

REFERENCIAS BIBLIOGRÁFICAS

Aars, J. & Ims, R.A. (2000) Population dynamics and genetic consequences of spatial density-dependent dispersal in patchy populations. *American Naturalist* 155: 252-265.

Ahnlund, H. (1980) Sexual maturity and breeding season of the badger, *Meles meles* in Sweden. *Journal of Zoology, London* 190: 77-95.

Alexander, R.D. (1974) The evolution of social behaviour. *Annual Review of Ecology and Systematics* 5: 325-383.

Blumstein, D.T. & Armitage, K.B. (1999) Cooperative breeding in marmots. *Oikos* 84: 369-382.

Boness, D.J., Craig, M.P., Honigman, L. & Austin, S. (1998) Fostering behavior and the effect of female density in Hawaiian monk seals, *Monachus schauinslandi*. *Journal of Mammalogy* 79: 1060-1069.

Bonet-Arbolí, V. (2003) Ecoetologia del toixó (*Meles meles* L.) en ambients mediterranis. Tesis Doctoral, Universitat de Barcelona.

Bonet-Arbolí, V. & Rafart, E. (1998) Ecoetologia del toixó (*Meles meles*, L.) a Collserola. Eines per a una gestió. Memoria final, Parc de Collserola.

Bonet-Arbolí, V. & Rafart, E. (1999) Organització espacial, ús de l'hàbitat i requeriments ambientals del toixó (*Meles meles*) a Collserola. Comportament social i reproductor d'un grup de toixons en captivitat. Memoria final, Parc de Collserola.

Brown, R. & Macdonald, D.W. (1985) *Social odours in Mammals*. Clarendon Press, Oxford.

Buesching, C.D., Newman, C. & Macdonald, D.W. (2002a) Variations of the colour and volume of the subcaudal gland secretion of the European badger (*Meles meles*) in relation to sex, season and individual-specific parameters. *Z Säugetierk.* 67: 1-10.

Buesching, C.D., Stopka, P. & Macdonald, D.W. (2003) The social function of allo-marking in the European badger (*Meles meles*). *Behaviour* 140: 965-980.

Buesching, C.D., Waterhouse, J.P. & Macdonald, D.W. (2002b) Gas chromatographic analysis of the subcaudal gland secretion of the European badger (*Meles meles*) Part I: Chemical differences related to individual-specific parameters. *Journal of Chemical Ecology* 28: 41-56.

Butler, J.M. & Roper, T. (1994) Escape tactics and alarm response in badgers *Meles meles*: a field experiment. *Ethology* 99: 313-322.

Butler, J. M. & Roper, T. J. (1996) Ectoparasites and sett use in European badgers. *Animal Behaviour* 52: 621-629.

Canivenc, R. (1966) A study of progestation in the European badger (*Meles meles* L.) Symposium of the Zoological Society of London 15: 15-26.

Canivenc, R. & Bonnin, M. (1979) Delayed implantation is under environmental control in the badger (*Meles meles* L.). *Nature* 278: 849-850.

Cant, M.A., Otali, E. & Mwanguhya, F. (2001) Eviction and dispersal in co-operatively breeding banded mongooses (*Mungos mungo*). *Journal of Zoology, London* 254: 155-162.

Carpenter, P. (2004) A study of mating systems and inbreeding in a high density population of the Eurasian Badger (*Meles meles*) using microsatellite markers. Thesis doctoral, University of Sheffield.

Carpenter, P., Dawson, D.A., Greig, C., Parham, A., Cheeseman, C.L. & Burke, T. (2003) Isolation of 39 polymorphic microsatellites loci and the development of a

fluorescently labelled marker set for the Eurasian badger (*Meles meles*) (Carnivora: Mustelidae). *Molecular Ecology Notes* 3: 610-615.

