


AUTHOR QUERY FORM

	Book: Spatial Capture-Recapture Chapter: Bibliography	Please e-mail your responses and any corrections to: E-mail: a.kittusamyramasamy@elsevier.com
---	--	--

Dear Author,

Any queries or remarks that have arisen during the processing of your manuscript are listed below and are highlighted by flags in the proof. (AU indicates author queries; ED indicates editor queries; and TS/TY indicates typesetter queries.) Please check your proof carefully and answer all AU queries. Mark all corrections and query answers at the appropriate place in the proof (e.g., by using on-screen annotation in the PDF file http://www.elsevier.com/framework_authors/tutorials/ePDF_voice_skin.swf) or compile them in a separate list, and tick off below to indicate that you have answered the query.

Please return your input as instructed by the project manager.

Uncited references: References that occur in the reference list but are not cited in the text. Please position each reference in the text or delete it from the reference list.	
Missing references: References listed below were noted in the text but are missing from the reference list. Please make the reference list complete or remove the references from the text.	
Location in Chapter	Query / remark
AU:1, page 549	Please provide the volume number for References “Burnham et al. (1980), Csardi and Nepusz (2006), Sillett et al. (2012), Ivan et al. (2013a), Ivan et al. (2013b), Kays et al. (2008), Russell et al. (2012), Kiefer (1959), Lele et al. (2012), MacKay et al. (2008), Matechou et al. (2013), Mitchell (1974), and Sollmann et al. (2013a)”.
AU:2, page 551	Please provide complete details for References “Chandler and Royle (2013), Dixon (2002), Venables et al. (2012), Hobbs (2011), Royle et al. (2012a), Royle et al. (2013), Kucera (2011), Reich et al. (2012), Mollet et al. (in review), Tobler et al. (2012), and Efford and Dawson (2010)”.
AU:3, page 551	Please check the givenname for the Reference “Efford (2011a)”.
AU:4, page 551	Please provide publisher details for References “Efford et al. (2009a), Nychka et al. (1997), and Schwarz and Arnason (2005)”.
AU:5, page 552	Please check the authors name for Reference “Farnsworth et al. (2002)”.

AU:6, page 554	Please update References Hanks and Hooten (in press), McClintock et al. (in press) and Sun (in press).
AU:7, page 557	Please provide more details for the Reference “Kucera (2011)”.
AU:8, page 557	Please check the journal title for the References “Kuo and Mallick (1998)”.
AU:9, page 561	Please check the authornames in References “Molinari-Jobin et al. (2013)” and provide volume number and page range.

Bibliography

- Adriaensen, F., Chardon, J.P., De Blust, G., Swinnen, E., Villalba, S., Gulinck, H., Matthysen, E., 2003. The application of least-cost modelling as a functional landscape model. *Landscape and Urban Planning* 64, 233–247.
- Agresti, A., 2002. *Categorical Data Analysis*, vol. 359. John Wiley and Sons.
- Aitkin, M., 1991. Posterior bayes factors. *Journal of the Royal Statistical Society, Series B (Methodological)* 53, 111–142.
- Alho, J.M., 1990. Logistic regression in capture-recapture models. *Biometrics* 46, 623–635.
- Alpizar-Jara, R., Pollock, K.H., 1996. A combination line transect and capture-recapture sampling model for multiple observers in aerial surveys. *Environmental and Ecological Statistics* 3, 311–327.
- Amstrup, S.C., McDonald, T.L., Manly, B.F.J., 2005. *Handbook of Capture-Recapture Analysis*. Princeton University Press.
- Anderson, D.R., Burnham, K.P., White, G.C., Otis, D.L., 1983. Density estimation of small-mammal populations using a trapping web and distance sampling methods. *Ecology* 64, 674–680.
- Arnason, N.A., 1972. Parameter estimates from mark-recapture experiments on two populations subject to migration and death. *Researches on Population Ecology* 13, 97–113.
- Arnason, N.A., 1973. The estimation of population size, migration rates and survival in a stratified population. *Researches on Population Ecology* 15, 1–8.
- Arnason, A., Schwarz, C., Gerrard, J., 1991. Estimating closed population size and number of marked animals from sighting data. *Journal of Wildlife Management* 55, 716–730.
- Baddeley, A., Turner, R., 2005. Spatstat: an R package for analyzing spatial point patterns. *Journal of Statistical Software* 12, 1–42. ISSN: 1548–7660.
- Bales, S., Hellgren, E., Leslie Jr., D., Hemphill Jr., J., 2005. Dynamics of a recolonizing population of black bears in the Ouachita Mountains of Oklahoma. *Wildlife Society Bulletin* 33, 1342–1351.
- Balme, G.A., Slotow, R., Hunter, L.T.B., 2010. Edge effects and the impact of non-protected areas in carnivore conservation: leopards in the Phinda-Mkhuze complex, South Africa. *Animal Conservation* 13, 315–323.

548 Bibliography

- Bartmann, R.M., White, G.C., Carpenter, L.H., Garrott, R.A., 1987. Aerial mark-recapture estimates of confined mule deer in Pinyon-Juniper woodland. *The Journal of Wildlife Management* 51, 41–46.
- Bayne, E., Hobson, K., 2002. Annual survival of adult American Redstarts and Ovenbirds in the southern boreal forest. *The Wilson Bulletin* 114, 358–367.
- Beier, P., Majka, D.R., Spencer, W.D., 2008. Forks in the road: choices in procedures for designing wildland linkages. *Conservation Biology* 22, 836–851.
- Belant, J., Van Stappen, J., Paetkau, D., 2005. American black bear population size and genetic diversity at Apostle Islands National Lakeshore. *Ursus* 16, 85–92.
- Berger, J., Liseo, B., Wolpert, R., 1999. Integrated likelihood methods for eliminating nuisance parameters. *Statistical Science* 14, 1–28.
- Besag, J., Kooperberg, C., 1995. On conditional and intrinsic autoregressions. *Biometrika* 82, 733–746.
- Best, N.G., Ickstadt, K., Wolpert, R.L., 2000. Spatial poisson regression for health and exposure data measured at disparate resolutions. *Journal of the American Statistical Association* 95, 1076.
- Bibby, C.J., Buckland, S.T., 1987. Bias of bird census results due to detectability varying with habitat. *Acta Ecologica* 8, 103–112.
- Bibby, C.J., Burgess, N.D., Hill, D.A., 1992. *Bird Census Techniques*. Academic Press, London, UK, p. 257.
- Bivand, R., Rundel, C. 2011. Rgeos: interface to geometry engine—open source (GEOS). R package version 0.1-8.
- Blair, W., 1940. A study of prairie deer-mouse populations in southern Michigan. *American Midland Naturalist* 24, 273–305.
- Bolker, B., 2008. *Ecological Models and Data in R*. Princeton University Press.
- Bondrup-Nielsen, S., 1983. Density estimation as a function of live-trapping grid and home range size. *Canadian Journal of Zoology* 61, 2361–2365.
- Borchers, D.L., 2012. A non-technical overview of spatially explicit capture-recapture models. *Journal of Ornithology* 152, 1–10.
- Borchers, D.L., Buckland, S.T., Zucchini, W., 2002. *Estimating Animal Abundance: Closed Populations*, vol. 13. Springer Verlag.
- Borchers, D.L., Efford, M.G., 2008. Spatially explicit maximum likelihood methods for capture-recapture studies. *Biometrics* 64, 377–385.
- Borchers, D.L., Zucchini, W., Fewster, R.M., 1998. Mark-recapture models for line transect surveys. *Biometrics* 54, 1207–1220.
- Boulanger, J., McLellan, B., 2001. Closure violation in DNA-based mark-recapture estimation of grizzly bear populations. *Canadian Journal of Zoology* 79, 642–651.
- Bowden, D.C. 1993. A simple technique for estimating population size. Technical Report 93/12, Department of Statistics, Colorado State University, Fort Collins, Colorado, USA.
- Box, G.E.P., Draper, N.R., 1959. A basis for the selection of a response surface design. *Journal of the American Statistical Association* 54, 622–654.
- Box, G.E.P., Draper, N.R., 1987. *Empirical Model-Building with Response Surfaces*. Wiley, New York.

- Boyce, M.S., McDonald, L.L., 1999. Relating populations to habitats using resource selection functions. *Trends in Ecology and Evolution* 14, 268–272.
- Brooks, S.P., Catchpole, E.A., Morgan, B.J.T., 2000. Bayesian animal survival estimation. *Statistical Science* 15, 357–376.
- Brownie, C., Hines, J.E., Nichols, J.D., Pollock, K.H., Hestbeck, J.B., 1993. Capture-recapture studies for multiple strata including non-Markovian transitions. *Biometrics* 49, 1173–1187.
- Buckland, S.T., 2004. *Advanced distance sampling*. Oxford University Press, USA.
- Buckland, S., Anderson, D., Burnham, K., Laake, J., Borchers, D., L, T., 2001. *Introduction to distance sampling: estimating abundance of biological populations*. Oxford University Press, Oxford, UK.
- Burnham, K.P., 1997. Distributional results for special cases of the Jolly-Seber model. *Communications in Statistics* 26, 1395–1409.
- Burnham, K.P., Anderson, D.R., 2002. *Model Selection and Multimodel Inference: A Practical Information-Theoretic Approach*. Springer Verlag.
- Burnham, K., Anderson, D., Laake, J. 1980. Estimation of density from line transect sampling of biological populations. *Wildlife Monographs*, pp. 3–202.
- Burnham, K., Anderson, D., White, G., Brownie, C., Pollock, K., 1987. *Design and Analysis Methods for Fish Survival Experiments Based on Release-Recapture*. American Fisheries Society Monograph, vol. 5. American Fisheries Society, Bethesda Maryland, p. 737.
- Burnham, K.P., Overton, W.S., 1978. Estimation of the size of a closed population when capture probabilities vary among animals. *Biometrika* 65, 625.
- Burt, W., 1943. Territoriality and home range concepts as applied to mammals. *Journal of Mammalogy* 24, 346–352.
- Casella, G., Berger, R.L., 2002. *Statistical Inference*. Duxbury Press.
- Casella, G., George, E.I., 1992. Explaining the Gibbs sampler. *American Statistician* 46, 167–174.
- Caswell, H., 1989. *Matrix Population Models*. Sinauer Association, Sunderland.
- Caswell, H., Werner, P.A., 1978. Transient behavior and life history analysis of teasel (*Dipsacus sylvestris* Huds.). *Ecology* 59, 53–66.
- Chandler, R.B., Royle, J.A. 2013. Spatially-explicit models for inference about density in unmarked or partially marked populations. *Annals of Applied Statistics*, xxxx–xxxx.
- Chandler, R.B., Royle, J.A., King, D., 2011. Inference about density and temporary emigration in unmarked populations. *Ecology* 92, 1429–1435.
- Clavel, J., Robert, A., Devictor, V., Julliard, R., 2008. Abundance estimation with a transient model under the robust design. *Journal of Wildlife Management* 72, 1203–1210.
- Clobert, J., Danchin, E., Dhondt, A., Nichols, J., 2001. *Dispersal*. Oxford.
- Cochran, W., 2007. *Sampling Techniques*. John Wiley & Sons, USA.
- Compton, B.W., McGarigal, K., Cushman, S.A., Gamble, L.R., 2007. A resistant-kernel model of connectivity for amphibians that breed in vernal pools. *Conservation Biology* 21, 788–799.

