

APPENDIX

ADDITIONAL REFERENCES TO CHAPTER 4

Included here are a number of references consulted to write this chapter, but that have not been cited in the text for reasons of insufficient space.

Introduction

1. Carson R. *Silent Spring*. London: Penguin Group; 1965.
2. Morris MG. The effect of sprays on the fauna of apple trees. V DDT/BHC and lead arsenate/nicotine applied at the green cluster stage. *J Appl Ecol* 1968; 5:409-429.
3. Pingali PL, Gerpacio RV. Living with reduced insecticide use for tropical rice in Asia. *Food Policy* 1997; 22(2):107-118.
4. Rattner BA. History of wildlife toxicology. *Ecotoxicology* 2009; 18(7):773-783.
5. Tayaputch N. Present aspects and environmental impacts of pesticide use in Thailand. *J Pestic Sci* 1996; 21(1):132-135.
6. Wood BJ. Pest control in Malaysia's perennial crops: a half century perspective tracking the pathway to integrated pest management. *Integr Pest Manage Rev* 2002; 7(3):173-190.
7. Yamamoto I. Nicotine - old and new topics. In: Kuhr RJ, Motoyama N, Eds. *Pesticides and the Future*. Amsterdam: IOS Publisher; 1998. pp. 61-69.

Pesticides in Agriculture

1. Akesson NB, Yates WE. Problems relating to application of agricultural chemicals and resulting drift residues. *Annu Rev Entomol* 1964; 9:285-318.
2. Akkerhuis GAJMJo. Walking behaviour and population density of adult linyphiid spiders in relation to minimizing the plot size in short term pesticide studies with pyrethroid insecticides. *Environ Pollut* 1993; 80(2):163-171.
3. Arts GH, Buijse-Bogdan LL, Belgers JDM, *et al.* Ecological impact in ditch mesocosms of simulated spray drift from a crop protection program for potatoes. *Integr Environ Assess Manage* 2006; 2(2):105-125.
4. Best L, Gionfriddo J. Characterization of grit use by cornfield birds. *Wilson Bull* 1991; 103(1):68-82.
5. Best LB, Fisher DL. Granular insecticides and birds: factors to be considered in understanding exposure and reducing risk. *Environ Toxicol Chem* 1992; 11(10):1495-1508.
6. Busby DG, White LM, Pearce PA. Effects of aerial spraying of fenitrothion on breeding white-throated sparrows. *J Appl Ecol* 1990; 27(2):743-755.
7. Craig I, Woods N, Dorr G. A simple guide to predicting aircraft spray drift. *Crop Protection* 1998; 17(6):475-482.
8. Kearns C, Matthews DI. A survey of annual pesticide usage during the control of sheep ectoparasites in Northern Ireland, 2005. *J Agric Sci* 2007; 145(5):517-528.
9. Leeuw Jd, *al. e.* Risks of Granules and Treated Seeds to Birds on Arable Fields: CML; 1995. Report No. 118.
10. Matsumura F. *Toxicology of Pesticides*. New York: Plenum Press; 1985.
11. McDougall KW. Arsenic and DDT residues at cattle tick dip sites in NSW. *Land Contam Reclam* 1997; 5:323-328.
12. Peakall DB, Miller DS, Kinter WB. Prolonged eggshell thinning caused by DDE in the duck. *Nature* 1975; 254:421.
13. Rahman MS, Malek MA, Matin MA. Trend of pesticide usage in Bangladesh. *Sci Total Environ* 1997; 159(1):33-39.
14. Ward MP, Armstrong RFT. Surveys to assess the amount of pesticide in wool and the use of pesticides by woolgrowers in Queensland. *Aust Vet J* 2001; 79(5):358-362.
15. Werf HMGvd. Assessing the impact of pesticides on the environment. *Agric Ecosyst Environ* 1996; 60(2-3):81-96.
16. White DH, Mitchell CA, Wynn LD, Flickinger EL, Kolbe EJ. Organophosphate insecticide poisoning of Canada geese in the Texas Panhandle. *J Field Ornithol* 1982; 53(1):22-27.
17. Woods N, Craig IP, Dorr G, Young B. Spray drift of pesticides arising from aerial application in cotton. *J Environ Qual* 2001; 30(3):697-701.

Exposure of Organisms to Agricultural Pesticides

1. Anderson TD, Lydy MJ. Increased toxicity to invertebrates associated with a mixture of atrazine and organophosphate insecticides. *Environ Toxicol Chem* 2002; 21(7):1507-1514.
2. Arnold SF, Klotz DM, Collins BM, *et al.* Synergistic activation of estrogen receptor with combinations of environmental chemicals. *Science* 1996; 272:1489-1492.