Carpenter, P., Pope, L.C., Greig, C., Dawson, D.A., Rogers, L., Erven, K., Wilson, G.J., Delahay, R.J., Cheeseman, C.L. & Burke, T. (2005) Mating system of the Eurasian badger, *Meles meles*, in a high density population. *Molecular Ecology* 14: 273-284.

Carr, G., Macdonald, D.W. (1986) The sociality of solitary foragers: a model based on resource dispersion. *Animal Behaviour* 34: 1540-1549.

Cheeseman, C.L., Cresswell, W.J., Harris, S. & Mallinson, P.J. (1988) Comparison of dispersal and other movements in two Badger (*Meles meles*) populations. *Mammal Review* 18 (1): 51-59.

Cheeseman, C.L., Wilesmith, J.W., Ryan, J. & Mallinson, P.J. (1987) Badger population dynamics in a high-density area. *Symposium zoological Society London* 58: 279-294.

Christian, S. F. (1994) Dispersal and other inter-group movements in badgers, *Meles meles*. *Zeitschrift Säugetierkunde* 59: 218-223.

Clark, T.W., Paquet, P.C. & Curlee, A.P. (1996) Large carnivore conservation in the Rocky Mountains of the United States and Canada. *Conservation Biology* 10: 936-939.

Clutton-Brock, T.H., Albon, S.D. & Guinness, F.E. (1989) Fitness costs of gestation and lactation in wild mammals. *Nature* 337: 260-262.

Clutton-Brock, T.H., Gaynor, D., Kansky, R., MacColl, A.D.C., McIlrath, G., Chadwick, P., Brotherton, P.N.M., O'Riain, J.M., Manser, M. & Skinner, J.D. (1998) Costs of cooperative behaviour in suricates (*Suricata suricatta*). *Proceedings Royal Society, London* 265: 185-190.

Cole, L.C. (1949) The measurement of interspecific association. *Ecology* 30: 411-424.

Corral, R. (2003) Caracterització de la dieta i aspectes morfològics i poblacionals del teixó: anàlisi a partir d'animals atropellats. Master en Biologia Experimental, Universitat de Barcelona.

Creel, S.R. & Creel, N.M. (1991). Energetics, reproductive suppression and obligate communal breeding in carnivores. *Behavioral Ecology and Sociobiology* 28: 263-270.

Creel, S.R., Monfort, L., Wildt, D.E. & Waser, P.M. (1991) Spontaneous lactation is an adaptive result of pseudopregnancy. *Nature* 351: 660-662.

Creel, S.R. & Waser, P.M. (1991). Failures of reproductive suppression in dwarf mongooses (*Helogale parvula*): accident or adaptation? *Behavioral Ecology* 2: 7-15.

Creel, S.R. & Waser, P.M. (1997). Variation in reproductive suppression among dwarf mongooses: interplay between mechanisms and evolution. En: *Cooperative breeding in mammals* (Eds. N.G. Solomon y J.A. French) Cambridge University Press, Cambridge.

Cresswell, W. & Harris, S. (1988) Foraging behaviour and home-range utilization in a suburban Badger (*Meles meles*) population. *Mammal Review* 18: 37-49.

Cresswell, W.J., Harris, S., Cheeseman, C.L. & Mallinson, P.J. (1992) To breed or not to breed: an analysis of the social and density-dependent constraints on the fecundity of female badgers (*Meles meles*). *Philosophical Transactions of the Royal Society, London B* 338: 393-407.

Cutler, T. L. & Swann, D. E. (1999) Using remote photography in wildlife ecology: a review. *Wildlife Society Bulletin* 27: 571-581.

Daly, M. (1979) Why don't male mammals lactate? *Journal theoretical Biology* 78: 325-345.

Da Silva, J., Macdonald, D.W. & Evans, P.G.H. (1994) Net costs of group living in a solitary forager, the Eurasian badger (*Meles meles*). *Behavioral Ecology* 5: 151-158.

