

Chernobyl and Fukushima Publications

Most Recent Publications:

Møller, A.P., A. Bonisoli-Alquati, G. Rudolfson, T.A. Mousseau. 2012. Elevated mortality among birds in Chernobyl as judged from biased sex and age ratios. **PLoS One**, 7(4): e35223. doi:10.1371/journal.pone.0035223

Møller, A.P., Hagiwara, A., Matsui, S., Kasahara, S., Kawatsu, K., Nishiumi, I., Suzuki, H., Ueda, K., Mousseau, T.A. 2012. Abundance of birds at Fukushima as judged from Chernobyl. *Environmental Pollution*, 164, 36-39.

Mousseau, T.A., and A.P. Møller. 2011. Landscape portrait: A look at the impacts of radioactive contaminants on Chernobyl's wildlife. **Bulletin of the Atomic Scientists**, 67(2): 38-46. (DOI: 10.1177/0096340211399747)

Møller, A. P., and T.A. Mousseau. 2011. Conservation consequences of Chernobyl and other nuclear accidents. **Biological Conservation**, 144:2787-2798.

Møller, A. P., A. Bonisoli-Alquati, G. Rudolfson, and T.A. Mousseau. 2011. Chernobyl birds have smaller brains. *PLoS One* 6(2): e16862. doi:10.1371/journal.pone.0016862 (pdf)

Beasley, D.A.E., A. Bonisoli-Alquati, S.M. Welch, A. P. Møller, T.A. Mousseau. Effects of parental radiation exposure on developmental instability in grasshoppers (*Chorthippus albomarginatus*). **Journal of Evolutionary Biology**, in press.

Population and Community Effect:

Møller, A.P., Hagiwara, A., Matsui, S., Kasahara, S., Kawatsu, K., Nishiumi, I., Suzuki, H., Ueda, K., Mousseau, T.A. 2012. Abundance of birds at Fukushima as judged from Chernobyl. *Environmental Pollution*, 164, 36-39.

Møller, A.P., A. Bonisoli-Alquati, G. Rudolfson, T.A. Mousseau. 2012. Elevated mortality among birds in Chernobyl as judged from biased sex and age ratios. **PLoS One**, 7(4): e35223. doi:10.1371/journal.pone.0035223

Mousseau, T.A., and A.P. Møller. 2011. Landscape portrait: A look at the impacts of radioactive contaminants on Chernobyl's wildlife. **Bulletin of the Atomic Scientists**, 67(2): 38-46. (DOI: 10.1177/0096340211399747)

Møller, A. P. and T.A. Mousseau. 2010. Efficiency of bio-indicators for low-level radiation under field conditions. *Ecological Indicators*,

doi:10.1016/j.ecolind.2010.06.013 (pdf)

Møller, A.P., and T.A. Mousseau. 2009. Reduced abundance of insects and spiders linked to radiation at Chernobyl 20 years after the accident. *Biology Letters of the Royal Society* 5(3): 356-359. (pdf)

Møller, A.P., T.A Mousseau. 2007. Species richness and abundance of forest birds in relation to radiation at Chernobyl. *Biology Letters of the Royal Society*, 3: 483-486. (pdf)

Møller, A.P., T.A Mousseau. 2007. Determinants of Interspecific Variation in Population Declines of Birds after Exposure to Radiation at Chernobyl. *Journal of Applied Ecology*, 44: 909-919. (pdf)

Møller, A. P., and T.A. Mousseau. 2011. Conservation consequences of Chernobyl and other nuclear accidents. **Biological Conservation**, 144:2787-2798.

Møller, A. P., T.A Mousseau. 2008. Reduced abundance of raptors in radioactively contaminated areas near Chernobyl. *Journal of Ornithology*, 150(1):239-246. (pdf)

Galvan, I., T.A. Mousseau, and A.P. Møller. 2010. Bird population declines due to radiation exposure at Chernobyl are stronger in species with pheomelanin-based colouration. **Oecologia**, doi:10.1007/s00442-010-1860-5

Møller, A.P., J. Erritzoe, F. Karadas, and T. A. Mousseau. 2010. Historical mutation rates predict susceptibility to radiation in Chernobyl birds. *Journal of Evolutionary Biology*, doi:10.1111/j.1420-9101.2010.02074.x (pdf)

