Geophysical Research Abstracts
Vol. 15, EGU2013-13863, 2013
EGU General Assembly 2013

Behavioural response in subterranean and semi-aquatic invertebrates following experimental simulation of pre-seismic changes

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When tectonic stresses build up in the Earth's crust, highly mobile electronic charge carriers are activated which cause a range of follow-on reactions when they arrive at the Earth's surface, primarily air ionization and at the rock-water interface oxidation of water to hydrogen peroxide. Anecdotal reports of many earthworms appearing at the ground surface and behavioural changes in toads before earthquakes suggests that these animals may be reacting to environmental changes. This paper reports the results of experimental work, with subterranean and semi-aquatic invertebrates, simulating these pre-earthquake changes.