Do Linh San, E. (2002) Biologie et écologie du Blaireau *Meles meles* (Mustelidae : Carnivora) dans la Broye : résultats préliminaires. Bull. Soc. Vaud. Sc. Nat. 88: 77-119.

Do Linh San, E. (2004) Biologie et écologie du blaireau européen (*Meles meles*) dans une population de faible densité (Broye, Suisse). Tesis Doctoral, Université de Neuchâtel.

Do Linh San, E., Ferrari, N. & Weber, J. (2003) Quelques observations sur la période de mise bas et le succès reproductif du blaireau (*Meles meles* L.) dans l'ouest de la Suisse. Bulletin de la Société Neuchâteloise des Sciences Naturelles 126 : 101-104.

Domingo-Roura, X., Macdonald, D.W., Roy, M.S, Marni, J., Terrades, J., Woodroffe, R., Burke, T. & Wayne, R.K. (2003). Confirmation of low genetic diversity and multiple breeding females in a social group of Eurasian badgers from microsatellite and field data. *Molecular Ecology* 12: 533-539.

Doolan, S.P. & Macdonald, D.W. (1997). Band structure and failures of reproductive suppression in a cooperatively breeding carnivore, the slender-tailed meerkat (*Suricata suricata*). *Behaviour* 134: 827-848.

Drews, C. (1993) The concept and definition of dominance in animal behaviour. *Behaviour* 125: 283-313.

Dumartin, B., Ribes, C., Souloumiac, J., Charron, G. & Canivenc, R. (1989) Détermination expérimentale de la croissance foetale chez le blaireau européen *Meles meles* L. *Mammalia* 53(2): 279-289.

Emlen, S.T. (1982) The evolution of helping: II. The role of behavioural conflict. *American Naturalist* 119: 29-39.

Evans, P.G.H., Macdonald, D.W. & Cheeseman, C.L. (1989) Social structure of the Eurasian badger (*Meles meles*): genetic evidence. *Journal of Zoology, London* 218: 587-595.

Gittleman, J.L. (1986) Carnivore life history patterns: Allometric, ecological and phylogenetic associations. *American Naturalist* 127: 744-771.

Gorman, M.L., Kruuk, H. & Leitch, A. (1984) Social functions of the sub-caudal scent gland secretion of the European badger (*Meles meles*) (Carnivora: Mustelidae). *Journal of Zoology* 203: 549-559.

Gorman, M.L. & Trowbridge, B.J. (1996) The role of odor in the social lives of Carnivores. En: *Carnivore Behavior, Ecology, and Evolution* (Ed. J.L. Gittleman) Cornell University Press, Ithaca, New York.

Goudet, J. (1995) FSTAT version 1.2. A computer program to calculate F-statistics. *Journal of Heredity* 86: 485-486.

Hall, M.J. (1983) Social-organization in an enclosed group of red deer (*Cervus elaphus* L.) on Rhum 1. the dominance hierarchy of females and their offspring. *Z. Tierpsychol* 61: 250-262.

Harris, S. & Cresswell, W. (1987) Dynamics of a suburban badger (*Meles meles*) population. *Symposium Zoological Society London* 58: 295-311.

Hatchwell, B.J. & Komdeur, J. (2000). Ecological constraints, life history traits and the evolution of cooperative breeding. *Animal Behaviour* 59: 1079-1086.

Hedrick, P.W. (1999) Highly variable genetic loci and their interpretation in evolution and conservation. *Evolution* 53: 313-318.

Hernández, I. & Rodríguez-Teijeiro, J.D. (1995) Toixó. En: *Els grans mamífers de Catalunya i Andorra* (Eds. J. Ruiz-Olmo & A. Aguilar) Lynx Edicions, Barcelona.

Hoogland, J.L., Tamarin, R.H. & Levy, C.K. (1989) Communal nursing in prairie dogs. *Behavioral Ecology & Sociobiology* 24: 91-95.

Huntingford, F. & Turner, A. (1987) *Animal conflict*. Chapman y Hall, London.