AU:1

550 Bibliography

- Conde, D., Colchero, F., Zarza, H., Christensen, N., Sexton, J., Manterola, C., Chávez, C., Rivera, A., Azuara, D., Ceballos, G., 2010. Sex matters: modeling male and female habitat differences for jaguar conservation. *Biological Conservation* 143, 1980–1988.
- Conn, P.B., Cooch, E.G., 2009. Multistate capture-recapture analysis under imperfect state observation: an application to disease models. *Journal of Applied Ecology* 46, 486–492.
- Conroy, M.J., Carroll, J.P., 2009. *Quantitative Conservation of Vertebrates*. Wiley-Blackwell.
- Conroy, M.J., Runge, J.P., Barker, R.J., Schofield, M.R., Fonnesebeck, C.J., 2008. Efficient estimation of abundance for patchily distributed populations via two-phase, adaptive sampling. *Ecology* 89, 3362–3370.
- Converse, S.J., Royle, J.A., 2012. Dealing with incomplete and variable detectability in multi-year, multi-site monitoring of ecological populations. In: Gitzen, R.R., Millspaugh, J.J., Cooper, A.B., Licht, D.S. (Eds.), *Design and Analysis of Long-term Ecological Monitoring Studies*. Cambridge University Press, pp. 426–442.
- Converse, S., White, G., Block, W., 2006a. Small mammal responses to thinning and wildfire in ponderosa pine-dominated forests of the southwestern United States. *Journal of Wildlife Management* 70, 1711–1722.
- Converse, S., White, G., Farris, K., Zack, S., 2006b. Small mammals and forest fuel reduction: national-scale responses to fire and fire surrogates. *Ecological Applications* 16, 1717–1729.
- Cooch, E., White, G., 2006. Program MARK: A Gentle Introduction. Available online with the MARK programme, p. 7.
- Cormack, R.M., 1964. Estimates of survival from the sighting of marked animals. *Biometrika* 51, 429–438.
- Coull, B.A., Agresti, A., 1999. The use of mixed logit models to reflect heterogeneity in capture-recapture studies. *Biometrics* 55, 294–301.
- Cox, D., 1955. Some statistical methods connected with series of events. *Journal of the Royal Statistical Society, Series B (Methodological)* 17, 129–164.
- Cressie, N., 1991. *Statistics for Spatial Data*. Wiley Series in Probability and Mathematical Statistics.
- Csardi, G., Nepusz, T., 2006. The igraph software package for complex network research. *International Journal of Complex Systems*, 1695.
- Cushman, S.A., Compton, B.W., McGarigal, K., 2010. Habitat fragmentation effects depend on complex interactions between population size and dispersal ability: modeling influences of roads, agriculture and residential development across a range of life-history characteristics. In: Cushman, S.A., Huettmann, F. (Eds.), *Spatial Complexity, Informatics, and Wildlife Conservation*, Springer, New York, pp. 369–385 (Chapter 20).
- Cushman, S.A., McKelvey, K.S., Hayden, J., Schwartz, M.K., 2006. Gene flow in complex landscapes: testing multiple hypotheses with causal modeling. *The American Naturalist* 168, 486–499.
- Dawson, D.K., Efford, M.G., 2009. Bird population density estimated from acoustic signals. *Journal of Applied Ecology* 46, 1201–1209.

- DeGraaf, R.M., Yamasaki, M., 2001. *New England Wildlife: Habitat, Natural History, and Distribution*. University Press of New England.
- DeSante, D.F., Burton, K.M., Saracco, J.F., Walker, B.L., 1995. Productivity indices and survival rate estimates from MAPS, a continent-wide programme of constant-effort mist-netting in North America. *Journal of Applied Statistics* 22, 935–948.
- Dice, L.R., 1938. Some census methods for mammals. *Journal of Wildlife Management* 2, 119–130.
- Dice, L.R., 1941. Methods for estimating populations of mammals. *Journal of Wildlife Management* 5, 398–407.
- Diggle, P.J. 2003. *Statistical Analysis of Spatial Point Processes*, second ed. Arnold, London.
- Dijkstra, E.W., 1959. A note on two problems in connexion with graphs. *Numerische Mathematik* 1, 269–271.
- Dillon, A., Kelly, M., 2007. Ocelot *Leopardus pardalis* in Belize: the impact of trap spacing and distance moved on density estimates. *Oryx* 41, 469–477.
- Dixon, P., 2002. Bootstrap resampling. *Encyclopedia of Environmetrics*. [AU:2]
- Dorazio, R.M., 2007. On the choice of statistical models for estimating occurrence and extinction from animal surveys. *Ecology* 88, 2773–2782.
- Dorazio, R.M., Royle, J.A., 2003. Mixture models for estimating the size of a closed population when capture rates vary among individuals. *Biometrics* 59, 351–364.
- Dormann, C.F., McPherson, J.M., Araújo, M., Bivand, R., Bolliger, J., Carl, G., Davies, G., R., Hirzel, A., Jetz, W., Daniel Kissling, W., et al., 2007. Methods to account for spatial autocorrelation in the analysis of species distributional data: a review. *Ecography* 30, 609–628.
- Durban, J., Elston, D., 2005. Mark-recapture with occasion and individual effects: abundance estimation through Bayesian model selection in a fixed dimensional parameter space. *Journal of Agricultural, Biological, and Environmental Statistics* 10, 291–305.
- Eddelbuettel, D., François, R., 2011. Rcpp seamless R and C++ integration. *Journal of Statistical Software* 40, 1–18.
- Efford, M.G., 2011a. Secr: spatially explicit capture-recapture models. R package version 2.3-1. [AU:3]
- Efford, M.G., 2004. Density estimation in live-trapping studies. *Oikos* 106, 598–610.
- Efford, M.G., 2011b. Estimation of population density by spatially explicit capture-recapture analysis of data from area searches. *Ecology* 92, 2202–2207.
- Efford, M.G., 2012. Spatially explicit capture-recapture for bear researchers and managers, Western Black Bear Workshop. Coeur d'Alene, ID.
- Efford, M.G., Dawson, D.K., 2009. Effect of distance-related heterogeneity on population size estimates from point counts. *The Auk* 126, 100–111.
- Efford, M.G., Dawson, D.K. 2010. SECR for acoustic data.
- Efford, M.G., Borchers, D.L., Byrom, A.E. 2009a. Density estimation by spatially explicit capture-recapture: likelihood-based methods. *Modeling Demographic Processes in Marked Populations*, pp. 255–269. [AU:4]
- Efford, M.G., Dawson, D.K., Borchers, D.L., 2009b. Population density estimated from locations of individuals on a passive detector array. *Ecology* 90, 2676–2682.

552 Bibliography

AU:5

- Efford, M.G., Dawson, D.K., Robbins, C.S., 2004. DENSITY: software for analysing capture-recapture data from passive detector arrays. *Animal Biodiversity and Conservation* 27, 217–228.
- Efford, M.G., Fewster, R.M., 2012. Estimating population size by spatially explicit capture-recapture. *Oikos*.
- Efford, M.G., Warburton, B., Coleman, M.C., Barker, R.J., 2005. A field test of two methods for density estimation. *Wildlife Society Bulletin* 33, 731–738.
- Epps, C.W., Palsbøll, P.J., Wehausen, J.D., Roderick, G.K., Ramey, R.R. I.I., McCullough, D.R., 2005. Highways block gene flow and cause a rapid decline in genetic diversity of desert bighorn sheep. *Ecology Letters* 8, 1029–1038.
- Epps, C.W., Wehausen, J.D., Bleich, V.C., Torres, S.G., Brashares, J.S., 2007. Optimizing dispersal and corridor models using landscape genetics. *Journal of Applied Ecology* 44, 714–724.
- Farnsworth, G.L., Pollock, K.H., Nichols, J.D., Simons, T.R., Hines, J.E., Sauer, J.R., 2002. A removal model for estimating detection probabilities from point-count surveys. *Auk* 119, 414–425.
- Fedorov, V.V., 1972. *Theory of Optimal Experiments*. Academic Press, New York.
- Fedorov, V.V., Hackl, P., 1997. *Model-Oriented Design of Experiments*. Springer.
- Fienberg, S.E., Johnson, M.S., Junker, B.W., 1999. Classical multilevel and Bayesian approaches to population size estimation using multiple lists. *Journal of the Royal Statistical Society of London A* 163, 383–405.
- Fiske, I.J., Chandler, R.B., 2011. Unmarked: an R package for fitting hierarchical models of wildlife occurrence and abundance. *Journal of Statistical Software* 43, 1–23.
- Forester, J.D., Im, H.K., Rathouz, P.J., 2009. Accounting for animal movement in estimation of resource selection functions: sampling and data analysis. *Ecology* 90, 3554–3565.
- Forester, J.D., Ives, A.R., Turner, M.G., Anderson, D.P., Fortin, D., Beyer, H.L., Smith, D.W., Boyce, M.S., 2007. State-space models link elk movement patterns to landscape characteristics in Yellowstone National Park. *Ecological Monographs* 77, 285–299.
- Fortin, D., Beyer, H.L., Boyce, M.S., Smith, D.W., Duchesne, T., Mao, J.S., 2005. Wolves influence elk movements: behavior shapes a trophic cascade in Yellowstone National Park. *Ecology* 86, 1320–1330.
- Foster, R.J., Harmsen, B.J., 2012. A critique of density estimation from camera-trap data. *Journal of Wildlife Management* 76, 224–236.
- Fowler, C., 1981. Density dependence as related to life history strategy. *Ecology* 62, 602–610.
- François, R., Eddelbuettel, D., Bates, D., 2011. RcppArmadillo: Rcpp integration for Armadillo templated linear algebra library. R package version 0.2-25.
- Frary, V., Duchamp, J., Maehr, D., Larkin, J., 2011. Density and distribution of a colonizing front of the American black bear *Ursus americanus*. *Wildlife Biology* 17, 404–416.

