J.-L. Wilhelm,
and F. Klein

220

Seasonal and non-seasonal deer: (Arctic to Tropic) 221

- 184 **Seasonal migration pattern of red deer (*Cervus elaphus* L.) in the central Slovakian mountains.**

S. Find'o, J. Bučko, and S. Steyaert

222

- 185 **Scale-dependent habitat selection of GPS-collared Alpine red deer the role of food availability and quality.**

B. Zweifel-Schielly and W. Suter

223

- 186 **Photic modulation of the temporal pattern and rate of activity in reindeer.**

B. E. H. van Oort, N. J. C. Tyler, M. P. Gerkema, L. Folkow, and K. A. Stokkan

224

- 187 **Habitat use and selection of fallow deer (*Dama dama* L.) in a Mediterranean environment.**

P. Di Luzio, P. Montanaro, and S. Focardi

225

- 188 **Function of habitat segregation in regulation of isolated sika deer population.**

S. Tatsuzawa

226

Venison and its potential contribution to diet 227

- 189 **Venison and the history of early European hunting enclosures.**

T. J. Fletcher

228

- 190 **Fatty acid profiles in Javan rusa (*Cervus timorensis russa*) stags.**

R. Sookhareea, R. Tume, W. R. Shorthose, and G. M. Dryden

229

- 191 **The effect of pelvic suspension on the biochemical and sensory quality of venison from red deer (*Cervus elaphus*) and fallow deer (*Dama dama*).**

C. L. Hutchison, J. S. Flesch, and R. C. Mulley

234

192	Contents of toxic metals (Cd, Pb, Hg) in tissues of the red deer (<i>Cervus elaphus</i>) living in the wild.	A. Dobrowolska and K. Górecka	240
193	Variations in characteristics of fat, free amino acids and taste of meat of Japanese deer.	M. Ishida, T. Inoue, T. Mashiko, K. Souma, and S. Ikeda	241
<i>Deer zooarcheology and history</i>			243
194	Stable isotopes evidence of seasonality effects on diet and locomotor adaptations of Pleistocene deer from southern Spain.	J. A. Estévez, A. Grandal-d'Anglade, T. Landete-Castillejos, A. J. García, and L. Gallego	244
195	Biometry and palaeoecology of the Red deer (<i>Cervus elaphus</i> Linné, 1758) during middle and upper Pleistocene in Western Europe. The example of the Lazaret cave (Alpes-Maritimes; France)	M. Liouville, P. Valensi, and E. Psathi	248
196	Fallow deer of Rhodes: an ongoing, comprehensive study about ecology, genetics and conservation.	D. Mertzanidou and A. Legakis	249
<i>Contributions received and accepted after the deadline</i>			251
197	Conservation of huemul (<i>Hippocamelus bisulcus</i>) deer in Chilean Patagonia: a new research initiative.	P. Corti	252
198	Translocation and semi-captive breeding of huemul (<i>Hippocamelus bisulcus</i>) with purpose of reintroduction in Chile.	P. Corti	253
199	So similar and yet so different: The surprising polyphyletic origin the genus <i>Mazama</i> (Mammalia: Cervidae).	J. M. B. Duarte, S. González, and J. E. Maldonado	254
200	Factors affecting the composition of autumn diet of red deer (<i>Cervus elaphus</i>) in Alpine environment.	M. Heroldová, M. Homolka, J. Kamler, C. Ghezzi, W. Redaelli, E. Andreoli, and S. Mattiello	255
<i>Author index</i>			257
<i>Index</i>			263