3. Arora S, Mukherjee I, Trivedi TP. Determination of pesticide residue in soil, water and grain from IPM and non-IPM field trials of rice. *Bull Environ Contam Toxicol* 2008; 81:373-376.
4. Avery M, Fischer D, Primus T. Assessing the hazard to granivorous birds feeding on chemically treated seeds. *Pestic Sci* 1997; 49(4):362-366.
5. Barnthouse LW. Modelling ecological risks of pesticides: a review of available approaches. In: Markert GSaB, Ed. *Ecotoxicology*. New York: John Wiley & Sons, Inc. and Spektrum Akademischer Verlag; 1998. pp. 769-798.
6. Blus LJ, Henny CJ, Lenhart DJ. Effects of heptachlor- and lindane-treated seed on Canada geese. *J Wildl Manage* 1984; 48(3):1097-1111.
7. Custer TW, Custer CM. Transfer and accumulation of organochlorines from black-crowned night-heron eggs to chicks. *Environ Toxicol Chem* 1995; 14(3):533-536.
8. Ford WM, Hill EP. Organochlorine pesticides in soil sediments and aquatic animals in the Upper Steele Bayou watershed of Mississippi. *Arch Environ Contam Toxicol* 1991; 20(2):161-167.
9. Gevaio B, Semple KT, Jones KC. Bound pesticide residues in soils: a review. *Environ Pollut* 2000; 108:3-14.
10. Harris ML, K. Wilson L, E. Elliott J, *et al.* Transfer of DDT and metabolites from fruit orchard soils to American robins (*Turdus migratorius*) twenty years after agricultural use of DDT in Canada. *Arch Environ Contam Toxicol* 2000; 39(2):205-220.
11. Hickey JJ, Anderson DW. Chlorinated hydrocarbons and eggshells changes in raptorial and fish-eating birds. *Science* 1968; 162:271-273.
12. Hunt LB, Sacho RJ. Response of robins to DDT and methoxychlor. *J Wildl Manage* 1969; 33:336-345.
13. Inglesfield C. Pyrethroids and terrestrial non-target organisms. *Pestic Sci* 1989; 27(4):387-428.
14. Kennedy IR, Sánchez-Bayo F, Kimber SW, Hugo L, Ahmad N. Off-site movement of endosulfan from irrigated cotton in New South Wales. *J Environ Qual* 2001; 30(3):683-696.
15. Kiesecker JM. Synergism between trematode infection and pesticide exposure: a link to amphibian limb deformities in nature? *Proc Natl Acad Sci USA* 2002; 99(15):9900-9904.
16. McCahon CP, Pascoe D. Episodic pollution: causes, toxicological effects and ecological significance. *Funct Ecol* 1990; 4(3):375-383.
17. Moriarty F. *Ecotoxicology - The Study of Pollutants in Ecosystems*. 3rd ed. London, UK: Academic Press; 1999.
18. Nash RG, Woolson EA. Persistence of chlorinated hydrocarbon insecticides in soils. *Science* 1967; 157:924-927.
19. Peakall DB, Kiff LF. Eggshell thinning and DDE residue levels among peregrine falcons *Falco peregrinus*: a global perspective. *Ibis* 1979; 121:200-204.
20. Relyea RA, Mills N. Predator-induced stress makes the pesticide carbaryl more deadly to grey treefrog tadpoles (*Hyla versicolor*). *Proc Natl Acad Sci USA* 2001; 98:2491-2496.
21. Robertson BK, Alexander M. Sequestration of DDT and dieldrin in soil: disappearance of acute toxicity but not the compounds. *Environ Toxicol Chem* 1998; 17(6):1034-1038.
22. Schenker UW. The role of intermediate degradation products for the assessment of persistent organic pollutants in a global multi-media model. Zurich: ETH Zurich; 2009.
23. Smelt JH, Leistra M, Houx NWH, Dekker A. Transformation of aldicarb sulfoxide and aldicarb sulfone in four water-saturated sandy subsoils. *Pestic Sci* 1995; 44:323-334.
24. Stansley W, Roscoe DE. Chlordane poisoning of birds in New Jersey, USA. *Environ Toxicol Chem* 1999; 18(9):2095-2099.
25. Thao VD, Kawano M, Tatsukawa R. Persistent organochlorine residues in soils from tropical and sub-tropical asian countries. *Environ Pollut* 1993; 81(1):61-71.
26. Walker CH, Hopkin SP, Sibly RM, Peakall DB. *Principles of Ecotoxicology*. 2nd ed. Glasgow, U.K.: Taylor and Francis; 2001.
27. Woodham DW, Reeves RG, Edwards RR. Total toxic aldicarb residues in weeds, grasses, and wildlife from the Texas High Plains following a soil treatment with the insecticide. *J Agric Food Chem* 1973; 21(4):604-607.

Review of Pesticide Impacts on Non-Target Communities

Soil Communities

1. Abdel-Kader MIA, Moubasher AH, Abdel-Hafez SI. Selective effects of five pesticides on soil and cotton-rhizosphere and rhizoplane fungus flora. *Mycopathologia* 1978; 66(1-2):117-123.
2. Babu BS, Gupta GP. Effect of systemic insecticides on the population of soil arthropods in a cotton field. *J Soil Biol Ecol* 1986; 6(1):32-41.
3. Bauer C, Rombke J. Factors influencing the toxicity of two pesticides on three lumbricid species in laboratory tests. *Soil Biol Biochem* 1997; 29(3-4):705-708.