- Fujiwara, M., Anderson, K., Neubert, M., Caswell, H., 2006. On the estimation of dispersal kernels from individual mark-recapture data. *Environmental and Ecological Statistics* 13, 183–197.
- García-Alaníz, N., Naranjo, E.J., Mallory, F.F., 2010. Hair-snares: a non-invasive method for monitoring felid populations in the Selva Lacandona, Mexico, *Tropical Conservation Science* 3, 403–411.
- Gardner, B., Reppucci, J., Lucherini, M., Royle, J., 2010a. Spatially explicit inference for open populations: estimating demographic parameters from camera-trap studies. *Ecology* 91, 3376–3383.
- Gardner, B., Royle, J.A., Wegan, M.T., 2009. Hierarchical models for estimating density from DNA mark-recapture studies. *Ecology* 90, 1106–1115.
- Gardner, B., Royle, J.A., Wegan, M.T., Rainbolt, R.E., Curtis, P.D., 2010b. Estimating black bear density using DNA data from hair snares. *Journal of Wildlife Management* 74, 318–325.
- Garshelis, D.L., Hristienko, H., 2006. State and provincial estimates of American black bear numbers versus assessments of population trend. *Ursus* 17, 1–7.
- Gelfand, A., Smith, A., 1990. Sampling-based approaches to calculating marginal densities. *Journal of the American Statistical Association* 85, 398–409.
- Gelman, A., 2006. Prior distributions for variance parameters in hierarchical models. *Bayesian Analysis* 1, 515–533.
- Gelman, A., Carlin, J.B., Stern, H.S., Rubin, D.B., 2004. *Bayesian Data Analysis*, second ed. CRC/Chapman & Hall, Boca Raton, Florida, USA.
- Gelman, A., Meng, X.L., Stern, H., 1996. Posterior predictive assessment of model fitness via realized discrepancies. *Statistica Sinica* 6, 733–759.
- Geman, S., Geman, D., 1984. Stochastic relaxation, Gibbs distributions, and the Bayesian restoration of images. *IEEE Transactions on Pattern Analysis and Machine Intelligence PAMI-6*, 721–741.
- Genz, A.S., Meyer, M.R., Lumley, T., Maechler, M., 2007. The adapt package. R package version 1.0-4.
- Gerlach, G., Musolf, K., 2000. Fragmentation of landscape as a cause for genetic subdivision in bank voles. *Conservation Biology* 14, 1066–1074.
- Gilks, W., Wild, P., 1992. Adaptive rejection sampling for Gibbs sampling. *Applied Statistics* 41, 337–348.
- Gilks, W.R., Thomas, A., Spiegelhalter, D.J., 1994. A Language and Program for Complex Bayesian Modelling. *Journal of the Royal Statistical Society. Series D (The Statistician)* 43, 169–177 (ArticleType: primary_article/ Issue Title: Special Issue: Conference on Practical Bayesian Statistics, 1992 (3)/ Full publication date: 1994/ Copyright 1994 Royal Statistical Society).
- Gilroy, J., Virzi, T., Boulton, R.L., Lockwood, J., 2012. A new approach to the apparent survival problem: estimating true survival rates from mark-recapture studies. *Ecology* 93, 1509–1516.
- Jimenez, O., Rossi, V., Choquet, R., Dehais, C., Doris, B., Varella, H., Vila, J.P., Pradel, R., 2007. State-space modelling of data on marked individuals. *Ecological Modelling* 206, 431–438.

554 Bibliography

- Gopalaswamy, A.M., 2012. Capture-recapture models, spatially explicit. In: El-Shaarawi, A.H., Piegorisch, W. (Eds.), *Encyclopedia of Environmentrics*, second ed. John Wiley & Sons Ltd, Chichester, UK.
- Gopalaswamy, A.M., Royle, A.J., Hines, J., Singh, P., Jathanna, D., Kumar, N.S., Karanth, K.U., 2012a. Program SPACECAP: software for estimating animal density using spatially explicit capture-recapture models. *Methods in Ecology and Evolution*. Online early, R package version 1.0-4.
- Gopalaswamy, A.M., Royle, J.A., Delampady, M., Nichols, J.D., Karanth, K.U., Macdonald, D.W., 2012b. Density estimation in tiger populations: combining information for strong inference. *Ecology* 93, 1741–1751.
- Grant, E.H.C., Nichols, J.D., Lowe, W.H., Fagan, W.F., 2010. Use of multiple dispersal pathways facilitates amphibian persistence in stream networks. *Proceedings of the National Academy of Sciences* 107, 6936–6940.
- Green, P., Richardson, S., 2002. Hidden Markov models and disease mapping. *Journal of the American Statistical Association* 97, 1055–1070.
- Greig-Smith, P., 1964. *Quantitative, Plant Ecology*. Butterworths (Washington).
- Grimm, V., Revilla, E., Berger, U., Jeltsch, F., Mooij, W., Railsback, S., Thulke, H.-H., Weiner, J., Wiegand, T., DeAngelis, D., 2005. Pattern-oriented modeling of agent-based complex systems: lessons from ecology. *Science* 310, 987–991.
- Hahn, T., Bouvier, A., Kiêu, K., 2010. R2Cuba: multidimensional numerical integration. R package version 1.0-6.
- Hall, R.J., Henry, P.F.P., Bunck, C.M., 1999. Fifty-year trends in a box turtle population in Maryland. *Biological Conservation* 88, 165–172.
- Hanks, E.M., Hooten, M.B., in press. Circuit theory and model-based inference for landscape connectivity. *Journal of the American Statistical Association*.
- Hanski, I.A., 1999. *Metapopulation Ecology*. Oxford University Press.
- Hardin, R.H., Sloane, N.J.A., 1993. A new approach to the construction of optimal designs. *Journal of Statistical Planning and Inference* 37, 339–369.
- Hastings, W., 1970. Monte Carlo sampling methods using Markov chains and their applications. *Biometrika* 57, 97–109.
- Hawkins, C.E., Racey, P.A., 2005. Low population density of a tropical forest carnivore, *cryptoprocta ferox*: implications for protected area management, *Oryx* 39, 35–43.
- Hayes, R.J., Buckland, S.T., 1983. Radial distance models for the line transect method. *Biometrics* 39, 29–42.
- Hayne, D., 1950. Apparent home range of *Microtus* in relation to distance between traps. *Journal of Mammalogy* 31, 26–39.
- Hayne, D.W., 1949. An examination of the strip census method for estimating animal populations. *Journal of Wildlife Management* 13, 145–157.
- Hedley, S.L., Buckland, S.T., Borchers, D.L., 1999. Spatial modelling from line transect data. *Journal of Cetacean Research and Management* 1, 255–264.
- Hendriks, I., Tenan, S., Tavecchia, G., Marbá, N., Jordá, G., Deudero, S., Álvarez, E., Duarte, C.M., 2013. Boat anchoring impacts coastal populations of the pen shell, the largest bivalve in the Mediterranean. *Biological Conservation* 160, 105–113.

