

Publication list of François Rousset as of October 13, 2016

Refereed publications in international journals

- Rousset, F., Gouy, A., Martinez-Almoyna, C., Courtiol, A. (in press) The summary likelihood method and its implementation in the Infusion package. *Mol. Ecol. Resources*. in press.
- Taschen E., Rousset, F., Sauve M., Benoit L., Dubois M.-P., Richard F., Selosse M.-A (in press) [How the truffle got its mate: insights from genetic structure in spontaneous and planted Mediterranean populations of *Tuber melanosporum*](#). *Mol. Ecol.* in press.
- Merle, C., Leblois, R., Rousset, F., Pudlo, P. (in press) [Resampling: an improvement of importance sampling in varying population size models](#). *Theor. Pop. Biol.* in press.
- Aguilée, R., Raoul, G., Rousset, F., Ronce, O. (2016) [Pollen dispersal slows geographical range shift and accelerates ecological niche shift under climate change](#). *Proc. Natl. Acad. Sci. USA* 113: E5741–E5748.
- Courtiol, A., Étienne, L., Feron, R., Godelle, B., Rousset, F. (2016) [The evolution of mutual mate choice under direct benefits](#). *Am. Nat.* in press.
- Rousset, F. (2015) [Regression, least squares, and the general version of inclusive fitness](#). *Evolution* 63: 2963–2970.
- Azzag, K., Chelin, Y., Rousset, F., le Goff, É., Martinand-Mari, C., Martinez, A.-M., Maurin, B., Daujat-Chavanieu, M., Averseng, J., Mangeat, P., Baghdigian, S. (2015) [The non-proliferative nature of Ascidian folliculogenesis as a model of highly ordered cellular topology distinct from proliferative epithelia](#). *PLoS ONE* 10: e0126341.
- Morlais, I., Nsango, S., Toussile, W., Abate, L., Annan, Z., Tchioffo, M.T., Co-huet, A., Awono-Ambene, P.H., Fontenille, D., Rousset, F., Berry, A. (2015) [Plasmodium falciparum mating patterns and mosquito infectivity of natural isolates of gametocytes](#). *PLoS ONE* 10: e0123777.
- Atyame, C.M., Labbé, P., Rousset, F., Beji, M., Makoundou, P., Duron, O., Dumas, É., Pasteur, N., Bouattour, A., Fort, P., and Weill, M. (2015) [Stable coexistence of incompatible *Wolbachia* along a narrow contact zone in mosquito field populations](#). *Mol. Ecol.* 24: 508–521.
- Rousset, F., Kirkpatrick, M., Guerrero, R.F. (2014) [Matrix inversions for chromosomal inversions: a method to construct summary statistics in complex coalescent models](#). *Theor. Pop. Biol.* 97: 1–10.
- Leblois, R., Pudlo, P., Néron, J., Bertaux, F., Beeravolu, C.R., Vitalis, R., Rousset, F. (2014) [Maximum likelihood inference of population size contractions from microsatellite data](#). *Mol. Biol. Evol.* 31: 2805–2823.