4. Beare MH, Reddy MV, Tian G, Srivastava SC. Agricultural intensification, soil biodiversity and agroecosystem function in the tropics: the role of decomposer biota. *Appl Soil Ecol* 1997; 6(1):87-108.
5. Bengtsson J. Disturbance and resilience in soil animal communities. *European J Soil Biol* 2002; 38(2):119-125.
6. Cheng Z, Grewal PS, Stinner BR, Hurto KA, Hamza HB. Effects of long-term turfgrass management practices on soil nematode community and nutrient pools. *Appl Soil Biol* 2008; 38(2):174-184.
7. Curry JP. The effects of the herbicides paraquat and dalapon on the soil fauna. *Pedobiologia* 1970; 10:329-36.
8. Dempster JP. A study of the effects of DDT applications against *Pieris rapae* on the crop fauna. In: Proc. 4th Br. Insectic. Fungic. Conf.; 1967; 1967. pp. 19-25.
9. Dubey HD, Rodriguez RL. Effect of dyrene and maneb on nitrification and ammonification. *Soil Sci Soc Am Proc* 1970; 34:435-439.
10. Edvartoro BB, Naidu R, Megharaj M, Singleton I. Changes in microbial properties associated with long-term arsenic and DDT contaminated soils at disused cattle dip site. *Ecotoxicol Environ Saf* 2003; 55(3):344-351.
11. Eijsackers H, Beneke P, Maboeta M, Louw JPE, Reinecke AJ. The implications of copper fungicide usage in vineyards for earthworm activity and resulting sustainable soil quality. *Ecotoxicol Environ Saf* 2005; 62(1):99-111.
12. Elmholt S. Side-effects of fungicides on non-target soil fungi under field conditions. *Tidsskr Planteavl* 1988; 92(1):96.
13. Endlweber K, Schädler M, Scheu S. Effects of foliar and soil insecticide applications on the collembolan community of an early set-aside arable field. *Appl Soil Biol* 2005; 31(1-2):136-146.
14. Foerster B, Van Gestel CAM, Koolhaas JE, *et al.* Ring-testing and field-validation of a Terrestrial Model Ecosystem (TME): An instrument for testing potentially harmful substances – Effects of carbendazim on organic matter breakdown and soil fauna feeding activity. *Ecotoxicology* 2004; 13(1-2):129-141.
15. Fox CJS. The effects of five herbicides on the numbers of certain invertebrate animals in grassland soil. *Can J Plant Sci* 1964; 44:405-409.
16. Frampton GK. Recovery responses of soil surface Collembola after spatial and temporal changes in long-term regimes of pesticide use. *Pedobiologia* 2000; 44(3-4):489-501.
17. Griffiths BS, Caul S, Thompson J, *et al.* Microbial and microfaunal community structure in cropping systems with genetically modified plants. *Pedobiologia* 2007; 51(3):195-206.
18. Hart MR, Brookes PC. Soil microbial biomass and mineralisation of soil organic matter after 19 years of cumulative field applications of pesticides. *Soil Biol Biochem* 1996; 28(12):1641-1649.
19. Hussein HM, Dimetry NZ, Iss-Hak Z, R. R. Sehnal F. Effects of insect growth regulators on the hairy rose beetle, *Tropinota squalida* (Col., Scarabeidae). *J Appl Entomol* 2005; 129(3):142-148.
20. Jaensch S, Frampton GK, Rombke J, Brink PJvd, Scott-Fordsmand JJ. Effects of pesticides on soil invertebrates in model ecosystem and field studies: a review and comparison with laboratory toxicity data. *Environ Toxicol Chem* 2006; 25(9):2490-2501.
21. James DG, Whitney J. Mite populations on grapevines in south-eastern Australia: Implications for biological control of grapevine mites (Acarina: Tenuipalpidae, Eriophyidae). *Exp Appl Acarol* 1993; 17(4):259-270.
22. Koolhaas JE, Van Gestel CAM, Rombke J, Soares AMVM, Jones SE. Ring-testing and field-validation of a Terrestrial Model Ecosystem (TME): An instrument for testing potentially harmful substance – Effects of carbendazim on soil microarthropod communities. *Ecotoxicology* 2004; 13(1-2):75-88.
23. Krüger K, Scholtz CH. Changes in the structure of dung insect communities after ivermectin usage in a grassland ecosystem. I. Impact of ivermectin under drought conditions. *Acta Oecologica* 1998; 19:425-438.
24. Leon YS-d, De Melo E, Soto G, Johnson-Maynard J, Lugo-Perez J. Earthworm populations, microbial biomass and coffee production in different experimental agroforestry management systems in Costa Rica. *Caribbean J Sci* 2006; 42(3):397-409.
25. Liess M, Brown C, Dohmen P, *et al.* Effects of Pesticides in the Field. Berlin: SETAC Press; 2005.
26. Monkiedje A, Ilori MO, Spiteller M. Soil quality changes resulting from the application of the fungicides mefenoxam and metalaxyl to a sandy loam soil. *Soil Biol Biochem* 2002; 34(12):1939-1948.
27. Moser T, Van Gestel CAM, Jones SE, Koolhaas JE, Rodrigues JML, Roembke J. Ring-testing and field-validation of a Terrestrial Model Ecosystem (TME): An instrument for testing potentially harmful substances – Effects of carbendazim on enchytraeids. *Ecotoxicology* 2004; 13(1-2):89-103.
28. Newsom LD. Consequences of insecticide use on non-target organisms. *Annu Rev Entomol* 1967; 12:257-286.
29. Panda S, Sahu SK. Recovery of acetylcholine esterase activity of *Drawida willsi* (Oligochaeta) following application of three pesticides to soil. *Chemosphere* 2004; 55(2):283-290.
30. Paoletti MG, Schweigl U, Favretto MR. Soil macroinvertebrates, heavy metals and organochlorines in low and high input apple orchards and coppiced woodland. *Pedobiologia* 1995; 39(1):20-33.
31. Roembke J, Van Gestel CAM, Jones SE, *et al.* Ring-testing and field-validation of a Terrestrial Model Ecosystem (TME): An instrument for testing potentially harmful substances – Effects of carbendazim on earthworms. *Ecotoxicology* 2004; 13(1-2):105-118.

