

Article (refereed) - postprint

Beresford, N.A.; Adam-Guillermin, C.; Bonzom, J.-M.; Garnier-Laplace, J.; Hinton, T.; Lecomte, C.; Copplestone, D.. 2012 Comment on “Abundance of birds in Fukushima as judged from Chernobyl” by Møller et al. (2012). *Environmental Pollution*, 169. 136. [10.1016/j.envpol.2012.05.011](https://doi.org/10.1016/j.envpol.2012.05.011)

Copyright © 2012 Elsevier Ltd.

This version available <http://nora.nerc.ac.uk/18832/>

NERC has developed NORA to enable users to access research outputs wholly or partially funded by NERC. Copyright and other rights for material on this site are retained by the rights owners. Users should read the terms and conditions of use of this material at <http://nora.nerc.ac.uk/policies.html#access>

NOTICE: this is the author's version of a work that was accepted for publication in *Environmental Pollution*. Changes resulting from the publishing process, such as peer review, editing, corrections, structural formatting, and other quality control mechanisms may not be reflected in this document. Changes may have been made to this work since it was submitted for publication. A definitive version was subsequently published in *Environmental Pollution* 169. 136. [10.1016/j.envpol.2012.05.011](https://doi.org/10.1016/j.envpol.2012.05.011)

Contact CEH NORA team at
noraceh@ceh.ac.uk

1 Letter to Editor

2 **Letter to Editor regarding: “Abundance of birds in Fukushima as judged from**
3 **Chernobyl” by Møller et al. (2012)**

4 Dear Sir,

5 During the year since the accident at the Fukushima Daiichi nuclear power plant, there have
6 been some published modelling exercises which have suggested that wildlife in the most
7 contaminated areas may be impacted by exposure to radiation. We are therefore pleased to
8 see that Møller et al. (2012) are undertaking relevant field research and publishing results.

9 Møller et al. conclude that there is a stronger negative impact on birds in areas close to
10 Fukushima than they have previously observed in the area around the Chernobyl nuclear
11 power plant. The paper is interesting, however, it raises a number of questions that readers
12 cannot address because of incomplete information. Whilst we recognise that the brevity may,
13 in part, be due to the nature of this ‘Rapid Communication’ it is unfortunate, and we
14 encourage *Environmental Pollution* to assist its readership in collaboration with the authors.

15 The paper addresses the important issue of the effects of environmentally relevant levels of
16 radioactivity and potentially challenges the current scientific understanding of the chronic
17 effects of ionising radiation on wildlife (UNSCEAR 2010). Therefore, it is important to avoid
18 confusion over the interpretation of the data discussed in the paper, particularly because the
19 local human population need clear, well supported, information. We recommend that
20 *Environmental Pollution* encourages the authors to make available all of the underlying data
21 for their Fukushima study and provide further clarity on their statistical approach. This could
22 readily be achieved by supplying additional supplementary material linked to the article on-
23 line. For instance, there is no information given on contamination levels or dose rates in the
24 study areas near the Fukushima plant. The observations include both positive and negative
25 slopes linking species abundance and level of radioactivity with little consideration given to
26 the positive slopes. This may be justified by the underlying data, but the reader is unable to
27 determine whether this is the case from the data as presented.

28 We hope that *Environmental Pollution* and the authors will agree to our suggestion of greater
29 transparency. Twenty-six years after the Chernobyl accident there is considerable controversy
30 over the interpretation of observations relating to environmental effects in the Chernobyl
31 exclusion zone. We must avoid this situation from also occurring with respect to Fukushima.
32 Our suggestion is a step towards achieving this which we hope the authors will welcome.

33 **References**

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

37 United Nations Committee on the Effects of Atomic Radiation (UNSCEAR) 2010. Sources
38 and effects of ionising radiation. UNSCEAR 2008. Report to General Assembly. United
39 Nations, New York.

40

41 **N.A. Beresford***

42 Centre for Ecology & Hydrology, Lancaster Environment Centre, Library Av., Bailrigg,
43 Lancaster, LA1 4AP, United Kingdom.

44 **C. Adam-Guillermin, J-M Bonzom, J. Garnier-Laplace, T. Hinton, C. Lecomte**

45 Institut de Radioprotection et de Sûreté Nucléaire, SERIS, CEN Cadarache—Bâtiment 159,
46 BP 3, 13115 Saint-Paul-lez-Durance, France

47 **D. Coplestone**

48 School of Natural Sciences, University of Stirling, Stirling FK9 4LA, United Kingdom

49 *Corresponding author, email:nab@ceh.ac.uk

50