- Étienne, L., Rousset, F., Godelle, B., Courtiol, A. (2014) [How choosy should I be? The relative searching time predicts evolution of choosiness under direct sexual selection](#) *Proc. Roy. Soc. B* 281: 20140190.
- Lehmann, L., Rousset, F. (2014) [The genetical theory of social behaviour](#). *Phil. Trans. Roy. Soc. B* 369: 20130357.
- Rousset, F., Ferdy, J.-B. (2014) [Testing environmental and genetic effects in the presence of spatial autocorrelation](#). *Ecography* 37: 781–790.
- Lehmann, L., Rousset, F. (2014) [Fitness, inclusive fitness, and optimization](#). *Biology & Philosophy* 29: 181-195.
- Rousset, F. (2013) [Exegeses on maximum genetic differentiation](#). *Genetics* 194: 557-559.
- Vitalis, R., Rousset, F., Kobayashi, Y., Olivieri, I., Gandon, S. (2013) [The joint evolution of dispersal and dormancy in a metapopulation with local extinctions and kin competition](#). *Evolution* 67: 1676–1691.
- Thomas, F., Fisher, D., Fort, P., Marie, J.-P., Daoust, S., Roche, B., Grunau, C., Cosseau, C., Mitta, G., Baghdiguian, S., Rousset, F., Lassus, P., Assenat, É., Grégoire, D., Missé, D., Lorz, A., Billy, F., Vainchenker, W., Delhommeau, F., Koscielny, S., Itzykson, R., Tang, R., Fava, F., Ballesta, A., Lepoutre, T., Krasinska, L., Dulic, V., Raynaud, P., Blache, P., Quittau-Prevostel, C., Vignal, E., Trauchessec, H., Perthame, B., Clairambault, J., Volpert, V., Solary, É., Hibner, U., and Hochberg, M. E. (2013) [Applying ecological and evolutionary theory to cancer: a long and winding road](#). *Evolutionary Applications* 6: 1–10.
- Guillot, G., Rousset, F. (2013) [Dismantling the Mantel tests](#). *Methods in Ecology and Evolution* 4: 336–344.
- Venables, J.P., Brosseau, J.-P., Gadea, G., Klinck, R., Prinos, P., Beaulieu, J.-F., Lapointe, E., Durand, M., Thibault, P., Tremblay, K., Rousset, F., Tazi, J., Abou Elela, S., Chabot, B. (2013) [RBFOX2 is an important regulator of mesenchymal-specific splicing in both normal and cancer tissues](#). *Molecular and Cellular Biology* 33: 396–405.
- Aguilée, R., Shaw, F.H., Rousset, F., Shaw, R.G., Ronce, O. (2013) [How does pollen versus seed dispersal affect niche evolution?](#) *Evolution* 67: 792–805.
- Rousset, F., Leblois R. (2012) [Likelihood-based inferences under isolation by distance: two-dimensional habitats and confidence intervals](#). *Mol. Biol. Evol.* 29: 957-973.
- Guerrero, R., Rousset, F., Kirkpatrick, M. (2012) [Coalescent patterns for chromosomal inversions in divergent populations](#) *Phil. Trans. Roy. Soc. London* 367: 430-438.
- Lehmann, L., Rousset, F. (2012) [The evolution of social discounting in hierarchically clustered populations](#). *Mol. Ecol.* 21: 447-471.

- Selosse, M.-A., Rousset, F. (2011) [The plant-fungal marketplace](#). *Science* 333: 828–829.
- Fellous, S., Duron, O., Rousset, F. (2011) [Adaptation due to symbionts and conflicts between heritable agents of biological information](#). *Nature Rev. Genetics* 12: 633.
- Rousset, F., Lion, S. (2011) [Much ado about nothing: Nowak et al.'s charge against inclusive fitness theory](#). *J. Evol. Biol* 24: 1386–1392.
- Rieux, A., Halkett, F., De Lapeyre De Bellaire, L., Zapater, M.F., Rousset, F., Ravigné, V., Carlier, J. (2011) [Inferences on pathogenic fungus population structures from microsatellite data: new insights from spatial genetics approaches](#). *Mol. Ecol.* 20: 1661–1674.
- Abbot et al. (137 co-authors, alphabetical order) (2011) [Inclusive fitness theory and eusociality](#) *Nature* 471: E1–E4.
- Harris, C., Rousset, F., Morlais, I., Fontenille, D., Cohuet, A. (2010) [Low linkage disequilibrium in wild *Anopheles gambiae* s.l. populations](#). *BMC Genetics* 11: 81.
- Harris, C., Lambrechts, L., Rousset, F., Abate, L., Nsango, S.E., Fontenille, D., Morlais, I., Cohuet, A. (2010) [Polymorphisms in *Anopheles gambiae* immune genes associated with natural resistance to *Plasmodium falciparum*](#). *PLoS Pathogens* 9: e1001112.
- Lehmann, L. Rousset, F. (2010) [How life-history and demography promote or inhibit the evolution of helping behaviors](#). *Phil. Trans. Roy. Soc. London* 365: 2599–2617
- Ruimy, R., Angebault, C., Djossou, F., Dupont, C., Epelboin, L., Jarraud, S., Armand-Lefevre, L., Bes, M., Lixandru, B.E., Bertine, M., El Miniai A., Renard, M., Bettinger, R.M., Lescat, M., Clermont, O., Peroz, G., Lina, G., Tavakol, M., Vandenesch, F., van Belkum, A., Rousset, F., Andremont, A. (2010) [Are host genetics the predominant determinant of persistent nasal *Staphylococcus aureus* carriage in humans?](#) *J. Inf. Dis.* 202: 924–934.
- Woerther, P.-L., Angebault C., Lescat M., Ruppé E., Skurnik D., El Mniai A., Clermont O., Jacquier H., Renard M., Bettinger R.M., Epelboin L., Dupont C., Guillemot D., Rousset, F., Arlet G., Denamur E., Djossou F., Andremont A. (2010) [Emergence and dissemination of Extended Spectrum \$\beta\$ -Lactamase-Producing *Escherichia coli* in the community: lessons from the study of a model population](#). *J. Inf. Dis.* 202: 515–523.
- Verdu, P., Leblois, R., Froment, A., Théry, S., Bahuchet, S., Rousset, F., Heyer, E., Vitalis, R. (2010) [Limited dispersal in mobile hunter-gatherer Baka Pygmies](#). *Biol. Letters* 6: 858–861.
- Beaumont, M.A., Nielsen, R., Robert, C., Hey, J., Gaggiotti, O., Knowles, L., Estoup, A., Panchal, M., Corander, J., Hickerson, M., Sisson, S.A., Fagundes, N., Chikhi, L., Beerli, P., Vitalis, R., Cornuet, J.-M., Huelsenbeck, J., Foll,

