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## SOIL SEED BANK AND ITS RELATIONSHIP TO THE ABOVE-GROUND VEGETATION IN GRAZED AND UNGRAZED OXBOW WETLANDS OF THE YANGTZE RIVER, CHINA

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### Abstract

Livestock grazing may have a great effect on both standing vegetation and soil seed bank. The present study investigated the characteristics of the soil seed bank and determined its relationship to the above-ground vegetation in grazed and ungrazed sites in the Hei-wa-wu oxbow wetland of the Yangtze River, China. A total of 3700 seedlings across 59 species germinated from the soil seed bank. Annuals and terrestrial species dominated the soil seed banks of both grazed and ungrazed sites. Grazing had no significant effect on the seed density and species richness, but altered the species composition of soil seed bank. Grazing tended to increase the floristic similarity between the soil seed bank and the above-ground vegetation. DCA ordination produced a clear separation of the soil seed bank and above-ground vegetation. Our results suggest that soil seed bank and its relation to standing vegetation in the Hei-wa-wu oxbow wetland are strongly influenced by livestock grazing.

*Key words:* flooding, human disturbance, vegetation, Yangtze River

*Received:* October, 2012; *Revised final:* February, 2014; *Accepted:* February, 2014; *Published in final edited form:* April 2018

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