

## List of publications

### Refereed journals:

- 44 Martini, X., Haccou, P., Olivieri, I., Hemptinne, J-L. in press Evolution of Cannibalism and Female's response to oviposition deterring pheromone in aphidophagous predators, *Journal of Animal Ecology*
- 43 Demon, I., Haccou, P., van den Bosch, F. 2007 Introgression of resistance genes between populations a model study of insecticide resistance in *Bemisia tabaci*. *Theoretical Population Biology* 72, 292-304
- 42 Serra, M.C. and Haccou, P. 2007 Dynamics of escape mutants. *Theoretical Population Biology* 72: 167-178
- 41 Yokomizo, H., Haccou, P., Iwasa, Y. 2007 Optimal conservation strategy in fluctuating environments with species interactions: resource-enhancement of the native species versus extermination of the alien species. *Journal of Theoretical Biology* 244:46-58
- 40 Beltman, J.B. and Haccou, P. 2005 Speciation through the learning of habitat features. *Theoretical Population Biology* 67, 189-202
- 39 Pike, N., Tully, T., Haccou, P., Ferrière, R. 2004 The effect of autocorrelation in environmental variability on the establishment and persistence of populations: an experimental test. *Proc Roy Soc B* 271, 2143-2148
- 38 Yokomizo, H., Haccou, P., Iwasa, Y. 2004 Multiple year optimization of conservation effort and monitoring effort for a fluctuating population. *Journal of Theoretical Biology* 230: 157-171
- 37 Haccou, P. and Schneider, M.V 2004 Modes of reproduction and the accumulation of deleterious mutations with multiplicative fitness effects. *Genetics* 166: 1093-1104
- 36 Beltman, J.B., Haccou, P., ten Cate, C. 2004 Learning and colonisation of new niches: a first step towards speciation. *Evolution* 58: 35-46
- 35 Haccou, P. Glazier, O., Cannings, C. 2003 Patch leaving strategies and superparasitism: an asymmetric generalized war of attrition. *Journal of Theoretical Biology* 225: 77-89
- 34 Beltman, J.B., Haccou, P., ten Cate, C. 2003 The impact of learning foster species' song on the evolution of specialist avian brood parasitism. *Behavioural Ecology* 14: 917-923.
- 33 Haccou, P. and Vatutin, V. 2003 Establishment success and extinction risk in autocorrelated environments. *Theoretical Population Biology* 64: 303-314
- 32 Yokomizo, H, Haccou, P., Iwasa, Y. 2003 Conservation effort and assessment of population size in fluctuating environments. *Journal of Theoretical Biology* 224: 167-182
- 31 Shudo, E., Haccou, P., Iwasa, Y. 2003 Optimal choice between feedforward and feedback control in gene expression to cope with unpredictable danger. *Journal of Theoretical Biology* 223: 149-160
- 30 Haccou, P. and Glazier, O. 2002 The ESS in an asymmetric generalised war of attrition with mistakes in role perception. *Journal of Theoretical Biology* 214: 329-349
- 29 Haccou, P. and McNamara, J.M. 1998 Effects of parental survival on clutch size decisions in fluctuating environments. *Evolutionary Ecology* 12: 459-475