- M., Yang, Z., Rousset, F., Balding, D., Excoffier, L. (2010) [In defence of model-based inference in phylogeography](#). *Mol. Ecol.* 19: 436–446.
- Prugnolle, F., Durand, P., Renaud, F., Rousset, F. (2010) [Effective size of the hierarchically structured populations of the agent of malaria: a coalescent-based model](#). *Heredity* 104: 371–377.
- Robledo-Arnuncio, J.J., Rousset, F. (2010) [Isolation by distance in a continuous population under stochastic demographic fluctuations](#). *J. Evol. Biol.* 23: 53–71.
- Lopez, S., Rousset, F., Shaw, F.H., Shaw, R.G., Ronce, O. (2009) [Joint effects of inbreeding and local adaptation on the evolution of genetic load after fragmentation](#). *Conservation Biology* 23: 1618–1627.
- Lehmann, L., Feldman, M.W., Rousset, F. (2009) [On the evolution of harming and recognition in finite panmictic and infinite structured populations](#). *Evolution* 63: 2896–2913.
- Ronce, O., Shaw, F.H., Rousset, F., Shaw, R.G. (2009) [Is inbreeding depression lower in maladapted populations? A quantitative genetics model](#). *Evolution* 63: 1807–1819.
- Lehmann, L., Rousset, F. (2009) [Perturbation expansions of multilocus fixation probabilities for frequency-dependent selection with applications to the Hill-Robertson effect and to the joint evolution of helping and punishment](#). *Theor. Pop. Biol.* 76: 35–51.
- Roze, D., Rousset, F. (2009) [Strong effects of heterosis on the evolution of dispersal rates](#). *J. Evol. Biol.* 22: 1221–1233.
- Lenormand, T., Roze, D., Rousset, F. (2009) [Stochasticity in evolution](#). *Tr. Ecol. Evol.* 24: 157–165.
- Leblois, R., Estoup, A., Rousset, F. (2009) [IBDSim: a computer program to simulate genotypic data under isolation by distance](#). *Mol. Ecol. Resources* 9: 107–109.
- Martinand-Mari, C., Maury, B., Rousset, F., Sahuquet, A., Mennessier, G., Rochal, S., Lorman, V., Mangeat, P., Baghdigui, S. (2009) [Topological control of life and death in non-proliferative epithelia](#). *PLoS One* 4: e4202.
- Saccheri, I., Rousset, F., Watts, P., Brakefield, P., Cook, L. (2008) [Selection and gene flow on a diminishing cline of melanic peppered moths](#). *Proc. Natl. Acad. Sci. USA* 105: 16212–16217.
- Roze D., Rousset, F. (2008) [Multilocus models in the infinite island model of population structure](#). *Theor. Pop. Biol.* 73: 529–542.
- Prugnolle F., Durand P., Koella J., Razakandrainibe F., Arnathau C., Villarreal D., Rousset, F., de Meeûs T., Renaud F. (2008) [A comparison of *Anopheles gambiae* and *Plasmodium falciparum* genetic structure over space and time](#). *Microbes and Infection* 10: 269–275.
- Rousset, F. (2008) [Demystifying Moran's I](#). *Heredity* 100: 231–232.