32. Seghers D, Verthé K, Reheul D, *et al.* Effect of long-term herbicide applications on the bacterial community structure and function in an agricultural soil. *FEMS Microbiol Ecol* 2003; 46(2):139-146.
33. Sousa JP, Rodrigues JML, Loureiro S, *et al.* Ring-testing and field-validation of a terrestrial model ecosystem (TME): An instrument for testing potentially harmful substances – Effects of carbendazim on soil microbial parameters. *Ecotoxicology* 2004; 13:43-60.
34. Vargas R. Biodiversity in humid tropical banana plantations where there has been long-term use of crop protection products. *Agronomia Costaricense* 2006; 30(2):83-109.
35. Wang Y-S, Wen C-Y, Chiu T-C, Yen J-H. Effect of fungicide iprodione on soil bacterial community. *Ecotoxicol Environ Saf* 2004; 59(1):127-132.
36. Wardle D, Parkinson D. Effects of three herbicides on soil microbial biomass and activity. *Plant and Soil* 1990; 122(1):21-28.
37. Wardle D, Yeates G, Bonner K, Nicholson K, Watson R. Impacts of ground vegetation management strategies in a kiwifruit orchard on the composition and functioning of the soil biota. *Soil Biol Biochem* 2001; 33(7-8):893-905.
38. Witt ABR, Samways MJ. Influence of agricultural land transformation and pest management practices on the arthropod diversity of a biodiversity hotspot, the Cape Floristic Region, South Africa. *African Entomol* 2004; 12(1):89-95.

Vegetation and its Arthropod Communities

1. Abdullah AR, Bajet CM, Matin MA, Nhan DD, Sulaiman AH. Ecotoxicology of pesticides in the tropical paddy field ecosystem. *Environ Toxicol Chem* 1997; 16(1):59-70.
2. Adams JB, Drew ME. Aphid populations in herbicide-treated oat fields. *Can J Zool* 1965; 43:789-794.
3. Altieri MA, Nicholls CI. *Biodiversity and Pest Management in Agroecosystems*. 2nd ed. New York: The Haworth Press, Inc.; 2004.
4. Ammann K. Effects of biotechnology on biodiversity: herbicide-tolerant and insect-resistant GM crops. *Trends Biotechnol* 2005; 23(8):388-394.
5. Chauzat M-P, Faucon J-P, Martel A-C, *et al.* A survey of pesticide residues in pollen loads collected by honey bees in France. *J Econ Entomol* 2006; 99(2):253-262.
6. Cohen JE, Schoenly K, Heong KL, *et al.* A food web approach to evaluating the effect of insecticide spraying on insect pest population dynamics in a Philippine irrigated rice ecosystem. *J Appl Ecol* 1994; 31(4):747-763.
7. Driggers BF, Pepper BB. Effect of orchard practices on codling moth and leafhopper parasitism. *J Econ Entomol* 1936; 29:477-480.
8. Eckert JE. The poisoning of bees, with methods of prevention. *J Econ Entomol* 1944; 37:551-552.
9. Fountain MT, Brown VK, Gange AC, Symondson WOC, Murray PJ. The effects of the insecticide chlorpyrifos on spider and Collembola communities. *Pedobiologia* 2007; 51(2):147-158.
10. Gerowitt B, Bertke E, Hespelt S-K, Tute C. Towards multifunctional agriculture: weeds as ecological goods? *Weed Res* 2003; 43(4):227-235.
11. Gurr GM, Wratten SD, Luna JM. Multi-function agricultural biodiversity: pest management and other benefits. *Basic Appl Ecol* 2003; 4(2):107-116.
12. Halm M-P, Rortais A, Arnold G, Taséi JN, Rault S. New risk assessment approach for systemic insecticides: the case of honey bees and imidacloprid (Gaucho). *Environ Sci Technol* 2006; 40(7):2448-2454.
13. Houghton AJ, Bell JR, Boatman ND, Wilcox A. The effects of different rates of the herbicide glyphosate on spiders in arable field margins. *J Arachnol* 1999; 27(1):249-254.
14. Heong KL, Escalada MM, Mai V. An analysis of insecticide use in rice: case studies in the Philippines and Vietnam. *Int J Pest Manage* 1994; 40(2):173-178.
15. Holland J, Fahrig L. Effect of woody borders on insect density and diversity in crop fields: a landscape-scale analysis. *Agric Ecosyst Environ* 2000; 78:115-122.
16. Jaynes HA, Marucci PE. Effect of artificial control practices on the parasites and predators of the codling moth. *J Econ Entomol* 1947; 40:9-25.
17. Kevan PG, Phillips TP. The economic impacts of pollinator declines: an approach to assessing the consequences. *Conserv Ecol* 2001; 5(1):8.
18. Kiritani K. Prospects for integrated pest management in rice cultivation. *JARQ* 1992; 26(2):81-87.
19. Lee JC, Menalled FD, Landis DA. Refuge habitats modify impact of insecticide disturbance on carabid beetle communities. *J Appl Ecol* 2001; 38(2):472-483.
20. Marshall E, Brown V, Boatman N, *et al.* The role of weeds in supporting biological diversity within crop fields. *Weed Res* 2003; 43(2):77-89.