AU:6

- Hestbeck, J.B., Malecki, R.A., 1989. Mark-resight estimate of Canada Goose mid-winter numbers. *Journal of Wildlife Management* 53, 749–752.
- Hijmans, R.J., van Etten, J., 2012. Raster: geographic analysis and modeling with raster data. R package version 1.9-67.
- Hines, J.E., Kendall, W.L., Nichols, J.D., 2003. On the use of the robust design with transient capture-recapture models. *Auk* 120, 1151–1158.
- Hobbs, N.T., 2011. An Ecological Modeler’s Primer on JAGS.
- Holdenried, R., 1940. A population study of the long-eared chipmunk (*Eutamias quadrimaculatus*) in the central Sierra Nevada. *Journal of Mammalogy* 21, 405–411.
- Hooten, M., Johnson, D., Hanks, E., Lowry, J., 2010. Agent-based inference for animal movement and selection. *Journal of Agricultural, Biological, and Environmental Statistics* 15, 523–538.
- Hooten, M., Wikle, C., 2010. Statistical agent-based models for discrete spatio-temporal systems. *Journal of the American Statistical Association* 105, 236–248.
- Hornik, K., 2011. The R FAQ. ISBN 3-900051-08-9.
- Huggins, R.M., 1989. On the statistical analysis of capture experiments. *Biometrika* 76, 133.
- Hurlbert, S.H., 1984. Pseudoreplication and the design of ecological field experiments. *Ecological monographs* 54, 187–211.
- Illian, J., Penttinen, A., Stoyan, H., Stoyan, D., 2008. Statistical Analysis and Modelling of Spatial Point Patterns. Wiley.
- Ivan, J., 2012. Density, demography, and seasonal movements of snowshoe hares in central Colorado, PhD Thesis. Colorado State University.
- Ivan, J., White, G., Shenk, T., 2013a. Using auxiliary telemetry information to estimate animal density from capture-recapture data, *Ecology*.
- Ivan, J., White, G., Shenk, T., 2013b. Using simulation to compare methods for estimating density from capture-recapture data, *Ecology*.
- Jackson, R., Roe, J., Wangchuk, R., Hunter, D., 2006. Estimating snow leopard population abundance using photography and capture-recapture techniques. *Wildlife Society Bulletin* 34, 772–781.
- Jennelle, C.S., Runge, M.C., MacKenzie, D.I., 2002. The use of photographic rates to estimate densities of tigers and other cryptic mammals: a comment on misleading conclusions. *Animal Conservation* 5, 119–120.
- Jett, D.A., Nichols, J.D., 1987. A field comparison of nested grid and trapping web density estimators. *Journal of Mammalogy* 68, 888–892.
- Jhala, Y.V., Qureshi, Q., Gopal, R., Sinha, P.R., 2011. Status of tigers, co-predators and prey in India. Technical Report. National Tiger Conservation Authority, Government of India, New Delhi and Wildlife Institute of India, Dehradun.
- Johnson, 2010. A model-based approach for making ecological inference from distance sampling data. *Biometrics* 66, 310–318.
- Johnson, D., 1980. The comparison of usage and availability measurements for evaluating resource preference. *Ecology* 61, 65–71.
- Johnson, D.H., 1999. The insignificance of statistical significance testing. *Journal of Wildlife Management* 63, 763–772.

556 Bibliography

- Johnson, D.S., London, J.M., Lea, M.A., Durban, J., 2008a. Continuous-time correlated random walk model for animal telemetry data. *Ecology* 89, 1208–1215.
- Johnson, D.S., Thomas, D.L., Ver Hoef, J.M., Christ, A., 2008b. A general framework for the analysis of animal resource selection from telemetry data. *Biometrics* 64, 968–976.
- Jolly, G.M., 1965. Explicit estimates from capture-recapture data with both death and dilution-stochastic model. *Biometrika* 52, 225–247.
- Jonsen, I.D., Flemming, J.M., Myers, R.A., 2005. Robust state-space modeling of animal movement data. *Ecology* 86, 2874–2880.
- Kadane, J.B., Lazar, N.A., 2004. Methods and criteria for model selection. *Journal of the American Statistical Association* 99, 279–290.
- Karanth, K.U., 1995. Estimating tiger *Panthera tigris* populations from camera-trap data using capture-recapture models. *Biological Conservation* 71, 333–338.
- Karanth, K.U., Nichols, J.D., 1998. Estimation of tiger densities in India using photographic captures and recaptures. *Ecology* 79, 2852–2862.
- Karanth, K.U., Nichols, J.D., 2000. Ecological status and conservation of tigers in India, WCS, US Fish and Wildlife Service. Centre for Wildlife Studies, Bangalore, India, p. 123.
- Karanth, K.U., Nichols, J.D., 2002. Monitoring tigers and their prey: a manual for researchers, managers and conservationists in *Tropical Asia*. Centre for Wildlife Studies, Bangalore, India.
- Kass, R., Wasserman, L., 1996. The selection of prior distributions by formal rules. *Journal of the American Statistical Association* 91, 1343–1370.
- Kays, R.W., Slauson, K.M., Long, R.A., MacKay, P., Zielinski, W.J., Ray, J.C., 2008. Remote cameras. Noninvasive survey methods for carnivores, 110–140.
- Kelly, M., Noss, A., Di Bitetti, M., Maffei, L., Arispe, R., Paviolo, A., De Angelo, C., Di Blanco, Y., 2008. Estimating puma densities from camera trapping across three study sites: Bolivia, Argentina, and Belize. *Journal of Mammalogy* 89, 408–418.
- Kendall, K.C., Stetz, J.B., Boulanger, J., Macleod, A.C., Paetkau, D., White, G.C., 2009. Demography and genetic structure of a recovering grizzly bear population. *Journal of Wildlife Management* 73, 3–16.
- Kendall, W.L., 1999. Robustness of closed capture-recapture methods to violations of the closure assumption. *Ecology* 80, 2517–2525.
- Kendall, W.L., Nichols, J.D., Hines, J.E., 1997. Estimating temporary emigration using capture-recapture data with Pollock's Robust design. *Ecology* 78, 563–578.
- Kéry, M., 2008. Estimating abundance from bird counts: binomial mixture models uncover complex covariate relationships. *Auk* 125, 336–345.
- Kéry, M., 2010. Introduction to WinBUGS for Ecologists: Bayesian Approach to Regression, Mixed Models and Related Analyses. Academic Press, ANOVA.
- Kéry, M., 2011. Towards the modelling of true species distributions. *Journal of Biogeography* 38, 617–618.
- Kéry, M., Gardner, B., Monnerat, C., 2010. Predicting species distributions from checklist data using site-occupancy models. *Journal of Biogeography* 37, 1851–1862.

- Kéry, M., Gardner, B., Stoeckle, T., Weber, D., Royle, J.A., 2011. Use of spatial capture-recapture modeling and DNA data to estimate densities of elusive animals. *Conservation Biology* 25, 356–364.
- Kéry, M., Royle, J.A., Schmid, H., 2005. Modeling avian abundance from replicated counts using binomial mixture models. *Ecological Applications* 15, 1450–1461.
- Kéry, M., Schaub, M., 2012. *Bayesian Population Analysis Using WinBugs*. Academic Press.
- Kiefer, J., 1959. Optimal experimental designs (with discussion). *Journal of the Royal Statistical Society, Series B*, 272–319.
- King, R., Brooks, S., 2001. On the Bayesian analysis of population size. *Biometrika* 88, 317–336.
- King, R., Brooks, S., Coulson, T., 2008. Analyzing complex capture-recapture data in the presence of individual and temporal covariates and model uncertainty. *Biometrics* 64, 1187–1195.
- Knape, Jonas, de Valpine, P., 2012. Are patterns of density dependence in the Global Population Dynamics Database driven by uncertainty about population abundance? *Ecology Letters* 15, 17–23.
- Knaus, J., 2010. Snowfall: easier cluster computing (based on snow). R package version 1.8-4.
- Koehler, G.M., Pierce, D.J., 2003. Black bear home-range sizes in Washington: climatic, vegetative, and social influences. *Journal of Mammalogy* 84, 81–91 (ArticleType: research-article/ Full publication date: Feb., 2003/ Copyright 2003 American Society of Mammalogists).
- Kohn, M., York, E., Kamradt, D., Haught, G., Sauvajot, R., Wayne, R., 1999. Estimating population size by genotyping faeces. *Proceedings of the Royal Society of London. Series B: Biological Sciences* 266, 657–663.
- Krebs, C.J., 1999. *Ecological Methodology*. Benjamin/Cummings, Menlo Park, CA.
- Kucera, B., 2011.
- Kuo, L., Mallick, B., 1998. Variable selection for regression models, *Sankhy: The Indian Journal of Statistics, Series B* 60, 65–81.
- Laird, N.M., Ware, J.H., 1982. Random-effects models for longitudinal data. *Biometrics* 38, 963–974.
- Langtimm, C.A., Dorazio, R.M., Stith, B.M., Doyle, T.J., 2011. New aerial survey and hierarchical model to estimate manatee abundance. *Journal of Wildlife Management* 75, 399–412.
- Le Cam, L., 1990. Maximum likelihood: an introduction. *International Statistical Review/Revue Internationale de Statistique* 58, 153–171.
- Lebreton, J.D., Burnham, K.P., Clobert, J., Anderson, D.R., 1992. Modeling survival and testing biological hypotheses using marked animals: a unified approach with case studies. *Ecological Monographs* 62, 67–118.
- Leggett, W.C., Carscadden, J.E., 1978. Latitudinal variation in reproductive characteristics of American shad (*Alosa sapidissima*): evidence for population specific life history strategies in fish. *Journal of the Fisheries Research Board of Canada* 35, 1469–1477.