- Rousset, F. (2008) [Genepop'007: a complete reimplementation of the Genepop software for Windows and Linux](#). *Mol. Ecol. Resources* 8: 103-106.
- Lopez, S., Rousset, F., Shaw, F., Shaw, R., Ronce, O. (2008) [Migration load in a self-compatible plant: role of pollen and seed dispersal in heterogeneous landscapes](#). *J. Evol. Biol.* 21: 394-309.
- Rousset, F., Leblois, R. (2007) [Likelihood and approximate likelihood analyses of genetic structure in a linear habitat: performance and robustness to model mis-specification](#). *Mol. Biol. Evol.* 24: 2730-2745.
- Rousset, F., Roze, D. (2007) [Constraints on the origin and maintenance of genetic kin recognition](#). *Evolution* 61: 2320–2330.
- Lehmann, L., Rousset, F., Roze, D., Keller, L. (2007) [Strong-reciprocity or strong-ferocity? A population genetic view of the evolution of altruistic punishment](#). *Am. Nat.* 170: 21-36.
- Watts, P.C., Rousset, F., Saccheri, I.J., Leblois, R., Kemp, S.J., Thompson, D.J. (2007) [Compatible genetic and ecological estimates of dispersal rates in insect \(*Coenagrion mercuriale*: Odonata: Zygoptera\) populations: analysis of 'neighbourhood size' using a more precise estimator](#). *Mol. Ecol.* 16: 737-751.
- Ravigné, V., Olivieri, I., González-Martínez S., Rousset, F. (2006) [Selective interactions between short-distance pollen and seed dispersal in self-compatible species](#). *Evolution* 60: 2257-2271.
- Lehmann, L., Perrin, N., Rousset, F. (2006) [Population demography and the evolution of helping behaviors](#). *Evolution* 60: 1137–1151.
- Duron, O., Labbé, P., Berticat, C., Rousset, F., Guillot, S., Raymond, M., Weill, M. (2006) [High *Wolbachia* density correlates with cost of infection for insecticide resistant *Culex pipiens* mosquitoes](#). *Evolution* 60: 303–314.
- Rousset, F. (2006) [Separation of time scales, fixation probabilities, and convergence to evolutionarily stable states under isolation by distance](#). *Theor. Pop. Biol.* 69: 165–179.
- Razakandrainibe, F.G., Durand, P., Koella, J.C., de Meeûs, T., Rousset, F., Ayala, F.J., Renaud, F. (2005) ["Clonal" population structure of the malaria agent *Plasmodium falciparum* in high-infection regions](#). *Proc. Natl. Acad. Sci. USA* 102: 17388–17393.
- Roze, D., Rousset, F. (2005) [Inbreeding depression and the evolution of dispersal rates: a multilocus model](#). *Am. Nat.* 166: 708–721.
- Roze, D., Rousset, F., Michalakis, Y. (2005) [Germline bottlenecks, biparental inheritance and selection on mitochondrial variants: a two-level selection model](#). *Genetics* 170: 1385–1399.
- de Iorio, M., Griffiths, R.C., Leblois, R., Rousset, F. (2005) [Stepwise mutation likelihood computation by sequential importance sampling in subdivided population models](#). *Theor. Pop. Biol.* 68: 41–53.

- Kirkpatrick, M., Rousset, F. (2005) [Wright meets AD: not all landscapes are adaptive](#). *J. Evol. Biol* 18: 1166–1169.
- Cohuet, A., Dia, I., Simard, F., Raymond, M., Rousset, F., Antonio-Nkondjio, C., Awono-Ambene, P. H., Wondji, C. S., Fontenille, D. (2005) [Gene flow between chromosomal forms of the malaria vector *Anopheles funestus* in Cameroon, Central Africa, and its relevance in malaria fighting](#). *Genetics* 169: 301–311.
- Béthenod, M.-T., Thomas, Y., Rousset, F., Frérot, B., Pélozuélo, L., Genestier, G., Bourguet, D. (2005) [Genetic isolation between two sympatric host plant races of the European corn borer, *Ostrinia nubilalis* Hübner. II -Assortative mating and host plant preferences for oviposition](#). *Heredity* 94: 264–270.
- Leturque, H., Rousset, F. (2004) [Intersexual competition as an explanation for sex ratio and dispersal biases in polygynous species](#). *Evolution* 58: 2398–2408.
- Roze, D., Rousset, F. (2004) [The robustness of Hamilton’s rule with inbreeding and dominance: kin selection and fixation probabilities under partial sib mating](#). *Am. Nat.* 164: 214–231.
- Roze, D., Rousset, F. (2004) [Joint effects of self-fertilization and population structure on the mutation load, inbreeding depression and heterosis](#). *Genetics* 167: 1001–1015.
- Vacher, C., Bourguet, D., Rousset, F., Chevillon, C., Hochberg, M. (2004) [High dose refuge strategies and genetically modified crops - Reply to Tabashnik et al](#). *J. Evol. Biol.* 17: 913–918.
- Leblois, R., Rousset, F., Estoup, A. (2004) [Influence of spatial and temporal heterogeneities on the estimation of demographic parameters in a continuous population using individual microsatellite data](#). *Genetics* 166: 1081–1092.
- Rousset, F., Ronce, O. (2004) [Inclusive fitness for traits affecting metapopulation demography](#). *Theor. Pop. Biol.* 65: 127–141.
- Henry, P.-H., Poulin, B., Rousset, F., Renaud, F., Thomas, F. (2004) [Infestation by the mite *Harpirhynchus nidulans* in the bearded tit *Panurus biarmicus*](#). *Bird Study* 51: 34–40.
- Roze, D., Rousset, F. (2003) [Diffusion approximations for selection and drift in subdivided populations: a straightforward method and examples involving dominance, selfing and local extinctions](#). *Genetics* 165: 2153–2166.
- Rousset, F. (2003) [Analysis of disruptive selection in subdivided populations](#). *BMC Evolutionary Biology* 3: 22. PDF version without typos
- Rousset, F. (2003) [Effective size in simple metapopulation models](#). *Heredity* 91: 107–111.
- Weill M., Severini C., Guillemin M.-L., Berticat C., Berthomieu A., Rousset, F., Raymond M. (2003) [Isolation and characterization of microsatellite DNA](#)