Jennions, M.D. & Macdonald, D.W. (1994) Cooperative breeding in mammals. *Trends in Ecology & Evolution* 9: 89-93.

Johnson, D.D.P., Kays, R., Blackwell, P. & Macdonald, D.W. (2002) Does the resource dispersion hypothesis explain group living? *Trends in Ecology and Evolution* 17: 563-570.

Johnson, D.D.P., Stopka, P. & Macdonald, D.W. (2003) Ideal flea constraints on group living: unwanted public goods and the emergence of cooperation. *Behavioural Ecology* 15: 181-186.

Keane, B., Waser, P.M., Creel, S.R., Creel, N.M., Elliott, L.F. & Minchella, D.J. (1994) Subordinate reproduction in dwarf mongooses. *Animal Behaviour* 47: 65-75.

Kelly, M. J. (2001) Computer-aided photograph matching in studies using individual identification: an example from Serengeti cheetahs. *Journal of Mammalogy* 82(2): 440-449.

Kokko, H. & Lundberg, P. (2001) Dispersal, migration, and offspring retention in saturated habitats. *American Naturalist* 157: 188-202.

Kowalczyk, R., Zalewski, A., Jedrzejewska, B. & Jedrzejewski, W. (2003) Spatial organization and demography of badgers (*Meles meles*) in Bialowieza Primeval Forest, Poland, and the influence of earthworms on badger densities in Europe. *Canadian Journal of Zoology* 81: 74-87.

Krebs, J.R. & Davis, N.B. (1993) *An introduction to Behavioural Ecology*. Blackwell Science, Oxford.

Kruuk, H. (1978) Spatial organization and territorial behaviour of the European badger *Meles meles*. *Journal of Zoology, London* 184: 1-19.

Kruuk, H. (1989) The social badger. Ecology and behaviour of a group-living carnivore (*Meles meles*). Oxford University Press, Oxford.

Kruuk, H., Gorman, M.L. & Leitch, A. (1984) Scent-marking with the subcaudal gland by the European badger, *Meles meles* L. *Animal Behaviour* 32: 899-907.

Kruuk, H. & Parish, T. (1982) Factors affecting population density, group size and territory size of the European badger, *Meles meles*. *Journal Zoology, Lond.* 196: 31-39.

Kruuk, H. & Parish, T. (1987) Changes in the size of groups and ranges of European badger (*Meles meles* L.) in an area in Scotland. *Journal of Animal Ecology* 56: 351-364.

Lehner, P.N. (1979) *Handbook of Ethological Methods*. Garland STPM, New York.

Lindström, E. (1986) Territory inheritance and the evolution of group living in carnivores. *Animal Behaviour* 34: 1825-1835.

Loudon, A.S.I., McNeilly, A.S. & Milne, J.A. (1983) Nutrition and lactational control of fertility in red deer. *Nature* 302: 145-147.

Lowe, A., Harris, S. & Ashton, P. (2004) *Ecological genetics: design, analysis and application*. Blackwell Publishing, Oxford.

Lüps, P. & Roper, T.J. (1990) Cannibalism in a female badger (*Meles meles*): infanticide or predation? *Journal of Zoology, London* 221: 314-315.

Macdonald, D.W. (1983) The ecology of carnivore social behaviour. *Nature* 301: 379-384.

Macdonald, D.W. & Moehlman, P.D. (1983) Cooperation, altruism and restraint in the reproduction of carnivores. En: *Perspectives in Ethology* Vol. 5 (Eds. P. Bateson y P. Klopfer). Plenum Press, New York.