21. Metcalf RL. Insecticides in pest management. In: Metcalf RL, Luckmann W, Eds. *Introduction to Insect Pest Management*: Wiley; 1975. pp. 235-273.
22. Midega CAO, Ogol CKPO, Overholt WA. Effect of agroecosystem diversity on natural enemies of maize stemborers in coastal Kenya. *Int J Tropical Insect Sci* 2004; 24(4):280-286.
23. Moffett JO, Macdonald RH, Levin MD. Toxicity of carbaryl-contaminated pollen to adult honey bees. *J Econ Entomol* 1970; 63:475-476.
24. Morrison M, Meslow E. Effects of the herbicide glyphosate on bird community structure, western Oregon. *For Sci* 1984; 30(1):95-106.
25. Osler GHR, Westhorpe D, Oliver I. The short-term effects of endosulfan discharges on eucalypt floodplain soil microarthropods. *Appl Soil Ecol* 2001; 16(3):263-273.
26. Paoletti MG, Pimentel D. The environmental and economic costs of herbicide resistance and host-plant resistance to plant pathogens and insects. *Technological Forecasting and Social Change* 1995; 50:9-23.
27. Philpott SM, Armbrrecht I. Biodiversity in tropical agroforests and the ecological role of ants and ant diversity in predatory function. *Ecol Entomol* 2006; 31(4):369-377.
28. Rabatin S, Stinner B. The significance of vesicular-arbuscular mycorrhizal fungal-soil macroinvertebrate interactions in agroecosystems. *Agric Ecosyst Environ* 1989; 27(1-4):195-204.
29. Rajeswaran J, Duraimurugan P, Shanmugam PS. Role of spiders in agriculture and horticulture ecosystem. *J Food Agric Environ* 2005; 3(3-4):147-152.
30. Ratte HT, Lennartz F, Ros-Nickoll M. Ecosystem dynamics and stability: are the effects of pesticides ecologically acceptable? In: Liess M, Brown C, Dohmen P, *et al.*, Eds. *Effects of Pesticides in the Field*. Berlin: SETAC Press; 2005. pp. 98-100.
31. Rodriguez E, Fernandez-Anero FJ, Ruiz P, Campos M. Soil arthropod abundance under conventional and no tillage in a Mediterranean climate. *Soil & Tillage Res* 2006; 85(1-2):229-233.
32. Rose R, Dively GP. Effects of insecticide-treated and lepidopteran-active Bt transgenic sweet corn on the abundance and diversity of arthropods. *Environ Entomol* 2007; 36(5):1254-1268.
33. Sánchez-Bayo F, Goka K. Ecological effects of the insecticide imidacloprid and a pollutant from antidandruff shampoo in experimental rice fields. *Environ Toxicol Chem* 2006; 25(6):1677-1687.
34. Sánchez-Bayo F, Yamashita H, Osaka R, Yoneda M, Goka K. Ecological effects of imidacloprid on arthropod communities in and around a vegetable crop. *J Environ Sci Health* 2007; B42(3):279-286.
35. Schier A. Field study on the occurrence of ground beetles and spiders in genetically modified, herbicide tolerant corn in conventional and conservation tillage systems. *J Plant Dis Protection* 2006; 20:101-113.
36. Schmutterer H. Side-effects of neem (*Azadirachta indica*) products on insect pathogens and natural enemies of spider mites and insects. *J Appl Entomol* 1997; 121(2):121-128.
37. Schuette G. Prospects of biodiversity in herbicide-resistant crops. *Outlook Agric* 2002; 31(3):193-198.
38. Settle WH, Ariawan H, Astuti ET, *et al.* Managing tropical rice pests through conservation of generalist natural enemies and alternative prey. *Ecology* 1996; 77(7):1975-1988.
39. Smith RF. Pesticides: their use and limitations in pest management. In: *Concepts of Pest Management*: N.C. State University; 1970. pp. 103-118.
40. Storkey J, Westbury DB. Managing arable weeds for biodiversity. *Pest Manage Sci* 2006; 63(6):517-523.
41. Suchail S, Guez D, Belzunces LP. Discrepancy between acute and chronic toxicity induced by imidacloprid and its metabolites in *Apis mellifera*. *Environ Toxicol Chem* 2001; 20(11):2482-2486.
42. Szitar K, Torok K, Szabo R. Vegetation composition changes in ex-arable fields following glyphosate application: the role of soil seed bank and timing of seed production. *Cereal Res Com* 2008; 36(Supp.):1587-1590.
43. Thompson HM. Assessing the exposure and toxicity of pesticides to bumblebees (*Bombus* sp.). *Apidologie* 2001; 32:305-321.
44. Volkmar C, Hussein M-A, Jany D, *et al.* Ecological studies on epigeous arthropod populations of transgenic sugar beet at Friemar (Thuringia, Germany). *Agric Ecosyst Environ* 2003; 95(1):37-47.
45. Whitford F, Showers WB. Impact of insecticides on composition and abundance of ground-dwelling insect fauna in adult European corn borer (Lepidoptera, Pyralidae) action sites in Iowa, USA. *Environ Entomol* 1987; 16(1):231-236.
46. Wiles JA, Jepson PC. Sublethal effects of deltamethrin residues on the within-crop behaviour and distribution of *Coccinella septempunctata*. *Entomol exp appl* 1994; 72(1):33-45.
47. Williams IH. Aspects of bee diversity and crop pollination in the European Union. In: Matheson A, Buchmann SL, O'Toole C, Westrich P, Williams IH, Eds. *The conservation of bees*. London: Academic Press; 1996. pp. 63-80.
48. Yardim EN, Edwards CA. Effects of weed control practices on surface-dwelling arthropod predators in tomato agroecosystems. *Phytoparasitica* 2002; 30(4):379-386.