- markers in the malaria vector *Anopheles maculipennis*. *Mol. Ecol. Notes* 3: 417–419.
- Annan, Z., Kengné, P., Berthomieu, A., Antonio-Nkondjio C., Rousset, F., Fontenille, D., Weill, M. (2003) Isolation and characterization of polymorphic microsatellite markers from the mosquito *Anopheles moucheti*, malaria vector in Africa. *Mol. Ecol. Notes* 3: 56–58.
- Vacher, C., Bourguet, D., Rousset, F., Chevillon, C., Hochberg, M. (2003) Modelling the spatial configuration of refuges for a sustainable control of pests : a case study of *BT* cotton. *J. Evol. Biol.* 16: 378-387.
- Leturque, H., Rousset, F. (2003) Joint evolution of sex ratio and dispersal: conditions for higher dispersal rates from good habitats. *Evol. Ecol.* 17: 67–84.
- Rousset, F. (2003) A minimal derivation of convergence stability measures. *J. Theor. Biol.* 221: 665-668.
- Leblois, R., Estoup, A., Rousset, F. (2003) Influence of mutational and sampling factors on the estimation of demographic parameters in a ‘continuous’ population under isolation by distance. *Mol. Biol. Evol.* 20: 491–502.
- Martel, C., Réjasse, A., Rousset, F., Béthenod, M.-T., Bourguet, D. (2003) Host-plant associated genetic differentiation in the northern French populations of the European corn borer. *Heredity* 90: 141-149.
- Rousset, F. (2002) Partial Mantel tests: reply to Castellano and Balletto. *Evolution* 56: 1874–1875.
- Rousset, F., Gandon, S. (2002) Evolution of the distribution of dispersal distance under distance-dependent cost of dispersal. *J. Evol. Biol.* 15: 515–523.
- Leturque, H., Rousset, F. (2002) Dispersal, kin competition, and the ideal free distribution in a spatially heterogeneous population. *Theor. Pop. Biol.* 62: 169-180.
- Berticat, C., Rousset, F., Raymond, M., Berthomieu, A., Weill, M. (2002) High *Wolbachia* density in insecticide resistant mosquitoes. *Proc. R. Soc. Lond. B.* 269: 1413-1416.
- Rousset, F. (2002) Inbreeding and relatedness coefficients: what do they measure? *Heredity* 88: 371-380.
- Tsitrone, A., Rousset, F., David, P. (2001) Heterosis, marker mutational processes, and population inbreeding history. *Genetics* 159: 1845-1859.
- Raufaste, N., Rousset, F. (2001) Are partial Mantel tests adequate? *Evolution* 55: 1703-1705.
- Sumner, J., Rousset, F., Estoup, A., Moritz, C. (2001) “Neighbourhood” size, dispersal and density estimates in the prickly forest skink (*Gnypetoscincus queenslandiae*) using individual genetic and demographic methods. *Mol. Ecol.* 10: 1917-1927.
- Bertault, G., Rousset, F., Fernandez, D., Berthomieu, A., Hochberg, M., Callot, G., Raymond, M. (2001) Population genetics and dynamics of the black