Czirjak, G.A., A.P. Møller, T.A. Mousseau, P. Heeb. 2010. Micro-organisms associated with feathers of barn swallows in radioactively contaminated areas around Chernobyl. *Microbial Ecology* 60:373-380 (DOI: 10.1007/s00248-010-9716-4). (pdf)

Møller, A.P., T. A. Mousseau. 2006. Biological consequences of Chernobyl: 20 years after the disaster. *Trends in Ecology and Evolution*, 21: 200-207. (pdf)

Møller, A.P., K. A. Hobson, T. A. Mousseau and A. M. Peklo. 2006. Chernobyl as a population sink for barn swallows: Tracking dispersal using stable isotope profiles. *Ecological Applications*, 16:1696-1705. (pdf)

Møller, A.P., T. A. Mousseau, G. Milinevsky, A. Peklo, E. Pysanets and T. Szép. 2005. Condition, reproduction and survival of barn swallows from Chernobyl. *Journal of Animal Ecology*, 74: 1102-1111. (pdf)

Møller, A.P. and T.A. Mousseau. 2011. Rigorous methodology for studies of effects of radiation from Chernobyl on animals and humans. **Biology Letters** of the Royal Society.

Developmental Abnormalities (Birth Defects, Visible Mutations, Morphological Effects):

Møller, A.P., T.A. Mousseau, F. de Lope, and N. Saino. 2007. Elevated frequency of abnormalities in barn swallows from Chernobyl. *Biology Letters of the Royal Society*, 3: 414-417. (pdf)

Møller, A. P., A. Bonisoli-Alquati, G. Rudolfsen, and T.A. Mousseau. 2011. Chernobyl birds have smaller brains. *PLoS One* 6(2): e16862. doi:10.1371/journal.pone.0016862 (pdf)

Møller, A.P., T. A. Mousseau. 2006. Biological consequences of Chernobyl: 20 years after the disaster. *Trends in Ecology and Evolution*, 21: 200-207. (pdf)

Møller, A. P., and T. A. Mousseau. 2003. Mutation and sexual selection: A test using barn swallows from Chernobyl. *Evolution*, 57: 2139-2146. (pdf)

Møller, A. P. and T. A. Mousseau . 2001. Albinism and phenotype of barn swallow of barn swallows (*Hirundo rustica*) from Chernobyl. *Evolution*, 55: 2097-2104. (pdf)

Møller, A. P., Surai, P., and T. A. Mousseau. 2004. Antioxidants, radiation and mutations in barn swallows from Chernobyl. *Proceedings of the Royal Society, London*, 272: 247-252. (pdf)

Genetic, Mutational, and Developmental Effects:

Beasley, D.A.E., A. Bonisoli-Alquati, S.M. Welch, A. P. Møller, T.A. Mousseau. Effects of parental radiation exposure on developmental instability in grasshoppers (*Chorthippus albomarginatus*). **Journal of Evolutionary Biology**, in press.

Møller, A. P., and T.A. Mousseau. 2011. Conservation consequences of Chernobyl and other nuclear accidents. **Biological Conservation**, 144:2787-2798.

Bonisoli-Alquati, A., A.P. Møller., G. Rudolfsen, N. Saino, M. Caprioloi, S. Ostermiller, T.A. Mousseau. 2010. The effects of radiation on sperm swimming behavior depend on plasma oxidative status in the barn swallow (*Hirundo rustica*). **Comparative Biochemistry and Physiology - Part A - Molecular & Integrative Physiology**, 159: 105-112 (DOI: 10.1016/j.cbpa.2011.01.018)

Møller, A.P., J. Erritzoe, F. Karadas, and T. A. Mousseau. 2010. Historical mutation rates predict susceptibility to radiation in Chernobyl birds. *Journal of Evolutionary Biology*, doi:10.1111/j.1420-9101.2010.02074.x (pdf)