AU:7

AU:8

558 Bibliography

- Lele, S.R., Keim, J.L., 2006. Weighted distributions and estimation of resource selection probability functions. *Ecology* 87, 3021–3028.
- Lele, S.R., Moreno, M., Bayne, E., 2012. Dealing with detection error in site occupancy surveys: what can we do with a single survey?. *Journal of Plant Ecology*.
- Lele, S.R., Nadeem, K., Schmuland, B., 2010. Estimability and likelihood inference for generalized linear mixed models using data cloning. *Journal of the American Statistical Association* 105, 1617–1625.
- Leonard, J.B.K., McCormick, S.D., 1999. Effects of migration distance on whole-body and tissue-specific energy use in American shad (*Alosa sapidissima*). *Canadian Journal of Fisheries and Aquatic Sciences* 56, 1159–1171.
- Lewin-Koh, N.J., Bivand, R., contributions by Edzer J. Pebesma, Archer, E., Baddeley, A., Bibiko, H.-J., Dray, S., Forrest, D., Friendly, M., Giraudoux, P., Golicher, D., Rubio, V.G., Hausmann, P., Hufthammer, K.O., Jagger, T., Luque, S.P., MacQueen, D., Niccolai, A., Short, T., Stabler, B., Turner, R., 2011. Maptools: Tools for reading and handling spatial objects. R package version 0.8-10.
- Lichstein, J.W., Simons, T.R., Shriver, S.A., Franzreb, K.E., 2002. Spatial autocorrelation and autoregressive models in ecology. *Ecological Monographs* 72, 445–463.
- Link, W., 2003. Nonidentifiability of population size from capture-recapture data with heterogeneous detection probabilities. *Biometrics* 59, 1123–1130.
- Link, W.A., in review. A cautionary note on the discrete uniform prior for the binomial N .
- Link, W.A., Barker, R.J., 1994. Density estimation using the trapping web design: a geometric analysis. *Biometrics* 50, 733–745.
- Link, W.A., Barker, R.J., 2005. Modeling association among demographic parameters in analysis of open population capture-recapture data. *Biometrics* 61, 46–54.
- Link, W.A., Barker, R.J., 2006. Model weights and the foundations of multimodel inference. *Ecology* 87, 2626–2635.
- Link, W.A., Barker, R.J., 2010. *Bayesian Inference: With Ecological Applications*. Academic Press, London, UK.
- Link, W.A., Eaton, M.J., 2011. On thinning of chains in MCMC. *Methods in Ecology and Evolution* 3, 112–115.
- Link, W.A., Yoshizaki, J., Bailey, L.L., Pollock, K.H., 2010. Uncovering a latent multinomial: analysis of markrecapture data with misidentification. *Biometrics* 66, 178–185.
- Liu, Wu, 1999. Parameter expansion for data augmentation. *Journal of American Statistical Association* 94, 1264–1274.
- Lukacs, P.M., Burnham, K.P., 2005. Estimating population size from DNA-based closed capture-recapture data incorporating genotyping error. *Journal of Wildlife Management* 69, 396–403.
- Lunn, D., Spiegelhalter, D., Thomas, A., Best, N., 2009. The BUGS project: evolution, critique, and future directions. *Statistics in Medicine* 28, 3049–3067.
- Lunn, D.J., Thomas, A., Best, N., Spiegelhalter, D., 2000. WinBUGS-a Bayesian modelling framework: concepts, structure, and extensibility. *Statistics and Computing* 10, 325–337.

- Mace, R., Minta, S., Manley, T., Aune, K., 1994. Estimating grizzly bear population size using camera sightings. *Wildlife Society Bulletin* 22, 74–83.
- MacEachern, S.N., Berliner, L.M., 1994. Subsampling the Gibbs sampler. *American Statistician* 48, 188–190.
- MacKay, P., Smith, D.A., Long, R.A., Parker, M., Long, R.A., MacKay, P., Zielinski, W.J., Ray, J.C., 2008. Scat detection dogs. *Noninvasive survey methods for carnivores*, 183–222.
- MacKenzie, D.I., Nichols, J.D., Lachman, G.B., Droege, S., Royle, J.A., Langtimm, C.A., 2002. Estimating site occupancy rates when detection probabilities are less than one. *Ecology* 83, 2248–2255.
- MacKenzie, D.I., Nichols, J.D., Royle, J.A., Pollock, K.H., Bailey, L.L., Hines, J.E., 2006. *Occupancy Estimation and Modeling: Inferring Patterns and Dynamics of Species Occurrence*. Academic Press.
- Maffei, L., Noss, A.J., 2008. How small is too small? Camera trap survey areas and density estimates for ocelots in the Bolivian Chaco. *Biotropica* 40, 71–75.
- Magoun, A.J., Long, C.D., Schwartz, M.K., Pilgrim, K.L., Lowell, R.E., Valkenburg, P., 2011. Integrating motion-detection cameras and hair snags for wolverine identification. *Journal of Wildlife Management* 75, 731–739.
- Manel, S., Schwartz, M.K., Luikart, G., Taberlet, P., 2003. Landscape genetics: combining landscape ecology and population genetics. *Trends in Ecology and Evolution* 18, 189–197.
- Manly, B., McDonald, L., Thomas, D., McDonald, T., Erickson, W., 2002. *Resource Selection by Animals: Statistical Design and Analysis for Field Studies*, second ed. Springer.
- Marques, T., Buckland, S., Borchers, D., Tosh, D., McDonald, R., 2010. Point transect sampling along linear features. *Biometrics* 66, 1247–1255.
- Marques, T., Thomas, L., Ward, J., DiMarzio, N., Tyack, P., 2009. Estimating cetacean population density using fixed passive acoustic sensors: an example with Blainville’s beaked whales. *Journal of the Acoustical Society of America* 125, 1982.
- Marques, T.A., Thomas, L., Royle, J.A., 2011. A hierarchical model for spatial capture-recapture data: comment. *Ecology* 92, 526–528.
- Matechou, E., Morgan, B.J.T., Pledger, S., Collazo, J.A., Lyons, J.E., 2013. Integrated analysis of capture-recapture-resighting data and counts of unmarked birds at stop-over sites. *Journal of Agricultural, Biological, and Environmental Statistics*.
- Matthysen, E., 2005. Density-dependent dispersal in birds and mammals. *Ecography* 28, 403–416.
- McCarthy, M.A., 2007. *Bayesian Methods for Ecology*. Cambridge University Press, Cambridge.
- McClintock, B., Hoeting, J., 2010. Bayesian analysis of abundance for binomial sighting data with unknown number of marked individuals. *Environmental and Ecological Statistics* 17, 317–332.
- McClintock, B., King, Thomas, Matthiopoulos, McConnell, Morales, 2012. A general discrete-time modeling framework for animal movement using multi-state random walks. *Ecological Monographs* 82, 335–349.

560 Bibliography

- McClintock, B., White, G., 2012. From NOREMARK to MARK: software for estimating demographic parameters using mark-resight methodology. *Journal of Ornithology* 152, 641–650.
- McClintock, B., White, G., Antolin, M., Tripp, D., 2009a. Estimating abundance using mark-resight when sampling is with replacement or the number of marked individuals is unknown. *Biometrics* 65, 237–246.
- McClintock, B., White, G., Burnham, K., 2006. A robust design mark-resight abundance estimator allowing heterogeneity in resighting probabilities. *Journal of Agricultural, Biological, and Environmental Statistics* 11, 231–248.
- McClintock, B.T., Conn, P., Alonso, R., Crooks, K.R. in press. Integrated modeling of bilateral photo-identification data in mark-recapture analyses. *Ecology*. <http://dx.doi.org/10.1890/12-1613.1>.
- McClintock, B.T., White, G.C., 2009. A less field-intensive robust design for estimating demographic parameters with markresight data. *Ecology* 90, 313–320.
- McClintock, B.T., White, G.C., Burnham, K.P., Pryde, M.A., 2009b. A generalized mixed effects model of abundance for mark-resight data when sampling is without replacement. In: Thomson, D. (Ed.), *Modeling Demographic Processes in Marked Populations*. Springer, New York, pp. 271–289.
- McCullagh, P., Nelder, J.A., 1989. *Generalized Linear Models*. Chapman & Hall/CRC.
- McRae, B.H., Beier, P., 2007. Circuit theory predicts gene flow in plant and animal populations. *Proceedings of the National Academy of Sciences* 104, 19885–19890.
- McRae, B.H., Dickson, B.G., Keitt, T.H., Shah, V.B., 2008. Using circuit theory to model connectivity in ecology, evolution, and conservation. *Ecology* 89, 2712–2724.
- Metropolis, N., Rosenbluth, A., Rosenbluth, M., Teller, A., Teller, E., et al., 1953. Equation of state calculations by fast computing machines. *Journal of Chemical Physics* 21, 1087–1092.
- Metropolis, N., Ulam, S., 1949. The Monte Carlo method. *Journal of the American Statistical Association* 44, 335–341.
- Meyer, R.K., Nachtsheim, C.J., 1995. The coordinate-exchange algorithm for construction exact optimal experimental designs. *Technometrics* 37 (1), 60–69.
- Millar, R.B., 2009. Comparison of hierarchical Bayesian models for overdispersed count data using DIC and Bayes’ factors. *Biometrics* 65, 962–969.
- Mills, L.S., Citta, J.J., Lair, K.P., Schwartz, M.K., Tallmon, D.A., 2000. Estimating animal abundance using noninvasive DNA sampling: promise and pitfalls. *Ecological Applications* 10, 283–294.
- Minta, S., Mangel, M., 1989. A simple population estimate based on simulation for capture-recapture and capture-resight data. *Ecology* 70, 1738–1751.
- Mitchell, T.J., 1974. An algorithm for the construction of D-optimal experimental designs. *Technometrics*, 203–210.
- Mohr, C., 1947. Table of equivalent populations of North American small mammals. *American Midland Naturalist* 37, 223–249.

- Molinari-Jobin, A., Kéry, M., Marboutin, E., Marucco, F., Zimmermann, F., Molinari, P., Frick, H., Wölfl, S., Bled, F., Breitenmoser-Würsten, C., Fuxjäger, C., Huber, T., I., K., Kos, I., Manfred Wölfl, M., Breitenmoser, U., 2013. Mapping range dynamics from opportunistic data: spatio-temporal distribution modeling of lynx *Lynx lynx* L. in the Alps. *Biological Conservation*, xx, xxxx–xxxx.
- Mollet, P., Kéry, M., Gardner, B., Pasinelli, G., A, R.J., in review. Population size estimation for capercaillie (*Tetrao urogallus* L.) using DNA-based individual recognition and spatial capture-recapture models.
- Morrison, M.L., Strickland, M.D., Block, W.M., Collier, B.A., Peterson, M.J., 2008. *Wildlife Study Design*. Springer.
- Müller, W.G., 2007. *Collecting Spatial Data: Optimum Design of Experiments for Random Fields*. Springer.
- Murdoch, W.W., 1994. Population redulation in theory and practice. *Ecology* 75, 271–287.
- Neal, A., White, G., Gill, R., Reed, D., Olterman, J., 1993. Evaluation of mark-resight model assumptions for estimating mountain sheep numbers. *Journal of Wildlife Management* 57, 436–450.
- Neal, A.K. 1990. Evaluation of Mark-Resight Population Estimates using Simulations and Field Data from Mountain Sheep. MS Thesis, Colorado State University, Fort Collins, Colorado, USA.
- Neal, R., 2003. Slice sampling. *Annals of Statistics* 31, 705–741.
- Nelder, J.A., Wedderburn, R.W.M., 1972. Generalized linear models, *Journal of the Royal Statistical Society. Series A (General)* 135, 370–384.
- Nichols, J., Pollock, K., 1990. Estimation of recruitment from immigration versus in situ reproduction using Pollock’s robust design. *Ecology*, 21–26.
- Nichols, J., Thomas, L., Conn, P., 2009. Inferences about landbird abundance from count data: recent advances and future directions. *Modeling Demographic Processes in Marked Populations*, 201–235.
- Nichols, J.D., Hines, J.E., Lebreton, J.-D., Pradel, R., 2000a. Estimation of contributions to population growth: a reverse-time capture-recapture approach. *Ecology* 81 (2), 3362–3376.
- Nichols, J.D., Hines, J.E., Pollock, K.H., Hinz, R.L., Link, W.A., 1994. Estimating breeding proportions and testing hypotheses about costs of reproduction with capture-recapture data. *Ecology* 75, 2052–2065.
- Nichols, J.D., Hines, J.E., Sauer, J.R., Fallon, F.W., Fallon, J.E., Heglund, P.J., 2000b. A double-observer approach for estimating detection probability and abundance from point counts. *Auk* 117, 393–408.
- Nichols, J.D., Karanth, K.U., 2002. Statistical concepts: assessing spatial distributions. In: Karanth, K.U., Nichols, J.D., (Eds.), *Monitoring tigers and their prey: a manual for researchers, managers and conservationists in Tropical Asia*. Centre for Wildlife Studies, Bangalore, India, pp. 29–38.
- Niemi, A., Fernández, C., 2010. Bayesian spatial point process modeling of line transect data. *Journal of Agricultural, Biological, and Environmental Statistics* 15, 327–345.