- truffle in a man-made truffle field. *Heredity* 86: 451–458.
- Leblois, R., Rousset, F., Tikel, D., Moritz, C., Estoup, A. (2000) Absence of evidence for isolation by distance in an expanding cane toad (*Bufo marinus*) population: an individual-based analysis of microsatellite genotypes. *Mol. Ecol.* 9: 1905–1909
- Rousset, F., Billiard, S. (2000) A theoretical basis for measures of kin selection in subdivided populations: finite populations and localized dispersal. *J. Evol. Biol.* 13: 814–825.
- Ronce, O., Gandon, S., Rousset, F. (2000) Kin selection and natal dispersal in an age-structured population. *Theor. Pop. Biol.* 58: 143–159.
- Rousset, F. (2000) Genetic differentiation between individuals. *J. Evol. Biol.* 13: 58–62.
- Gandon, S., Rousset, F. (1999) Evolution of stepping stone dispersal rates. *Proc. Roy. Soc. Lond. B* 266: 2507–2513.
- Rousset, F. (1999c) Reproductive value vs sources and sinks. *Oikos* 86: 591–596
- Estoup, A., Cornuet, J.-M., Rousset, F., Guyomard, R. (1999) Juxtaposed microsatellite systems as diagnostic markers for genetic introgression: theoretical aspects. *Mol. Biol. Evol.* 16: 898–908
- Rousset, F., Braig, H.R., O’Neill, S.L. (1999) A stable triple *Wolbachia* infection in *Drosophila* with nearly additive incompatibility effects. *Heredity* 82: 620–627.
- Dobson, S.L., Bourtzis, K., Braig, H.R., Jones, B.F., Zhou, W., Rousset, F., O’Neill, S.L. (1999) *Wolbachia* infections are distributed throughout insect somatic and germ line tissues. *Insect Biochem. Mol. Biol.* 29: 153–160.
- Rousset, F. (1999b) Genetic differentiation in populations with different classes of individuals. *Theor. Popul. Biol.* 55: 297–308.
- Rousset, F. (1999a) Genetic differentiation within and between two habitats. *Genetics* 151: 397–407.
- Tsagkarakou, A., Navajas, M., Rousset, F., Pasteur, N. (1998) Genetic differentiation in *Tetranychus urticae* (Acari: Tetranychidae) from greenhouses in France. *Exp. Appl. Acarol.* 23: 365–378
- Ronfort, J., Jenczewski, É., Bataillon, T., Rousset, F. (1998) Analysis of population structure in autotetraploid species. *Genetics*, 150: 921–930.
- Zhou, W.-G., Rousset, F., O’Neill, S.L. (1998) Microphylogeny and PCR based classification of *Wolbachia* strains using WSP gene sequences. *Proc. Roy. Soc. Lond. B* 265: 509–515.
- Estoup, A., Rousset, F., Michalakis, Y., Cornuet, J.M., Adriamanga, M., Guyomard, R. (1998) Comparative analysis of microsatellite and allozyme markers: a case study investigating microgeographic differentiation in brown trout (*Salmo trutta*). *Mol. Ecol.* 7: 339–353