- 28 Haccou, P. and Iwasa, Y. 1998 Robustness of optimal mixed strategies. *Journal of Mathematical Biology* 36: 485-296
- 27 Haccou, P. & Iwasa, Y. 1996 Establishment probability in fluctuating environments: a branching process model. *Theoretical Population Biology* 50: 254-280
- 26 Bressers, W.M.A., Kruk, M.R., van Erp, A.M.M., Willekens-Bramer, D.C., Haccou, P., Meelis, E. 1995 A time-structured analysis of hypothalamically induced increases in self-grooming and activity in the rat. *Behavioural Neurosciences* 109: 1158-1171
- 25 Bressers, W.M.A., Kruk, M.R., van Erp, A.M.M., Willekens-Bramer, D.C., Haccou, P., Meelis, E. 1995 Time structure of self-grooming in the rat: self-facilitation and effects of hypothalamic stimulation and neuropeptides. *Behavioural Neurosciences*, 109: 995-964
- 24 Haccou, P. & Iwasa, Y. 1995 Optimal mixed strategies in stochastic environments. *Theoretical Population Biology*, 47: 212-243
- 23 Sjerps, M. & Haccou, P. 1994. Effects of competition on optimal patch leaving: a war of attrition. *Theoretical Population Biology*, 46: 300-318
- 22 Iwasa, Y. & Haccou, P. 1994. ESS emergence pattern of male butterflies in stochastic environments. *Evolutionary Ecology*, 8: 503-523
- 21 Metz, J.A.J., Haccou, P., Meelis, E. 1994. On the Shapiro-Wilk test and Darling's test for exponentiality. *Biometrics*, 50: 527-530
- 20 Sjerps, M. & Haccou, P. 1994. A war of attrition between larvae on the same host plant: stay and starve or leave and be eaten? *Evolutionary Ecology*, 8: 269-287
- 19 Cuthill, I., Haccou, P., Kacelnik, A. 1994. Starlings (*Sturnus vulgaris*) exploiting patches: response to long-term changes in travel time. *Behavioral ecology*, 5: 81-90
- 18 Sjerps, M. & Haccou, P. 1993. Information determines the optimal clutch sizes of competing insects: Stackelberg versus Nash equilibrium. *Journal of Theoretical Biology*, 163: 473-483
- 17 Sjerps, M., Haccou, P., Meelis, E., Meyden, E. van. 1993. Egg distribution within patches: an optimality problem for insects. *Theoretical Population Biology*, 43: 337-366
- 16 Hemerik, L., Driessen, G., Haccou, P. 1993. The effects of intra-patch experiences on patch leaving tendency, search time and search efficiency of parasitoids of the species *Leptopilina clavipes*. *Journal of Animal Ecology*, 62, 33-44
- 15 Heitmans, R.B., Haccou, P., van Alphen, J.J.M. 1992. Egg supply, clutch size and survival probability in *Aprostocetus hagenowii* (Ratz) (Hymenoptera: Eulophidae) a gregarious parasitoid of cockroach ootheca. *Experimental and Applied Entomology, Proceedings of the Netherlands Entomological Society*, 3, 62-69
- 14 Haccou, P. & Van der Steen, W.J. 1992. Methodological problems in evolutionary biology IX: The testability of optimal foraging theory. *Acta Biotheoretica* 40: 285-295
- 13 Meelis, E., Bressers, M., Haccou, P. 1991. Non-parametric testing for the number of change points in a sequence of independent random variables. *Journal of statistical computation and simulation*, 39, 129-137
- 12 Haccou, P., Alphen, J.J.M. van, Heitmans, W. 1991. Optimal clutch size of parasitoids in stochastically fluctuating environments. *Experimental and Applied Entomology, Proceedings of the Netherlands Entomological Society* 2, 185-189

- 11 Haccou,P., De Vlas,S.J., Van Alphen,J.J.M., Visser,M.E. 1991, Information processing by foragers: effects of intra-patch experience on the leaving tendency of *Leptopilina Heterotoma*. *Journal of Animal Ecology*, 60 , 93-106
- 10 Bressers,W.M.A., Meelis,E., Haccou,P., Kruk,M.R. 1991. When did it really start or stop: the impact of censored observations on ethological analysis of durations. *Behavioural processes*, 23, 1-20
- 9 Meelis,E., Haccou,P., Bressers,W.M.A. 1990. Detection of time-inhomogeneity in behavioural processes: tests for multiple abrupt changes in boutlengths. *Behavioural Processes* 22, 121-132
- 8 Cuthill,I.C., Kacelnik,A., Krebs,J.R., Haccou,P., Iwasa,Y. 1990. Starlings exploiting patches: the effect of recent experience on foraging decisions. *Animal Behaviour* 40, 625-640
- 7 Haccou,P. & Meelis,E. 1988. Testing for the number of change points in a sequence of exponential random variables. *Journal of Statistical Computation and Simulation*, 30, 285-298
- 6 Haccou,P., Meelis,E., Langeler,E.G., Dienske,H. 1988. Detection of low dose effects of psychopharmaca: application of a semi-Markov model to rhesus monkey behaviour. *Behavioural Processes*, 17, 145-166
- 5 Haccou,P., Kruk,M.R., Meelis,E., Van Bavel,E.T., Wouterse,K., Meelis,W. 1988. Markov models for social interactions: analysis of electrical stimulation in the hypothalamic aggression area of rats. *Animal Behaviour*, 36, 1145-1163
- 4 Haccou,P., Meelis,E., Van de Geer,S. 1988. The likelihood ratio test for the change point problem for exponentially distributed random variables. *Stochastic processes and their applications*, 27, 121-139
- 3 Haccou,P. & Meelis,E. 1986. On the analysis of time-inhomogeneity in Markov chains: a refined test for abrupt behavioural changes. *Animal Behaviour*, 34, 302-303
- 2 Haccou,P. & Hemerik,L. 1985. The influence of larval dispersal in the cinnabar moth (*Tyria jacobaeae*) on predation by the red wood ant (*Formica polyctena*): an analysis based on the proportional hazards model. *Journal of Animal Ecology*, 54, 755-769
- 1 Haccou,P., Dienske,H., Meelis,E. 1983. Analysis of time-inhomogeneity in Markov chains applied to mother-infant interactions of rhesus monkeys. *Animal Behaviour*, 31, 927-945