Vertebrates

1. Albers PH, Klein PN, Green DE, *et al.* Chlorfenapyr and mallard ducks: overview, study design, macroscopic effects, and analytical chemistry. *Environ Toxicol Chem* 2006; 25(2):438-445.
2. Alvord HH, Kadlec RH. Atrazine fate and transport in the Des Plaines Wetlands. *Ecol Model* 1996; 90(1):97-107.
3. Ayas Z. Review on DDT and its residues in Turkey's wetlands. *J Environ Biol* 2007; 28(4):707-715.
4. Baker SD, Sepúlveda MS. An evaluation of the effects of persistent environmental contaminants on the reproductive success of Great Blue Herons (*Ardea herodias*) in Indiana. *Ecotoxicology* 2008; 18(3):271-280.
5. Barrett GW. Effects of Sevin on small mammal populations in agricultural and oil field ecosystems. *J Mammal* 1988; 69:731-739.
6. Berny PJ, Buronfosse T, Buronfosse F, Lamarque F, Lorgue G. Field evidence of secondary poisoning of foxes (*Vulpes vulpes*) and buzzards (*Buteo buteo*) by bromadiolone, a 4-year survey. *Chemosphere* 1997; 35(8):1817-1829.
7. Blus LJ, Heath RG, Gish CD, Belisle AA, Prouty RM. Eggshell thinning in the brown pelican: implication of DDE. *BioScience* 1971; 15:1213-1215.
8. Boone MD, James SM. Interactions of an insecticide, herbicide, and natural stressors in amphibian community mesocosms. *Ecol Appl* 2003; 13(3):829-841.
9. Brickle N, Harper D, Aebischer N, Cockayne S. Effects of agricultural intensification on the breeding success of corn buntlings *Miliaria calandra*. *J Appl Ecol* 2000; 37(5):742-755.
10. Brunelli E, Bernabò I, Berg C, *et al.* Environmentally relevant concentrations of endosulfan impair development, metamorphosis and behaviour in *Bufo bufo* tadpoles. *Aquat Toxicol* 2009; 91(2):135-142.
11. Buck JA, Brewer LW, Hooper MJ, Cobb GP, Kendall RJ. Monitoring great horned owls for pesticide exposure in south central Iowa. *J Wildl Monit* 1990; 60:321-331.
12. Buerger TT, Kendall RJ, Mueller BS, Vos Td, Williams BA. Effects of methyl parathion on northern bobwhite survivability. *Environ Toxicol Chem* 1991; 10(4):527-532.
13. Butler S, Vickery J, Norris K. Farmland biodiversity and the footprint of agriculture. *Science* 2007; 315(5810):381-384.
14. Casida JE, Quistad GB. Why insecticides are more toxic to insects than people: the unique toxicology of insects. *J Pestic Sci* 2004; 29(2):81-86.
15. Chamberlain DE, Fuller RJ. Local extinctions and changes in species richness of lowland farmland birds in England and Wales in relation to recent changes in agricultural land-use. *Agric Ecosyst Environ* 2000; 78:1-17.
16. Clark DR. DDT and the decline of free-tailed bats (*Tadarida brasiliensis*) at Carlsbad Cavern, New Mexico. *Arch. Environ. Contam Toxicol* 2001; 40(4):537-543.
17. Cooke AS, Bell AA, Prestt I. Eggshell characteristics and incidence of shell breakage for grey herons *Ardea cinerea* exposed to environmental pollutants. *Environ Pollut* 1976; 11:59-84.
18. Crivelli AJ, Marsili L, Focardi S, Renzoni A. Organochlorine compounds in pelicans (*Pelecanus crispus* and *Pelecanus onocrotalus*) nesting at Lake Mikri Prespa, north western Greece. *Bull Environ Contam Toxicol* 1999; 62(4):383-389.
19. Custer T, Hill E, Ohlendorf H. Effects on wildlife of ethyl and methyl parathion applied to California rice fields. *Calif Fish Game* 1985; 71(4):220-224.
20. Custer TW, Hines RK, Melancon MJ, Hoffman DJ. Contaminant concentrations and biomarker response in great blue heron eggs from 10 colonies on the upper Mississippi river, USA. *Environ Toxicol Chem* 1997; 16(2):260-271.
21. Dong YH, Wang H, An Q, *et al.* Residues of organochlorinated pesticides in eggs of water birds from Tai Lake in China. *Environ Geochem Health* 2004; 26(2-3):259-268.
22. Durda JL, Powell RA, Barthalmus GT. Physiological and behavioural effects of guthion on pine voles, *Microtus pinetorum*. *Bull Environ Contam Toxicol* 1989; 43:80-86.
23. Ecobichon DJ, Zelt D. The acute toxicity of fenitrothion in weaning rats and effects on tissue esterases and monooxygenases. *Toxicology* 1979; 13:287-296.
24. Edwards R, Millburn P, Hutson D. Comparative toxicity of cis-cypermethrin in rainbow trout, frog, mouse, and guail. *Toxicol Appl Pharmacol* 1986; 84(3):512-522.
25. Ernst W, Julien G, Henningar P. Contamination of ponds by fenitrothion during forest spraying. *Bull Environ Contam Toxicol* 1991; 46:815-821.
26. Fellers GM, McConnell LL, Pratt D, Datta S. Pesticides in mountain yellow-legged frogs (*Rana muscosa*) from the Sierra Nevada mountains of California, USA. *Environ Toxicol Chem* 2004; 23(9):2170-2177.
27. Floate KD, Bouchard P, Holroyd G, Poulin R, Wellicome TI. Does doramectin use on cattle indirectly affect the endangered burrowing owl. *Rangeland Ecol Manage* 2008; 61(5):543-553.
28. Forsyth DJ, Martin PA, Shaw GG. Effects of herbicides on two submersed aquatic macrophytes, *Potamogeton pectinatus* L. and *Myriophyllum sibiricum* Komarov, in a prairie wetland. *Environ Pollut* 1997; 95(2):259-268.