- Chevillon, C., Rivet, Y., Raymond, M., Rousset, F., Smouse, P.E., Pasteur, N. (1998) [Migration/selection balance and ecotype differentiation in the mosquito *Culex pipiens*](#). *Mol. Ecol.* 7: 197–208
- Chevillon, C., Bourguet, D., Rousset, F., Pasteur, N., Raymond, M. (1997) [Pleiotropy of adaptive changes in populations: comparisons among insecticide resistance genes in *Culex pipiens*](#). *Genet. Research* 70: 195–204
- Raymond, M., Väätäntö, R.L., Thomas, F., Rousset, F., de Meeûs, T., Renaud, F. (1997) [Heterozygote deficiency in the mussel *Mytilus edulis* complex revisited](#). *Marine Ecology Progress Series* 156: 225–237
- Guillemaud, T., Rousset, F. (1997) [Consequences of *Wolbachia* transmission process on the infection dynamics](#). *J. Evol. Biol.* 10: 601–612.
- Rousset, F., Raymond, M. (1997) [Statistical analyses of population genetic data: new tools, old concepts](#). *Tr. Ecol. Evol.* 12: 313–317.
- Rousset, F. (1997) [Genetic differentiation and estimation of gene flow from *F*-statistics under isolation by distance](#). *Genetics* 145: 1219–1228.
- Guillemaud, T., Pasteur, N., Rousset, F. (1997) [Contrasting levels of variability between cytoplasmic genomes and incompatibility types in the mosquito *Culex pipiens*](#). *Proc. Roy. Soc. Lond. B* 264: 245–251.
- Goudet, J., de Meeûs, T., Raymond, M., Rousset, F. (1996) [Testing differentiation in diploid populations](#). *Genetics* 144: 1931–1938.
- Rousset, F., Thomas, F., De Meeûs, T., Renaud, F. (1996) [Inference of parasite induced host mortality from distributions of parasite numbers](#). *Ecology* 77: 2203–2211
- Rigaud, T., Rousset, F. (1996) [What generates the diversity of *Wolbachia*-Arthropod interactions?](#) *Biodiv. & Conserv.* 5: 999-1013
- Tsagkarakou, A., Guillemaud, T., Rousset, F., Navajas, M. (1996) [Molecular identification of a *Wolbachia* symbiont in a *Tetranychus urticae* strain \(Acari: Tetranychidae\)](#). *Insect Mol. Biol.* 5: 217–221
- Rousset, F. (1996) [Equilibrium values of measures of population subdivision for stepwise mutation processes](#). *Genetics* 142: 1357–1362.
- Pasteur, N., Marquine, M., Rousset, F., Failloux, A.-B., Chevillon, C., Raymond, M. (1995) [The role of passive migration in the dispersal of resistance genes in *Culex pipiens quinquefasciatus* from French Polynesia](#). *Genetical Research* 66: 139–146
- Rousset, F., Raymond, M. (1995) [Testing heterozygote excess and deficiency](#). *Genetics* 140: 1413–1419.
- Rousset, F., Solignac, M. (1995) [Evolution of single and double *Wolbachia* symbioses during speciation in the *Drosophila simulans* complex](#). *Proc. Natl. Acad. Sci. USA* 92: 6389–6393.
- Thomas, F., Renaud, F., Rousset, F., Cézilly, F., De Meeûs, T. (1995) [Differential mortality of two closely related host species induced by one parasite](#). *Proc.*

- R. Soc. Lond. B.* 260: 349–352
- Raymond, M., Rousset, F. (1995b) [GENEPOP \(Version 1.2\): population genetics software for exact tests and ecumenicism.](#) *J. Hered.* 86: 248–249
- Raymond, M., Rousset, F. (1995a) [An exact test for population differentiation.](#) *Evolution* 49: 1280–1283
- Solignac, M., Vautrin, D., Rousset, F. (1994) [Widespread occurrence of *Wolbachia* and partial cytoplasmic incompatibility in *Drosophila melanogaster*.](#) *C. R. Acad. Sci.* 317: 461–470
- Rousset, F., de Stordeur, E. (1994) [Properties of *Drosophila simulans* strains experimentally infected by different clones of the bacterium *Wolbachia*.](#) *Heredity* 72: 325–331
- Bressac, C., Rousset, F. (1993) [The reproductive incompatibility system in *Drosophila simulans* : DAPI-staining analysis of the *Wolbachia* symbionts in sperm cysts.](#) *J. Invert. Pathol.* 61: 226–230.
- Rousset, F., Bouchon, D., Pintureau, B., Juchault, P., Solignac, M. (1992) [*Wolbachia* endosymbionts responsible for various alterations of sexuality in arthropods.](#) *Proc. Roy. Soc. London B* 250: 91–98
- Rousset, F., Vautrin, D., Solignac, M. (1992) [Molecular identification of *Wolbachia*, the agent of cytoplasmic incompatibility in *Drosophila simulans*, and variation in relation to host mitochondrial types.](#) *Proc. Roy. Soc. London B* 247: 163–168
- Rousset, F., Pélandakis, M., Solignac, M. (1991) [Evolution of compensatory substitutions through G-U intermediate state in *Drosophila* rRNA.](#) *Proc. Natl. Acad. Sci. USA* 88: 10032–10036.
- Rousset, F., Raymond, M., Kjellberg, F. (1991) [Cytoplasmic incompatibilities in the mosquito *Culex pipiens*: How to explain a cytotype polymorphism?](#) *J. Evol. Biol.* 4: 69–82.
- Rousset, F., Raymond, M. (1991) [Cytoplasmic incompatibility in insects: why sterilize females?](#) *Tr. Ecol. Evol.* 6: 54–57.

Book

- Rousset, F. (2004) [Genetic structure and selection in subdivided populations.](#) Princeton University Press, *Monographs in Population Biology*.