#### **Books:**

- Haccou, P., Jagers, P., Vatutin, V.A. 2005 *Branching Processes - Variation, Growth, and Extinction of Populations*. Cambridge University Press, 316 pp.
- Haccou,P. & Meelis,E. 1992, 1994 (paperback). *Statistical analysis of behavioural data*. Oxford University Press, 400pp.

#### **Book chapters:**

- Haccou, P. 2008 *Mathematical models of biology*. In: *Mathematical Models* [Eds. Jerzy A. Filar, Jacek B. Krawczyk], in *Encyclopedia of Life Support Systems (EOLSS)*, Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford ,UK, [<http://www.eolss.net> ]

- Haccou, P. & van Alphen, J.J.M. 2007 Competitive modes and asymmetric wars of attrition in insect parasitoids. In: E. Wajnberg, C. Bernstein, J.J.M. van Alphen (eds) *Behavioural Ecology of Insect Parasitoids: From Theoretical Approaches to Field Applications*. Blackwell Publishing Ltd.
- Wajnberg, E. & Haccou, P. 2007 Statistical tools for a sound behavioural ecology of insect parasitoids. In: E. Wajnberg, C. Bernstein, J.J.M. van Alphen (eds) *Behavioural Ecology of Insect Parasitoids: From Theoretical Approaches to Field Applications*. Blackwell Publishing Ltd.
- Haccou, P., Sjerps, M., van der Meijden, E. 1999 To leave or to stay, that is the question: predictions from models of patch-leaving strategies. In: H. Olf, V.K. Brown and R.H. Drent eds. *Proceedings of the 38th Symposium of the British Ecological Society: Herbivores: between Plants and Predators*. Blackwell Science, Oxford, pp.85-108
- Haccou, P. 1988. Analyse met behulp van continue tijd Markov modellen en generalisaties. In: P.C.M. Molenaar & G.J. Mellenbergh, eds. *De analyse van dyadische interacties: Bijdragen aan een door de Psychon werkgemeenschap data-analyse georganiseerd symposium*. University of Amsterdam, pp. 49-111
- Haccou, P. 1986. Analysis of behaviour by means of continuous time Markov chain models and their generalizations. In: P.W. Colgan & R. Zayan (eds) *Quantitative models in ethology*, Privat, Toulouse
- Haccou, P., Van Bavel, E.T., Kruk, M.R. 1985. Markov chain description and analysis of changes induced by hypothalamic stimulation in a male CPBWEzob rat at intensities below attack threshold. In: M.R. Kruk & P.F. Brain (eds) *Mathematical methods and representations in etho-pharmacological aggression research*, pp. 31-56

### **Reports**

- Haccou, P. 1991. Patch leaving decisions of foraging animals. 2<sup>nd</sup> Year-book of the society of KNAW researchers, 83-89
- Haccou, P. 1987. *Statistical methods for ethological data*. Ph.D. thesis, Leiden University (240 pp.)
- Haccou, P., Meelis, E., Van de Geer, S. 1985. On the likelihood ratio test for a change point in a sequence of independent exponentially distributed random variables. Report MS-R8507, Centre for Mathematics and Computer Science, Amsterdam (31pp.)