29. Fournier M, Robert J, Salo HM. Immunotoxicology of amphibians. *Appl Herpetol* 2005; 2:297-309.
30. Freedman B, Poirier A, Morash R, Scott F. Effects of the herbicide 2,4,5-T on the habitat and abundance of breeding birds and small mammals of a conifer clearcut in Nova Scotia. *Can Field-Nat* 1988; 102(1):6-11.
31. Freemark K, Boutin C. Impacts of agricultural herbicide use on terrestrial wildlife in temperate landscapes: A review with special reference to North America. *Agric Ecosyst Environ* 1995; 52(2-3):67-91.
32. Freemark K, Kirk DA. Birds on organic and conventional farms in Ontario: partitioning effects of habitat and practices on species composition and abundance. *Biol Conserv* 2001; 101(3):337-350.
33. Fyfe RW, Campbell J, Hayson B, Hodson K. Regional population declines and organochlorine insecticides in Canadian prairie falcons. *The Canadian Field Naturalist* 1969; 83:191-200.
34. Guruge KS, Tanabe S, Fukuda M, Yamagishi S, Tatsukawa R. Accumulation pattern of persistent organochlorine residues in common cormorants (*Phalacrocorax carbo*) from Japan. *Mar Pollut Bull* 1997; 44:186-193.
35. Hall RJ, Donald R, Clark J. Responses of the iguanid lizard *Anolis carolinensis* to four organophosphorus pesticides. *Environ Pollut A* 1982; 28:45-52.
36. Hardy AR, Westlake GE, Lloyd GA, *et al.* An intensive field trial to assess hazards to birds and mammals from the use of methiocarb as a bird repellent on ripening cherries. *Ecotoxicology* 1993; 2(1):1-31.
37. Harris ML, Elliott JE, Butler RW, Wilson LK. Reproductive success and chlorinated hydrocarbon contamination of resident great blue herons (*Ardea herodias*) from coastal British Columbia, Canada, 1977 to 2000. *Environ Pollut* 2003; 121:207-227.
38. Hayes T, Collins A, Lee M, *et al.* Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses. *Proc Natl Acad Sci USA* 2002; 99(8):5476-5480.
39. Henny CJ, Kolbe EJ, Hill EF, Blus LJ. Case histories of bald eagles and other raptors killed by organophosphorus insecticides topically applied to livestock. *J Wildl Dis* 1987; 23(2):292-295.
40. Hickey JJ, Hunt LB. Initial song bird mortality following a Dutch elm disease control program. *J Wildl Manage* 1960; 24:259-265.
41. Hill EF, Mendenhall VM. Secondary poisoning of barn owls with famphur, an organophosphate insecticide. *J Wildl Manage* 1980; 44(3):676-681.
42. Hinsley S, Bellamy P. The influence of hedge structure, management and landscape context on the value of hedgerows to birds: a review. *J Environ Manage* 2000; 60(1):33-49.
43. Holland JM, Southway S, Ewald JA, *et al.* Invertebrate chick food for farmland birds: spatial and temporal variation in different crops. *Aspects Appl Biol* 2002; 67:27-34.
44. Hooper MJ, Detrich PJ, Weisskopf CP, Wilson BW. Organophosphorous insecticide exposure in hawks inhabiting orchards during winter dormant-spraying. *Bull Environ Contam Toxicol* 1989; 42:651-659.
45. Hothem RL, Roster DL, King KA, *et al.* Spatial and temporal trends of contaminants in eggs of wading birds from San Francisco Bay, California. *Environ Toxicol Chem* 1995; 14(8):1319-1331.
46. Hyne RV, Spolyarich N, Wilson SP, *et al.* Distribution of frogs in rice bays within an irrigated agricultural area: links to pesticide usage and farm practices. *Environ Toxicol Chem* 2009; 28(6):1255-1265
47. Jett DA, Nichols JD, Hines JE. Effect of Orthene® on an unconfined population of the meadow vole (*Microtus pennsylvanicus*). *Can J Zool* 1986; 64(1):243-250.
48. Johnson IP, J. R. Flowerdew, R. Hare. Effects of broadcasting and of drilling methiocarb molluscicide pellets on field populations of wood mice, *Apodemus sylvaticus*. *Bull Environ Contam Toxicol* 1991; 46(1):84-91.
49. Johnston DW. Decline of DDT residues in migratory birds. *Science* 1974; 186:841-842.
50. King KA, Donald H, White, Christine A, Mitchell. Nest defense behavior and reproductive success of laughing gulls sublethally dosed with parathion. *Bull Environ Contam Toxicol* 1984; 33:499-504.
51. Kreitzer JF, Fleming WJ. Effects of monocrotophos and fenthion on discrimination acquisition and reversal in northern bobwhite (*Colinus virginianus*). *Environ Toxicol Chem* 1988; 7(3):237-240.
52. Lehner PN, Egbert A. Dieldrin and eggshell thickness in ducks. *Nature* 1969; 224(5225):1218-1219.
53. Linder G, Richmond ME. Feed aversion in small mammals as a potential source of hazard reduction for environmental chemicals: agrochemical case studies. *Environ Toxicol Chem* 1990; 9(1):95-105.
54. Martinez-Lopez E, Maria-Mojica P, Martinez JE, *et al.* Organochlorine residues in booted eagle (*Hieraetus pennatus*) and goshawk (*Accipiter gentilis*) eggs from southeastern Spain. *Environ Toxicol Chem* 2007; 26(11):2373-2378.
55. Maruya K, Smalling K, Mora M. Residues of toxaphene in insectivorous birds (*Petrochelidon* spp.) from the Rio Grande, Texas. *Arch Environ Contam Toxicol* 2005; 48(4):567-574.
56. Mineau P, Boag PT, Beninger RJ. Effects of fenitrothion on memory for cache-site locations in black-capped chickadees. *Environ Toxicol Chem* 1994; 13(2):281-290.