Book chapters

- Solignac, M., Rousset, F. (1993) Diversity of the arthropod endosymbiont *Wolbachia* and its effects on host sexuality. *Current Topics in Mol. Genet. (Life Sci. Adv.)* 1: 203–214

- Pasteur, N., Raymond, M., Rousset, F., Bergé, J.-B., Amichot, M., Pauron, D., Cuany, A., Fournier, D. (1997) Cloning and detection of insecticide resistance genes. pp. 399–419 in *Molecular biology of insect disease vectors: a methods manual* (J.M. Crampton, C.B. Beard and C. Louis eds.) Chapman & Hall.
- Tsakarakou, A., Navajas, M., Rousset, F., Pasteur, N. (1998) Genetic differentiation in *Tetranychus urticae* (Acari : Tetranychidae) from greenhouses in France. Pp. 175–185 in : J. Bruin, L. P. S. Van der Geest et al. (Eds.), *Ecology and Evolution of the Acari*, Kluwer Academic Publishers, Dordrecht, The Netherlands. [Republication of Tsakarakou *et al.*, 1998]
- Rousset, F. (2001a) Genetic approaches to the estimation of dispersal rates. Pp. 18–28 in *Dispersal: individual, population and community* (J. Clobert, É. Danchin, A. A. Dhondt and J. D. Nichols, eds.), Oxford Univ. Press, Oxford
- Rousset, F. (2001b) Inferences from spatial population genetics. Pp. 239–269 in *Handbook of Statistical Genetics* (D. Balding, M. Bishop and C. Cannings, eds.), John Wiley & Sons
- Rousset, F. (2003) Inferences from spatial population genetics. Pp. 681-712 in *Handbook of Statistical Genetics, second edition* (D. Balding, M. Bishop and C. Cannings, eds.), John Wiley & Sons. [Updated version of the previous book chapter]
- Clobert, J., Ims, R., Rousset, F. (2004) Causes, mechanisms and consequences of dispersal. Pp. 307-335 in *Ecology, genetics, and evolution of metapopulations* (I. Hanski and O. Gaggiotti, eds.), Acad. Press, San Diego.
- Rousset, F. (2007) Inferences from spatial population genetics. Pp. 945–979 in *Handbook of Statistical Genetics, third edition* (D. Balding, M. Bishop and C. Cannings, eds.), John Wiley & Sons. [Extensively revised version of the chapter from previous editions of this book]
- Ferdy, J.-B., David, P., Rousset, F. (2010) Formalisations mathématiques de l'évolution biologique. *Biologie évolutive* (F. Thomas, T. Lefevre et M. Raymond, eds.), pp. 1–32. De Boeck.
- Lebreton, J.-D., Klein, É., Gimenez, O., Rousset, F. (2010) Statistiques pour la biologie évolutive. *Biologie évolutive* (F. Thomas, T. Lefevre et M. Raymond, eds.), pp. 33–48. De Boeck.
- Rousset, F. (2012) Demographic consequences of the selective forces controlling density-dependent dispersal. Pp. 266-279 in *Dispersal Ecology and Evolution* (J. Clobert, M. Baguette, T.G. Benton and J.M. Bullock, eds.), Oxford UP.
- Lenormand T., Rode N., Chevin L.-M., Rousset, F. (2016) Valeur sélective: définitions, enjeux et mesures. *Biologie évolutive* (F. Thomas, T. Lefevre et M. Raymond, eds.), 2e édition.

Rousset, F., Lehmann L. (2016) [Kin selection](#). In *Oxford Bibliographies in Evolutionary Biology* (K. Pfennig, ed.), Oxford University Press.

Software (follow the links for more information on each of them)

[GENEPOP](#), originally developed with M. Raymond, is a blend of routine techniques and more focused methods for the analysis of allelic polymorphisms in natural populations.

[MIGRAINE](#) (collaboration with R. Leblois) implements coalescent-based likelihood methods for inference of demographic parameters from population genetic data.

[IBDSIM](#) (main developer R. Leblois) for the simulation of genotypic data under general isolation by distance models.

[SPAMM](#) (initial collaboration with J.-B. Ferdy) is an [R package](#) that fits generalized linear mixed models (GLMMs), including those with spatial random effects; fits a bunch of other models with non-gaussian random effects, such as Beta or Gamma-distributed ones; and includes modelling of heteroscedasticity (structured dispersion).

[BLACKBOX](#) (collaboration with R. Leblois) is an [R package](#) which can be used interactively with [MIGRAINE](#), but that can also be used independently to optimize functions which are estimated with some error.

[INFUSION](#) is an [R package](#) for statistical inference by simulation, using a methodology alternative to Approximate Bayesian Computation.

[ISORIX](#) (main developer A. Courtiol) is an [R package](#) for computation of “isoscapes” (maps of isotopic variation) and inference of the spatial origin of samples from isotopic variation.