- Macdonald, D.W., Stewart, P.D., Johnson, P.J., Porket, J. & Buesching, C. (2002) No evidence of social hierarchy amongst feeding badgers, *Meles meles*. *Ethology* 108: 613-628.
- Mace, R. D., Minta, S. C., Manley, T. L. & Aune, K. E. (1994) Estimating grizzly bear population size using camera sightings. *Wildlife Society Bulletin* 22: 74-83.
- Malcolm, J.R. & Marten, K. (1982) Natural selection and communal rearing of pups in African wild dog (*Lycaon pictus*). *Behavioral Ecology and Sociobiology* 10: 1-13.
- Mantel, N. (1967) The detection of disease clustering and a generalized regression approach. *Cancer Research* 27: 209-220.
- Martin, P. & Bateson, P. (1986) *Measuring behaviour: an introductory guide*. Cambridge University Press, Cambridge.
- McCracken, G.F. (1984) Communal nursing in Mexican free-tailed bat maternity colonies. *Science* 223: 1090-1091.
- Mooring, M.S. & Samuel, W.M (1998) The biological basis of grooming in moose: programmed versus stimulus-driven grooming. *Animal Behaviour* 56: 1561-1570.
- Neal, E. (1977) *Badgers*. Pool: Blandford Press.
- Neal, E. & Cheeseman, C.L. (1996) *Badgers*. T & AD Poyser Natural History, London.
- Neal, E. & Harrison, R.J. (1958) Reproduction in the European badger (*Meles meles* L.). *Trans. Zool. Soc. Lond.* 29: 67-130.
- Nei, M. (1978) Estimation of average heterozygosity and genetic distance from a small number of individuals. *Genetics* 89: 583-590.

Oftedal, O.T. & Gittleman, J.L. (1996) Patterns of energy outputs during reproduction in Carnivores. En: Carnivore Behavior, Ecology, and Evolution Vol. 1 (Ed. J.L. Gittleman). Cornell University Press, Ithaca, New York.

O'Brien, T.G. (1993) Allogrooming behaviour among adult female wedge-capped capuchin monkeys. *Animal Behaviour* 46: 499-510.

Packer, C., Gilbert, D.A., Pusey, A.E. & O'Brien, S.J. (1991) A molecular genetic analysis of kinship and cooperation in African lions. *Nature* 351: 562-565.

Packer, C., Lewis, S. & Pusey, A. (1992) A comparative analysis of non-offspring nursing. *Animal Behaviour* 43: 265-281.

Page, R.J.C., Ross, J. & Langton, S.D. (1994) Seasonality of reproduction in the European badger *Meles meles* in south-west England. *Journal of Zoology, London* 233: 69-91.

Paget, R.J. & Middleton, A.L.V. (1974) Some observations on the sexual activities of badgers (*Meles meles*) in Yorkshire in the months December to April. *Journal of Zoology, London* 173: 256-260.

Palomares, F., Delibes, M., Ferreras, P., Fedriani, J.M., Calzada, J. & Revilla, E. (2000) Iberian lynx in a fragmented landscape: predispersal, dispersal, and postdispersal habitats. *Conservation Biology* 14 (3): 809-818.

Pigozzi, G. (1987) Behavioural ecology of the European badger (*Meles meles* L.): diet, food availability and use of space in the Maremma Natural Park, Central Italy. Tesis doctoral, University of Aberdeen.

Powell, R.A. (2000) Animal home ranges and territories and home range estimators. En: *Research techniques in Animal Ecology. Controversies and consequences* (Eds. L. Boitani & T.K. Fuller) Columbia University Press, New York.

Pusey, A.E. & Packer, C. (1994) Non-offspring nursing in social carnivores: minimizing the costs. *Behavioural Ecology* 5: 362-374.

Rafart, E. (1998) Memòria de l'estudi de la reproducció en captivitat d'un clan de toixons (*Meles meles*) a la Serra de Collserola. Parc de Collserola.

Rafart, E. & Rodríguez-Teijeiro, J.D. (2000) Cria de toixons en captivitat: resultats i perspectives. En: I Jornades sobre la Recerca en els sistemes naturals de Collserola: aplicacions a la gestió del Parc (Eds. F. Llimona, J.M. Espelta, J.C. Guix, E. Mateos, J.D. Rodríguez-Teijeiro). Consorci Parc de Collserola, Barcelona.