[AU:9]

562 Bibliography

- Norris, J.L., Pollock, K.H., 1996. Nonparametric MLE under two closed capture-recapture models with heterogeneity. *Biometrics* 52, 639–649.
- Nowak, R.M., 1999. *Walker's Mammals of the World*, vol 1, sixth ed. John's Hopkins University Press, first printing ed, Baltimore.
- Nychka, D., Yang, Q., Royle, J.A., 1997. Constructing spatial designs for monitoring air pollution using regression subset selection. *Statistics for the Environment: Pollution Assessment and Control*, vol. 3, pp. 131–154.
- O'Brien, T., 2011. Abundance, density and relative abundance: a conceptual framework. In: O'Connell, A.F.J., Nichols, J.D., Karanth, U. (Eds.), *Camera Traps in Animal Ecology: Methods and Analyse*. Springer Verlag, Tokyo, Japan, pp. 71–96.
- O'Connell, A.F., Nichols, J.D., Karanth, U.K., 2010. *Camera Traps in Animal Ecology: Methods and Analyses*. Springer.
- O'Hara, R., Sillanpää, M., 2009. A review of Bayesian variable selection methods: what, how and which. *Bayesian Analysis* 4, 85–118.
- Otis, D.L., Burnham, K.P., White, G.C., Anderson, D.R., 1978. Statistical inference from capture data on closed animal populations. *Wildlife Monographs*, 3–135.
- Ovaskainen, O., 2004. Habitat-specific movement parameters estimated using mark-recapture data and a diffusion model. *Ecology* 85, 242–257.
- Ovaskainen, O., Rekola, H., Meyke, E., Arjas, E., 2008. Bayesian methods for analyzing movements in heterogeneous landscapes from mark-recapture data. *Ecology* 89, 542–554.
- Parmenter, R.R., MacMahon, J.A., 1989. Animal density estimation using a trapping web design: field validation experiments. *Ecology* 70, 169–179.
- Parmenter, R.R., Yates, T.L., Anderson, D.R., Burnham, K.P., Dunnum, J.L., Franklin, A.B., Friggens, M.T., Lubow, B.C., Miller, M., Olson, G.S., et al., 2003. Small-mammal density estimation: a field comparison of grid-based vs. web-based density estimators. *Ecological Monographs* 73, 1–26.
- Patterson, T., Thomas, L., Wilcox, C., Ovaskainen, O., Matthiopoulos, J., 2008. State-space models of individual animal movement. *Trends in Ecology and Evolution* 23, 87–94.
- Paviolo, A., De Angelo, C., Di Blanco, Y., Di Bitetti, M., 2008. Jaguar *Panthera onca* population decline in the Upper Paraná Atlantic Forest of Argentina and Brazil. *Oryx* 42, 554.
- Paviolo, A., Di Blanco, Y., De Angelo, C., Di Bitetti, M., 2009. Protection affects the abundance and activity patterns of pumas in the Atlantic Forest. *Journal of Mammalogy* 90, 926–934.
- Pebesma, E., Bivand, R., 2011. *Package sp*. R package version 0.9-91.
- Pledger, S., 2004. Unified maximum likelihood estimates for closed capture-recapture models using mixtures. *Biometrics* 56, 434–442.
- Pledger, S., Efford, M., Pollock, K., Collazo, J., Lyons, J., 2009. Stopover duration analysis with departure probability dependent on unknown time since arrival. *Modeling Demographic Processes in Marked populations* 3, 349–363.
- Plummer, M., 2003. JAGS: A program for analysis of Bayesian graphical models using Gibbs sampling. In: *Proceedings of the 3rd International Workshop on Distributed Statistical Computing (DSC 2003)*. March, pp. 20–22.

- Plummer, M., 2009. rjags: Bayesian graphical models using mcmc. R package version 1.0.3-12.
- Plummer, M., 2011. rjags: Bayesian graphical models using mcmc. R package version 3-5.
- Plummer, M., Best, N., Cowles, K., Vines, K., 2006. CODA: convergence diagnosis and output analysis for MCMC. R News 6, 7–11.
- Pollock, K.H., 1982. A capture-recapture design robust to unequal probability of capture. *Journal of Wildlife Management* 46, 752–757.
- Pollock, K.H., Nichols, J.D., Brownie, C., Hines, J.E. 1990. Statistical inference for capture-recapture experiments. *Wildlife Monographs*, 3–97.
- Porneluzi, P.A., Faaborg, J., 1999. Season long fecundity, survival, and viability of Ovenbirds in fragmented and unfragmented landscapes. *Conservation Biology* 13, 1151–1161.
- Pradel, R., 1996. Utilization of capture-mark-recapture for the study of recruitment and population growth rate. *Biometrics* 52, 703–709.
- Pradel, R., Hines, J.E., Lebreton, J.D., Nichols, J.D., 1997. Capture-Recapture Survival Models Taking Account of Transients. *Biometrics* 53, 60–72.
- Raabe, J. 2012. Factors Influencing Distribution and Survival of Migratory Fishes following Multiple Low-Head Dam Removals on a North Carolina River. Ph.D dissertation. Ph.D Thesis, North Carolina State University, Raleigh, NC.
- Rathbun, S., 1996. Estimation of Poisson intensity using partially observed concomitant variables. *Biometrics* 52, 226–242.
- Rathbun, S., Cressie, N., 1994. A space-time survival point process for a longleaf pine forest in southern Georgia. *Journal of the American Statistical Association* 89, 1164–1174.
- Rathbun, S., Shiffman, S., Gwaltney, C., 2007. Modelling the effects of partially observed covariates on Poisson process intensity. *Biometrika* 94, 153–165.
- Reich, B.J., Gardner, B., Wilting, A., 2012. A spatial capture-recapture model for territorial species. *Biometrics in review*, xx, xx–xxx.
- Robert, C.P., Casella, G., 2004. *Monte Carlo Statistical Methods*, Springer, New York, USA.
- Robert, C.P., Casella, G., 2010. *Introducing Monte Carlo Methods with R*, Springer, New York, USA.
- Roberts, G.O., Rosenthal, J.S., 1998. Optimal scaling of discrete approximations to Langevin diffusions. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)* 60, 255–268.
- Rowcliffe, J., Carbone, C., Jansen, P.A., Kays, R., Kranstauber, B., 2011. Quantifying the sensitivity of camera traps: an adapted distance sampling approach. *Methods in Ecology and Evolution* 2, 464–476.
- Rowcliffe, J.M., Field, J., Turvey, S.T., Carbone, C., 2008. Estimating animal density using camera traps without the need for individual recognition. *Journal of Applied Ecology* 45, 1228–1236.
- Royle, J., Kéry, M., Guélat, J., 2011a. Spatial capture-recapture models for search-encounter data. *Methods in Ecology and Evolution* 2, 602–611.