- Bonisoli-Alquati, A., A. Voris, T. A. Mousseau, A. P. Møller, N. Saino, and M. Wyatt. 2009. DNA damage in barn swallows (*Hirundo rustica*) from the Chernobyl region detected by the use of the Comet assay. *Comparative Biochemistry and Physiology*, in press. (pdf)
- Bonisoli-Alquati, A., T. A. Mousseau, A. P. Møller, M. Caprioli, and N. Saino. 2009. Increased oxidative stress in barn swallows from the Chernobyl region. *Comparative Biochemistry and Physiology. Part A: Molecular & Integrative Physiology*, in press. (pdf)
- Møller, A. P., T.A. Mousseau and G. Rudolfson. 2008. Females affect sperm swimming performance : a field experiment with barn swallows *Hirundo rustica*. *Behavioral Ecology* 19(6):1343-1350. (pdf)
- Møller, A. P., F. Karadas, & T. A. Mousseau. 2008. Antioxidants in eggs of great tits *Parus major* from Chernobyl and hatching success. *J. Comp. Physiol. B.* 178:735-743. (pdf)
- Kravets A.P., T.A. Mousseau, Omel'chenko1 Zh. A., Kozeretska I.A., Vengjen G.S. 2009. Dynamics of hybrid dysgenesis frequency in *Drosophila melanogaster* following controlled protracted radiation exposure. *Cytology and Genetics*, in press (in Russian).
- Kravets A.P., Mousseau T.A., Litvinchuk A.V., Ostermiller S., Vengjen G.S. 2009. Wheat seedlings DNA methylation pattern changes at chronic seeds γ - irradiation. *Cytology and Genetics*, in press (in Russian).
- Kozeretska, I.A., A.V. Protsenko, E.S. Afanas'eva, S.R. Rushkovskii, A.I. Chuba, T.A. Mousseau, and A.P. Moller. 2008. Mutation processes in natural populations of *Drosophila melanogaster* and *Hirundo rustica* from radiation-contaminated regions of Ukraine. *Cytology and Genetics* 42(4) : 267-271. (pdf)
- Gashak, S.P., Y.A. Maklyuk, A.M. Maksimenko, V.M. Maksimenko, V.I. Martinenko, I.V. Chizhevsky, M.D. Bondarkov, T.A. Mousseau. 2008. The features of radioactive contamination of small birds in Chernobyl Zone in 2003-2005. *Radiobiology and Radioecology* 48: 27-47.(Russian). (pdf)
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- Møller, A. P., T. A. Mousseau, F. de Lope and N. Saino. 2008. Anecdotes and empirical research in Chernobyl. *Biology Letters*, 4:65-66. (pdf)
- Møller, A.P. T.A Mousseau . 2007. Birds prefer to breed in sites with low radioactivity in Chernobyl. *Proceedings of the Royal Society*, 274:1443-1448. (pdf)

Tsyusko, O.V., M.B. Peters, C. Hagen, T.D. Tuberville, T.A. Mousseau, A.P. Moller and T.C. Glenn. 2007. Microsatellite markers isolated from barn swallows (*Hirundo rustica*). *Molecular Ecology Notes*, 7: 833-835. (pdf)

Møller, A. P., Surai, P., and T. A. Mousseau. 2004. Antioxidants, radiation and mutations in barn swallows from Chernobyl. *Proceedings of the Royal Society, London*, 272: 247-252. (pdf)

Impacts on Human Populations:

Svendsen, E.R., I.E. Kolpakov, Y.I. Stepanova, V.Y. Vdovenko, M.V. Naboka, T.A. Mousseau, L.C. Mohr, D.G. Hoel, W.J.J. Karmaus. 2009. ¹³⁷Cesium exposure and spirometry measures in Ukrainian children affected by the Chernobyl nuclear incident. *Environmental Health Perspectives*, 118:720-725. (pdf) .

Stepanova, E., W. Karmaus, M. Naboka, V. Vdovenko, T. Mousseau, V. Shestopalov, J. Vena, E. Svendsen, D. Underhill, and H. Pastides. 2008. Exposure from the Chernobyl accident had adverse effects on erythrocytes, leukocytes, and, platelets in children in the Narodichesky region, Ukraine. A 6-year follow-up study. *Environmental Health*, 7:21. (pdf)

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Shestopalov, V., M. Naboka, E. Stepanova, E. Skvarska, T. Mousseau, and Y.Serkis. 2004. Risk assessment of morbidity under conditions with different levels of radionuclides and heavy metals. *Bulletin of the Chernobyl Zone* 24(2): 40-47. (In Ukrainian). (pdf)