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Radioactive Cs Accumulations in Wildlife (Some Species of Birds and Mammals) Collected from Eastern Part of Nihonmatsu City, Fukushima Prefecture, Japan

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Summary

Radioactive Cs (^{134}Cs and ^{137}Cs) concentrations were measured in various organs and tissues of wild animals (Four species of mammals and 3 species of birds) collected from eastern part of Nihonmatsu City in Fukushima Prefecture, during 2011 to 2013. Muscular concentrations of radioactive Cs were higher than the other organs and tissues such as liver and kidney. However, the tissues which has important role such as brain and reproductive gland showed comparative concentrations of radioactive Cs. Decreasing trends of radioactive Cs in body of wildlife were observed from in April of 2011 to end of 2013. In the other hand, species inhabiting in forest tended to keep relatively high levels of radioactive Cs.

Concentrations of radioactive Cs in great cover of birds were higher than those in other parts of feather such as breast feathers. Clearly high concentrations were observed in vane of feather when comparing with those of shaft. These findings suggest that feather samples of birds are effective parts as indicator of exterior pollution of their habitat and also suggest that air pollution of radioactive Cs still continued during on 2012 and 2013. Relative higher concentrations of radioactive Cs were detected in the body of piglets than those of mother of Japanese wild boar and comparative concentrations were observed in the egg albumen and yolk of spot-billed duck. These were suggested that radioactive Cs can transfer to fetus and eggs from mother's body and pollution may continue through generations. Therefore, the continual monitoring using wildlife is require strongly for evaluation of ecological risks and human health.

Key Words: Species specific accumulation, Tissue distribution, Distribution in avian feather,
Monitoring of air pollution, Temporal trend
