



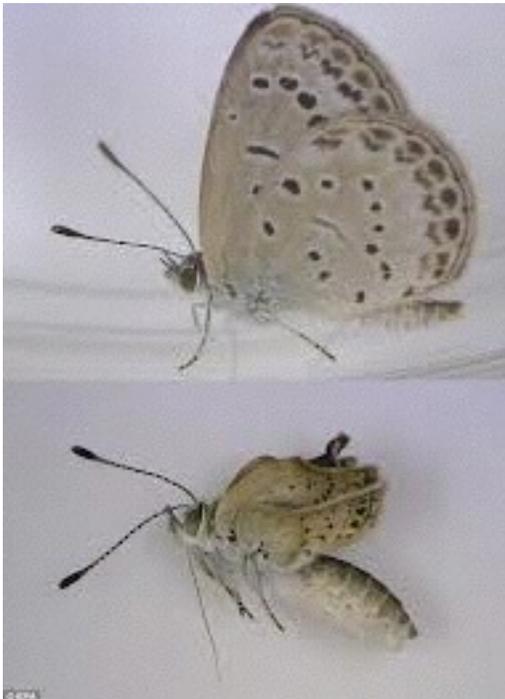
## BEYOND NUCLEAR BACKGROUNDER

Plants and animals show damage after nuclear disasters  
Lessons from TMI  
March 7, 2014

After the radiation release from Three Mile Island, a number of plants exhibited [strange mutations](#) including extra large leaves (gigantism), double-headed blossoms and other anomalies. Damage of this type in plants further supports the human blood tests, which showed higher radiation releases.

Initially after Chernobyl, radiation releases killed pine trees turning their needles red. These trees were burned to death with gamma radiation from the accident. Dubbed the [“Red Forest”](#) it remains one of the most radioactive places on earth, despite the fact that the dead trees were bulldozed over. Lesser-exposed pine trees [suffered damage](#) including [gigantism](#) and trunk discoloration precisely at the growth ring for the disaster year (1986). Increases in physical abnormalities after the Chernobyl accident [have continued](#) to be passed on to the offspring with no clear indication of [adaptation](#) to radiation exposure.

After Fukushima, researchers reported [deformed butterflies](#). They conclude “we conclude that the radionuclide contamination from the Fukushima Dai-ichi NPP caused harmful effects on *Z. maha* [pale grass blue butterfly] at physiological and genetic levels” and the “results are consistent with other field studies performed in [Chernobyl](#) and [Fukushima](#).”



In addition to initial damage from radiation exposure, studies (summarized in 1998) of Chernobyl animal populations living in chronic low-dose radiation show an [increase in radiosensitivity](#) among those whose ancestors were exposed. This indicates that successive generations could be less able to cope with the same degree of exposure as their parents were and that, for certain animal species, there is no genetic adaptation to mutations from low-dose, chronic, man-made radiation exposure—the kind received from nuclear power whether or not there is an accident.

*The pale grass blue butterfly (top) is a healthy adult compared to the mutated variety (bottom) with shriveled wings.*