Rapaport, L. & Haight, J. (1987) Some observations regarding allomaternal caretaking among captive elephants (*Elephas maximus*). *Journal Mammalogy* 68: 438-442.

Revilla, E. (1998) Organización social del tejón en Doñana. Tesis Doctoral, Universidad de León.

Revilla, E. & Palomares, F. (2001). Differences in key habitat use between dominant and subordinate animals: intraterritorial dominance payoffs in Eurasian badgers? *Canadian Journal of Zoology* 79: 165-170.

Revilla, E. & Palomares, F. (2002). Spatial organization, group living and ecological correlates in low-density populations of Eurasian badgers, *Meles meles*. *Journal Animal Ecology* 71: 497-512.

Revilla, E., Palomares, F. & Delibes, M. (2001) Edge-core effects and the effectiveness of traditional reserves in conservation: Eurasian badgers in Doñana National Park. *Conservation Biology* 15: 148-158.

Revilla, E., Palomares, F. & Fernández, N. (2001) Characteristics, location and selection of diurnal resting dens by Eurasian badgers (*Meles meles*) in a low density area. *Journal of Zoology (London)* 255: 291-299.

Reynolds, J., Weir, B.S. & Cockerham, C.C. (1983) Estimation of the coancestry coefficient: basis for a short-term genetic distance. *Genetics* 105: 767-779.

Rodríguez-Teijeiro, J.D., Puigcerver, M., Gallego, S., Cordero, P.J. & Parkin, D.T. (2003) Pair bond and multiple paternity in the polygamous common quail (*Coturnix coturnix*). *Ethology* 109: 291-302.

Rogers, L. M., Cheeseman, C. L. Mallison, P. J. & Clifton-Hadley, R.S. (1997) The demography of a high-density badger (*Meles meles*) population in the west of England. *Journal of Zoology* 242: 705-728.

Rogers, L. M., Delahay, R., Cheeseman, C. L., Langton, S., Smith, G. C. & Clifton-Hadley, R. S. (1998) Movement of badgers (*Meles meles*) in a high-density population: individual, population and disease effects. *Proceedings Royal Society London B* 265: 1269-1276.

Rogers, L.M., Forrester, G.J., Wilson, G.J., Yarnell, R.W. & Cheeseman, C.L. (2003) The role of setts in badger (*Meles meles*) group size, breeding success and status of TB (*Micobacterium bovis*). *Journal of Zoology* 260: 209-215.

Roper, T.J. (1992a) Badger *Meles meles* setts – architecture, internal environment and function. *Mammal Review* 22: 43-53.

Roper, T.J. (1992b) The structure and function of badgers setts. *Journal of Zoology, London* 227: 691-698.

Roper, T.J., Shepherdson, D.J. & Davies, J.M. (1986) Scent marking with faeces and anal secretion in the European badger (*Meles meles*): seasonal and spatial characteristics of latrine use in relation to territoriality. *Behaviour* 97: 94-117.

Roper, T., Ostler, J., Schmidt, T.K. & Christian, S.F. (2001) Sett use in European badgers *Meles meles*. *Behaviour* 138: 173-187.

Sambrook, J., Fritsch, E.F. & Maniatis, T (1989) *Molecular Cloning: a Laboratory Manual*. Cold Spring Harbour Laboratory Press, New York.

Senar, J.C. (2000) *Vivir y convivir: la vida en grupos sociales*. En: *Etología. Introducción a la Ciencia del Comportamiento* (Ed. J. Carranza). Universidad de Extremadura, Cáceres.

Service, K. (1998) *Properties of badger urine as a substance used in scent-marking*. Tesis doctoral, University of Bristol.

Slatkin, M. (1985) Rare alleles as indicators of gene flow. *Evolution* 39: 53-65.