564 Bibliography

- Royle, J.A., 2004a. Generalized estimators of avian abundance from count survey data. *Animal Biodiversity and Conservation* 27, 375–386.
- Royle, J.A., 2004b. N-mixture models for estimating population size from spatially replicated counts. *Biometrics* 60, 108–115.
- Royle, J.A., 2006. Site occupancy models with heterogeneous detection probabilities. *Biometrics* 62, 97–102.
- Royle, J.A., 2008. Modeling individual effects in the Cormack-Jolly-Seber model: a state-space formulation. *Biometrics* 64, 364–370.
- Royle, J.A., 2009a. Analysis of capture-recapture models with individual covariates using data augmentation. *Biometrics* 65, 267–274.
- Royle, J.A., 2009b. Analysis of capture-recapture models with individual covariates using data augmentation. *Biometrics* 65, 267–274.
- Royle, J.A., Chandler, R.B., 2012. Integrating Resource Selection Information with Spatial Capture-Recapture. *arXiv*, preprint *arXiv:1207.3288*.
- Royle, J.A., Chandler, R.B., Gazenski, K.D., Graves, T.A. 2013. Spatial capture-recapture for jointly estimating population density and landscape connectivity. *Ecology*.
- Royle, J.A., Chandler, R.B., Sun, C., Fuller, A. 2012a. Integrating Resource Selection Information with Spatial Capture-Recapture. *needs updated MEE*.
- Royle, J.A., Chandler, R.B., Yackulic, C., Nichols, J.D., 2012b. Likelihood analysis of species occurrence probability from presence-only data for modelling species distributions. *Methods in Ecology and Evolution* 3, 545–554.
- Royle, J.A., Converse, S.J. in review. Hierarchical spatial capture-recapture models: Modeling population density from replicated capture-recapture experiments. *Ecology*.
- Royle, J.A., Converse, S.J., Link, W.A., 2012c. Data Augmentation for Hierarchical Capture-recapture Models. *arXiv*, preprint *arXiv:1211.5706*.
- Royle, J.A., Dawson, D.K., Bates, S., 2004. Modeling abundance effects in distance sampling. *Ecology* 85, 1591–1597.
- Royle, J.A., Dorazio, R.M., 2006. Hierarchical models of animal abundance and occurrence. *Journal of Agricultural, Biological, and Environmental Statistics* 11, 249–263.
- Royle, J.A., Dorazio, R.M., 2008. *Hierarchical Modeling and Inference in Ecology: the Analysis of Data from Populations, Metapopulations and Communities*. Academic Press.
- Royle, J.A., Dorazio, R.M., 2012. Parameter-expanded data augmentation for Bayesian analysis of capture-recapture models. *Journal of Ornithology* 152, S521–S537.
- Royle, J.A., Dorazio, R.M., Link, W.A., 2007. Analysis of multinomial models with unknown index using data augmentation. *Journal of Computational and Graphical Statistics* 16, 67–85.
- Royle, J.A., Dubovsky, J.A., 2001. Modeling spatial variation in waterfowl band-recovery data. *Journal of Wildlife Management* 65, 726–737.

- Royle, J.A., Gardner, B., 2011. Hierarchical models for estimating density from trapping arrays. In: O'Connell, A.F.J., Nichols, J.D., Karanth, U., (Eds.), *Camera Traps in Animal Ecology: Methods and Analyses*. Springer Verlag, Tokyo, Japan, pp. 163–190.
- Royle, J.A., Karanth, K.U., Gopalaswamy, A.M., Kumar, N.S., 2009a. Bayesian inference in camera trapping studies for a class of spatial capture-recapture models. *Ecology* 90, 3233–3244.
- Royle, J.A., Kéry, M., 2007. A Bayesian state-space formulation of dynamic occupancy models. *Ecology* 88, 1813–1823.
- Royle, J.A., Link, W.A., 2006. Generalized site occupancy models allowing for false positive and false negative errors. *Ecology* 87, 835–841.
- Royle, J.A., Magoun, A.J., Gardner, B., Valkenburg, P., Lowell, R.E., 2011b. Density estimation in a wolverine population using spatial capture-recapture models. *Journal of Wildlife Management* 75, 604–611.
- Royle, J.A., Nichols, J.D., 2003. Estimating abundance from repeated presence-absence data or point counts. *Ecology* 84, 777–790.
- Royle, J.A., Nichols, J.D., Karanth, K.U., Gopalaswamy, A.M., 2009b. A hierarchical model for estimating density in camera-trap studies. *Journal of Applied Ecology* 46, 118–127.
- Royle, J.A., Nychka, D., 1998. An algorithm for the construction of spatial coverage designs with implementation in SPLUS. *Computers and Geosciences* 24, 479–488.
- Royle, J.A., Young, K.V., 2008. A hierarchical model for spatial capture-recapture data. *Ecology* 89, 2281–2289.
- Russell, R.E., Royle, J.A., Desimone, R., Schwartz, M.K., Edwards, V.L., Pilgrim, K.P., McKelvey, K.S., 2012. Estimating abundance of mountain lions from unstructured spatial samples. *Journal of Wildlife Management*.
- Rutledge, M., 2013. Impacts of resident Canada geese in a suburban environment, PhD Thesis. North Carolina State University.
- Sacks, J., Welch, W.J., Mitchell, T.P., Wynn, H., 1989. Design and analysis of computer experiments. *Statistical Science* 4, 409–435.
- Sæther, B.-E., Bakke, 2000. Avian life history variation and contribution of demographic traits to the population growth rate. *Ecology* 81, 642–653.
- Sæther, B.E., Engen, S., Matthysen, E., 2002. Demographic characteristics and population dynamical patterns of solitary birds. *Science* 295, 2070–2073.
- Saïd, S., Servanty, S., 2005. The influence of landscape structure on female roe deer home-range size. *Landscape Ecology* 20, 1003–1012.
- Salom-Pérez, R., Carrillo, E., Sáenz, J., Mora, J., 2007. Critical condition of the jaguar *Panthera onca* population in Corcovado National Park. *Costa Rica, Oryx* 41, 51.
- Sanathanan, L., 1972. Estimating the size of a multinomial population. *Annals of Mathematical Statistics* 43, 142–152.
- Sauer, J.R., Link, W.A., 2002. Hierarchical modeling of population stability and species group attributes from survey data. *Ecology* 83, 1743–1751.

566 Bibliography

- Schofield, M., Barker, R., 2008. A unified capture-recapture framework. *Journal of Agricultural, Biological, and Environmental Statistics* 13, 458–477.
- Schwartz, M.K., Copeland, J.P., Anderson, N.J., Squires, J.R., Inman, R.M., McKelvey, K.S., Pilgrim, K.L., Waits, L.P., Cushman, S.A., 2009. Wolverine gene flow across a narrow climatic niche. *Ecology* 90, 3222–3232.
- Schwartz, M.K., Monfort, S.L., 2008. *Genetic and Endocrine Tools for Carnivore Surveys*. Island Press Washington, DC, USA.
- Schwarz, C.J., Arnason, A.N., 1996. A general methodology for the analysis of Capture-recapture experiments in open populations. *Biometrics* 52, 860–873.
- Schwarz, C.J., Arnason, A.N., 2005. Jolly-Seber models in MARK. In: Cooch, E.G., White, G. (Eds.), *Program MARK: A Gentle Introduction*, fifth ed.
- Schwarz, C.J., Bailey, R.E., Irvine, J.R., Dalziel, F.C., 1993. Estimating salmon spawning escapement using capture-recapture methods. *Canadian Journal of Fisheries and Aquatic Sciences* 50, 1181–1191.
- Seber, G.A.F., 1965. A note on the multiple-recapture census. *Biometrika* 52, 249–259.
- Seber, G.A.F., 1982. *The Estimation of Animal Abundance and Related Parameters*. Macmillan Publishing Company.
- Sepúlveda, M.A., Bartheld, J.L., Monsalve, R., Gómez, V., Medina-Vogel, G., 2007. Habitat use and spatial behaviour of the endangered Southern river otter (*Lontra provocax*) in riparian habitats of Chile: conservation implications. *Biological Conservation* 140, 329–338.
- Shirk, A.J., Wallin, D.O., Cushman, S.A., Rice, C.G., Warheit, K.I., 2010. Inferring landscape effects on gene flow: a new model selection framework. *Molecular Ecology* 19, 3603–3619.
- Sillett, S., Chandler, R.B., Royle, J.A., Kéry, M., Morrison, S., 2012. Hierarchical distance sampling models to estimate population size and habitat-specific abundance of an island endemic. *Ecological Applications*.
- Sillett, T., Rodenhouse, N., Holmes, R., 2004. Experimentally reducing neighbor density affects reproduction and behavior of a migratory songbird. *Ecology* 85, 2467–2477.
- Skalski, J.R., Millspaugh, J.J., Spencer, R.D., 2005. Population estimation and biases in paintball, mark-resight surveys of elk. *Journal of Wildlife Management* 69, 1043–1052.
- Skaug, H.J., Schweder, T., 1999. Hazard models for line transect surveys with independent observers. *Biometrics* 55, 29–36.
- Sklyar, O., Murdoch, D., Smith, M., Eddelbuettel, D., François, R., 2010. *Inline C, C++ Fortran function calls from R*. R package version 0.3.8.
- Smith, D., Smith, M.S., 2006. Estimation of binary Markov random Fields using Markov chain Monte Carlo. *Journal of Computational and Graphical Statistics* 15, 1–21.
- Smith, M.H., Blessing, R., Chelton, J.G., Gentry, J.B., Golley, F.B., McGinnis, J.T., 1971. Determining density for small mammal populations using a grid and assessment lines. *Acta Theriologica* 16, 105–125.

- Soisalo, M.K., Cavalcanti, S.M.C., 2006. Close-up space in radio-telemetry. *Biological Conservation* 129, 487–496.
- Sollmann, R., Furtado, M.M., Gardner, B., Hofer, H., Jacomo, A.T.A., Trres, N.M., Silveira, L., 2011. Improving density estimates for elusive carnivores: accounting for sex-specific detection and movements using spatial capture-recapture models for jaguars in central Brazil. *Biological Conservation* 144, 1017–1024.
- Sollmann, R., Gardner, B., Belant, J.L., 2012. How does spatial study design influence density estimates from spatial capture-recapture models? *PLoS One* 7, e34575.
- Sollmann, R., Gardner, B., Chandler, R.B., Shindle, D., Onorato, D.P., Royle, J.A., O’Connell, A.F., in revision. Using multiple data sources provides density estimates for endangered Florida panther. *Journal of Applied Ecology*.
- Sollmann, R., Gardner, B., Parsons, A., Stocking, J., McClintock, B., Simons, T., Pollock, K., O’Connell, A., 2013a. A spatial mark-resight model augmented with telemetry data. *Ecology*.
- Sollmann, R., Mohamed, A., Samejima, H., Wilting, A., 2013b. Risky business or simple solution-Relative abundance indices from camera-trapping. *Biological Conservation* 159, 405–412.
- Sólymos, P., Lele, S., Bayne, E., 2012. Conditional likelihood approach for analyzing single visit abundance survey data in the presence of zero inflation and detection error. *Environmetrics* 23, 197–205.
- Spiegelhalter, D., Best, N., Carlin, B., Van Der Linde, A., 2002. Bayesian measures of model complexity and fit. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)* 64, 583–639.
- Stabler, B., 2006. Shapefiles: read and write ESRI shapefiles. R package version 0.6.
- Stanley, T., Burnham, K., 1999. A closure test for time-specific capture-recapture data. *Environmental and Ecological Statistics* 6, 197–209.
- Stanley, T., Richards, J., 2013. Software review: a program for testing capture-recapture data for closure. *Wildlife Society Bulletin* 33, 782–785.
- Stevens, Jr. D., Olsen, A., 2004. Spatially balanced sampling of natural resources. *Journal of the American Statistical Association* 99, 262–278.
- Stevick, P.T., Palsbøll, P.J., Smith, T.D., Bravington, M.V., Hammond, P.S., 2001. Errors in identification using natural markings: rates, sources, and effects on capture-recapture estimates of abundance. *Canadian Journal of Fisheries and Aquatic Sciences* 58, 1861–1870.
- Stoyan, D., Penttinen, A., 2000. Recent applications of point process methods in forestry statistics. *Statistical Science* 15, 61–78.
- Strauss, D., 1975. A model for clustering. *Biometrika* 63, 467–475.
- Sturtz, S., Ligges, U., Gelman, A., 2005. R2WinBUGS: A package for running WinBUGS from R. *Journal of Statistical Software* 12, 1–16.
- Su, Y.-S., Yajima, M., 2011. R2jags: A Package for running jags from R. R package version 0.02-17.
- Sun, C.C., in press. Population Estimation, Genetic Diversity, and Structure of Black bears in Southwestern New York, Master’s Thesis. Cornell University.
- Taberlet, P., Bouvet, J., 1992. Bear conservation genetics. *Nature* 358, 197–197.