57. Mora MA, Anderson DW. Seasonal and geographical variation of organochlorine residues in birds from northwest Mexico. *Arch Environ Contam Toxicol* 1991; 21:541-548.
58. Mora MA. Transboundary pollution: persistent organochlorine pesticides in migrant birds of the southwestern United States and Mexico. *Environ Toxicol Chem* 1997; 16(1):3-11.
59. Morris RD. The effects of endrin on *Microtus* and *Peromyscus*. I. Unenclosed field populations. *Can J Zool* 1970; 48(4):685-708.
60. Newton I. Changes attributed to pesticides in the nesting success of the sparrowhawk in Britain. *J Appl Ecol* 1974; 11:95-102.
61. Peakall D. *Animal Biomarkers as Pollution Indicators*. Cornwall: Chapman & Hall; 1992.
62. Peakall DB. DDE: its presence in peregrine eggs in 1948. *Science* 1974; 183:673-674.
63. Pomeroy SE, Barrett GW. Dynamics of enclosed small mammal populations in relation to an experimental pesticide application. *Am Midland Nat* 1975; 93(1):91-106.
64. Rattner BA, Hoffman DJ, Melancon MJ, *et al.* Organochlorine and metal contaminant exposure and effects in hatching black-crowned night herons (*Nycticorax nycticorax*) in Delaware Bay. *Arch Environ Contam Toxicol* 2000; 39(1):38-45.
65. Relyea RA, Diecks N. An unforeseen chain of events: lethal effects of pesticides on frogs at sublethal concentrations. *Ecol Appl* 2008; 18(7):1728-1742.
66. Robinson RA, Wilson JD, Crick HQP. The importance of arable habitat for farmland birds in grassland landscapes. *J Appl Ecol* 2001; 38(5):1059-1069.
67. Roelofs W, Croker DR, Shore RF, *et al.* Case study Part 2: Probabilistic modelling of long-term effects of pesticides on individual breeding success in birds and mammals. *Ecotoxicology* 2005; 14(8):895-923.
68. Rouse JS, Bishop CA, Struger J. Nitrogen pollution: an assessment of its threat to amphibian survival. *Environ Health Perspect* 1999; 107(12):799-803.
69. Sheffield SR, Lochmiller RL. Effects of field exposure to diazinon on small mammals inhabiting a semienclosed prairie grassland ecosystem. I. Ecological and reproductive effects. *Environ Toxicol Chem* 2001; 20(2):284-296.
70. Sibly RM, Akçakaya HR, Topping CJ, O'Connor RJ. Population-level assessment of risks of pesticides to birds and mammals in the UK. *Ecotoxicology* 2005; 14(8):863-876.
71. Smith B, Holland J, Jones N, *et al.* Enhancing invertebrate food resources for skylarks in cereal ecosystems: how useful are in-crop agri-environment scheme management options? *J Appl Ecol* 2009; 46(3):692-702.
72. Smith TM, Stratton GW. Effects of synthetic pyrethroid insecticides on nontarget organisms. *Residue Rev* 1986; 97:93-120.
73. Soliman S. Comparative studies on the neurotoxicity of organophosphorus compounds in different animal species. *Neurotoxicology* 1983; 4(4):107-116.
74. Stehn RA, Stone JA, Richmond ME. Feeding response of small mammal scavengers to pesticide-killed arthropod prey. *Am Midland Nat* 1976; 95(1):253-256.
75. Stone W, Overmann S, Okoniewski J. Intentional poisoning of birds with parathion. *Condor* 1984; 86(3):333-336.
76. Story P, Cox M. Review of the effects of organophosphorus and carbamate insecticides on vertebrates. Are there implications for locust management in Australia? *Wildl Res* 2001; 28(2):179-193.
77. Tanabe S, Iwata H, Tatsukawa R. Global contamination by persistent organochlorines and their ecotoxicological impact on marine mammals. *Sci Total Environ* 1994; 154:163-177.
78. Tomizawa M, Casida J. Neonicotinoid insecticide toxicology: mechanisms of selective action. *Annu Rev Pharmacol Toxicol* 2005; 45:247-268.
79. Trudeau S, Mineau P, Cartier GS, *et al.* Using dried blood spots stored on filter paper to measure cholinesterase activity in wild avian species. *Biomarkers* 2007; 12(2):145-154.
80. White DH, Kirke A. King, Christine A. Mitchell, *et al.* Parathion causes secondary poisoning in a laughing gull breeding colony. *Bull Environ Contam Toxicol* 1980; 23(1):281-284.
81. Wiemeyer SN, Porter RD. DDE thins eggshells of captive American kestrels. *Nature* 1970; 227:737-738.