Smith, M.S. & Macdonald, L.E. (1974) Serum levels of luteinizing hormone and progesterone during the estrous cycle, pseudopregnancy and pregnancy in the dog. *Endocrinology* 94: 404-412.

Stewart, P.D., Anderson, C. & Macdonald, D.W. (1997) A mechanism for passive range exclusion: evidence from the European badger (*Meles meles*). *Journal of Theoretical Biology* 184: 279-289.

Wahlund, S. (1928) Composition of populations from the perspective of the theory of heredity. *Hereditas* 11: 65-105.

Wetton, J.H., Carter, R.E., Parkin, D.T. & Walters, D. (1987) Demographic study of a wild house sparrow population by DNA fingerprinting. *Nature* 327: 147-149.

Wetton, J.H., Parkin, D.T. & Carter, R.E. (1992) The use of genetic markers for parentage analysis in *Passer domesticus* (House sparrows). *Heredity* 69: 243-254.

Vandenbergh, J.G. (1971) The effects of gonadal hormones on the aggressive behaviour of adult golden hamsters (*Mesocricetus auratus*). *Animal Behaviour* 19: 589-594.

van Teeffelen, A., Elmeros, M. & Madsen, A.B. (2001) Diurnal resting of European badger (*Meles meles*) in Denmark. Wissenschaftliche Mitteilungen aus dem Niederösterreichischen Landesmuseum 14: 171-173.

von Schantz, T. (1984) Spacing strategies, kin selection, and population regulation in altricial vertebrates. *Oikos* 42: 48-58.

Wandeler, A.I. & Graf, M. (1982) Der Geschlechtszyklus weiblicher Dachse (*Meles meles* L.) in der Schweiz. *Revue Suisse de Zoologie* 89: 1009-1016.

Waser, P.M. (1981). Sociality or territorial defense? The influence of resource renewal. *Behavioral Ecology and Sociobiology* 8: 231-237.

White, G.C. & Garrot, R.A. (1990) Analysis of wildlife radio-tracking data. Academic Press, New York.

Wilkinson, G.S. (1992) Communal nursing in the evening bat, *Nycticeius humeralis*. *Behavioral Ecology and Sociobiology* 31: 225-235.

Wilson, E.O. (1975) *Sociobiology: the new synthesis*. Cambridge, MA: Belknap Press.

Woodroffe, R. (1993). Alloparental behaviour in the European badger. *Animal Behaviour* 46: 413-415.

Woodroffe, R. (1995) Body condition affects implantation date in the European badger, *Meles meles*. *Journal of Zoology, London* 236: 183-188.

Woodroffe, R. & Ginsberg, J.R. (1998) Edge effects and the extinction of populations inside protected areas. *Science* 280: 2126-2128.

Woodroffe, R. & Macdonald, D.W. (1992) Badger clans: demographic groups in an antisocial species. *Journal of Zoology, London* 227: 696-698.

Woodroffe, R. & Macdonald, D.W. (1993) Badger sociality: models of spatial grouping. Symposium of the Zoological Society of London 65: 145-169.

Woodroffe, R. & Macdonald, D.W. (1995a) Costs of breeding status in the European badger, *Meles meles*. Journal of Zoology 235: 237-245.

Woodroffe, R. & Macdonald, D.W. (1995b) Female/female competition in European badgers *Meles meles*: effects on breeding success. Journal of Animal Ecology 64: 12-20.

Woodroffe, R. & Macdonald, D.W. (2000) Helpers provide no detectable benefits in the European badger (*Meles meles*). Journal Zoology, London 250: 113-119.

Woodroffe, R., Macdonald, D.W. & Da Silva, J. (1995) Dispersal and philopatry in the European badger, *Meles meles*. Journal of Zoology, London 237: 227-239.

Zar, J.H. (1996) Biostatistical analysis. Prentice Hall International, New Jersey.