568 Bibliography

- Takemura, A., 1999. Some superpopulation models for estimating the number of population uniques. In: *Proceedings of the International Conference on Statistical Data Protection SDP*. Citeseer 98, 45–58.
- Tanner, M.A., Wong, W.H., 1987. The calculation of posterior distributions by data augmentation. *Journal of the American Statistical Association* 82, 528–540.
- Thomas, A., O'Hara, B., Ligges, U., Sturtz, S., 2006. Making BUGS Open. *R News* 6, 12–17.
- Thompson, C., Royle, J.A., Garner, J., 2012. A framework for inference about carnivore density from unstructured spatial sampling of scat using detector dogs. *Journal of Wildlife Management* 76, 863–871.
- Thompson, S.K., 2002. *Sampling*. Wiley, New York.
- Tierney, L., Rossini, A.J., Li, N., Sevcikova, H., 2011. Snow: Simple Network of Workstations. R package version 0.3.7.
- Tilman, D., Kareiva, P., 1997. *Spatial Ecology: the Role of Space in Population Dynamics and Interspecific Interactions*, vol. 30. Princeton University Press.
- Tischendorf, L., Fahrig, L., 2000. On the usage and measurement of landscape connectivity. *Oikos* 90, 7–19.
- Tischendorf, L., Grez, A., Zaviero, T., Fahrig, L., 2005. Mechanisms affecting population density in fragmented habitat. *Ecology and Society* 10, 7.
- Tobler, M., Carrillo-Percastegui, S., Leite Pitman, R., Mares, R., Powell, G., 2008. An evaluation of camera traps for inventorying large-and medium-sized terrestrial rainforest mammals. *Animal Conservation* 11, 169–178.
- Tobler, M.W., Hibert, F., Debeir, L., Hansen, C., 2012. Density and sustainable harvest estimates for the lowland tapir in the Amazon of French Guiana using a spatial capture-recapture model.
- Tracy, J.A. 2006., Individual-based movement modeling as a tool for conserving connectivity. In: Crooks, K., Sanjayan, M., (Eds.), *Connectivity Conservation*. Cambridge University Press, pp. 343–368.
- Trolle, M., Kéry, M., 2003. Estimation of ocelot density in the Pantanal using capture-recapture analysis of camera-trapping data. *Journal of Mammalogy* 84, 607–614.
- Trolle, M., Kéry, M., 2005. Camera-trap study of ocelot and other secretive mammals in the northern Pantanal. *Mammalia* 69, 409–416.
- Tufto, J., Andersen, R., Linnell, J., 1996. Habitat use and ecological correlates of home range size in a small cervid: the roe deer. *Journal of Animal Ecology* 65, 715–724.
- Tyre, A.J., Tenhumberg, B., Field, S.A., Niejalke, D., Parris, K., Possingham, H.P., 2003. Improving precision and reducing bias in biological surveys: estimating false-negative error rates. *Ecological Applications* 13, 1790–1801.
- Valiere, N., Taberlet, P., 2000. Urine collected in the field as a source of DNA for species and individual identification. *Molecular Ecology* 9, 2150–2152.
- van Etten, J. 2011. Package gdistance. R package version 1.1-2.
- Venables, W., Ripley, B. 2002. *Modern Applied Statistics with S*, Springer Verlag.
- Venables, W., Smith, D., Team, R.D.C., 2012. *An Introduction to R*.

- Ver Hoef, J., Boveng, P., 2007. Quasi-poisson vs. negative binomial regression: How should we model overdispersed count data? *Ecology* 88, 2766–2772.
- Ver Hoef, J.M., 2012. Who Invented the Delta Method? *American Statistician* 66, 124–127.
- Wallace, R.B., Gomez, H., Ayala, G., Espinoza, F., 2003. Camera trapping for jaguar (*Panthera onca*) in the Tuichi Valley, Bolivia. *Journal of Neotropical Mammalogy* 10, 133–139.
- Wegan, M., Curtis, P., Rainbolt, R., Gardner, B., 2012. Temporal sampling frame selection in DNA-based capture mark-recapture investigations. *Ursus* 23, 42–51.
- Wegan, M.T. 2008. Aversive conditioning, population estimation, and habitat preference of black bears (*Ursus Americanus*) on fort drum military installation in Northern New York. PhD Thesis. Cornell University, January.
- Wegge, P., Pokheral, C.P., Jnawali, S.R., 2004. Effects of trapping effort and trap shyness on estimates of tiger abundance from camera trap studies. *Animal Conservation* 7, 251–256.
- White, G., 1996. NOREMARK: population estimation from mark-resighting surveys. *Wildlife Society Bulletin* 24, 50–52.
- White, G., Bennetts, R., 1996. Analysis of frequency count data using the negative binomial distribution. *Ecology* 77, 2549–2557.
- White, G., Shenk, M. 2001. Population estimation with radio-marked individuals. In: Millspaugh, J., Marzluff, J., (Eds.), *Radio Tracking and animal populations*. Academic Press, San Diego, USA, pp. 329–350.
- White, G.C., Anderson, D.R., Burnham, K.P., Otis, D., 1982. *Capture-Recapture and Removal Methods for Sampling Closed Populations*. Los Alamos National Laboratory, Los Alamos.
- White, G.C., Garrot, R., 1990. *Analysis of Wildlife Radiolocation Data*, Academic Press, New York, USA.
- White, G.C., Shenk, T.M., 2000. *Population Estimation with Radio-Marked Animals*. Academic Press, San Diego, California.
- Whitman, J., Ballard, W., Gardner, C. 1986. Home range and habitat use by wolverines in southcentral Alaska. *Journal of Wildlife Management*, 460–463.
- Wickham, Hadley, 2007. Reshaping data with the reshape package. *Journal of Statistical Software*, 21.
- Wikle, C.K., 2010. Hierarchical Modeling with spatial data. In: Gelfand, A., Diggle, P., Fuentes, M., Guttorp, P., (Eds.), *Handbook of Spatial Statistics*. Chapman and Hall, pp. 89–106.
- Williams, B.K., Nichols, J.D., Conroy, M.J., 2002. *Analysis and Management of Animal Populations: Modeling, Estimation, and Decision Making*. Academic Press.
- Wilson, K.R., Anderson, D.R., 1985a. Evaluation of a density estimator based on a trapping web and distance sampling theory. *Ecology* 66, 1185–1194.
- Wilson, K.R., Anderson, D.R., 1985b. Evaluation of two density estimators of small mammal population size. *Journal of Mammalogy* 66, 13–21.
- With, K., Crist, T., 1995. Critical thresholds in species' responses to landscape structure. *Ecology* 76, 2446–2459.

570 Bibliography

- Wolpert, R.L., Ickstadt, K., 1998. Poisson/gamma random field models for spatial statistics. *Biometrika* 85, 251–267.
- Woods, J.G., Paetkau, D., Lewis, D., McLellan, B.N., Proctor, M., Strobeck, C., 1999. Genetic tagging of free-ranging black and brown bears. *Wildlife Society Bulletin* 27, 616–627.
- Wright, J., Barker, R., Schofield, M., Frantz, A., Byrom, A., Gleeson, D., 2009. Incorporating genotype uncertainty into mark-recapture-type models for estimating abundance using DNA samples. *Biometrics* 65, 833–840.
- Wynn, H.P., 1970. The sequential generation of D-optimum experimental designs. *Annals of Mathematical Statistics* 41, 1655–1664.
- Yang, H.C., Chao, A., 2005. Modeling animals' behavioral response by Markov Chain models for capture-recapture experiments. *Biometrics* 61, 1010–1017.
- Yoshizaki, J., Pollock, K.H., Brownie, C., Webster, R.A., 2009. Modeling misidentification errors in capture-recapture studies using photographic identification of evolving marks. *Ecology* 90, 3–9.
- Zeller, K., McGarigal, K., Whiteley, A., 2012. Estimating landscape resistance to movement: a review. *Landscape Ecology* 27, 777–797.
- Zuur, A.F., Ieno, E.N., Walker, N.J., Saveliev, A.A., Smith, G.M., 2009. *Mixed Effects Models and Extensions in Ecology with R*. Springer Verlag.
- Zylstra, E., Steidl, R., Swann, D., 2010. Evaluating survey methods for monitoring a rare vertebrate, the Sonoran desert tortoise. *Journal of Wildlife Management* 74, 1311–1318.