

Supplementary material

Land use alters soil propagule banks of wetlands down the soil-depth profile

Samantha K Dawson^{A,B,F}, *Jane A Catford*^C, *Peter Berney*^D, *Richard T Kingsford*^B,
and Samantha Capon^E

^ASwedish Species Information Centre, Swedish University of Agricultural Sciences,
Box 7007, SE-75007 Uppsala, Sweden.

^BCentre for Ecosystem Science, School of Biology, Earth and Environmental Science,
UNSW, Sydney, NSW 2052, Australia.

^CDepartment of Geography, King's College London, Strand, London, WC2R 2LS, UK.

^DNSW National Parks and Wildlife Service, Narrabri, NSW 2390, Australia.

^EAustralian Rivers Institute, School of Environment and Science, Griffith University,
Nathan, Qld 4111, Australia.

^FCorresponding author. Email: samantha.k.dawson@gmail.com

Information reproduced from Dawson *et al.* (2017a).

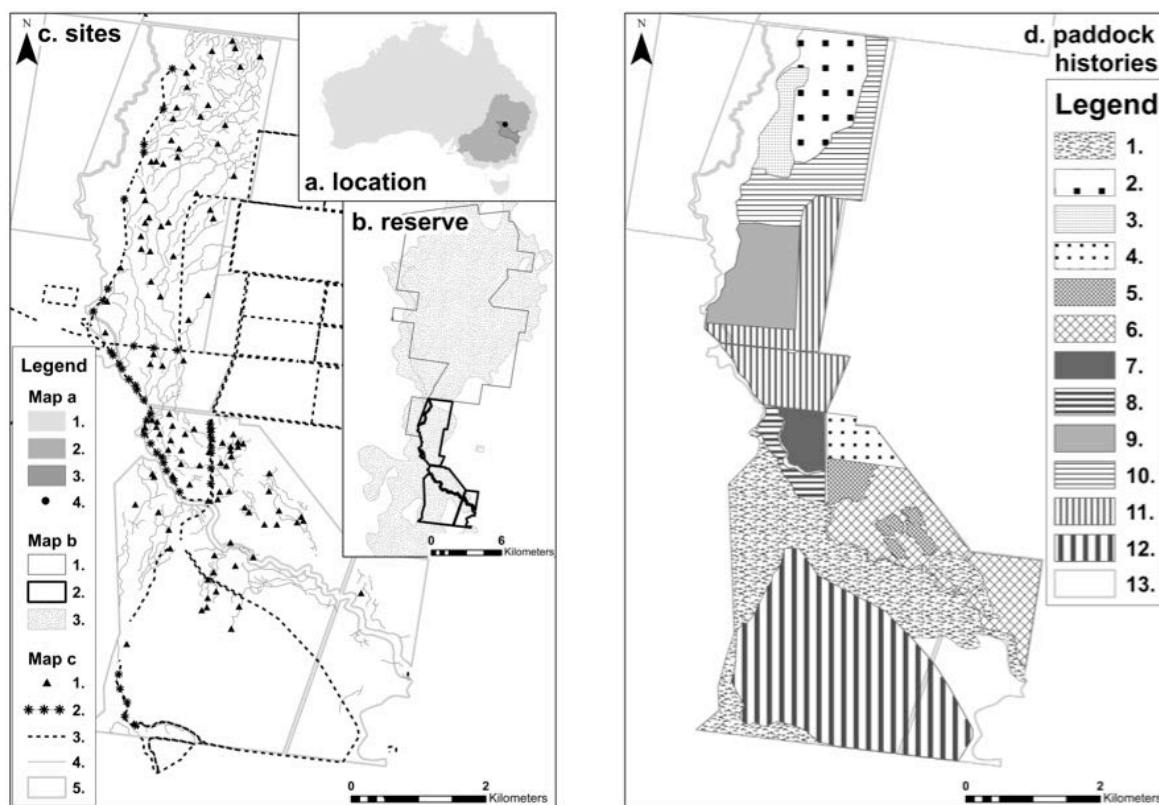


Fig. S1. Maps of the sampling area, sites and field history: (a) Australia (1), Murray–Darling Basin (2), Macquarie Catchment (3) and the location of the Macquarie Marshes (4). (b) Northern Reserve, key: 1. Macquarie Marshes Northern Nature Reserve; 2. Pillicawarrina Reserve; 3. regularly inundated area. (c) Site locations with restoration measures and marsh channels, key: (1) sampling sites, (2) levee breaches and culvert improvements made in 2009, (3) levees and embankments, (4) marsh channels derived from LIDAR-based DEMs, (5) nature reserve boundary (inc. Pillicawarrina). (d) Fields within the Pillicawarrina Reserve; bold fields were sampled at a range of soil depths as part of the study, key: (1) not cleared (some ringbarking in the 1950s), (2) bulldozed 2000, (3) bulldozed 2002, (4) bulldozed and ploughed 2003, (5) chain cleared 1982, (6) chain cleared 1998, (7) cultivated 2002, 2004, 2006, (8) cultivated 2003, (9) cultivated 2005–2007, (10) cultivated 2006, (11) cultivated 1985–2008, (12) cultivated 1997–2009, (13) nature reserve boundary.

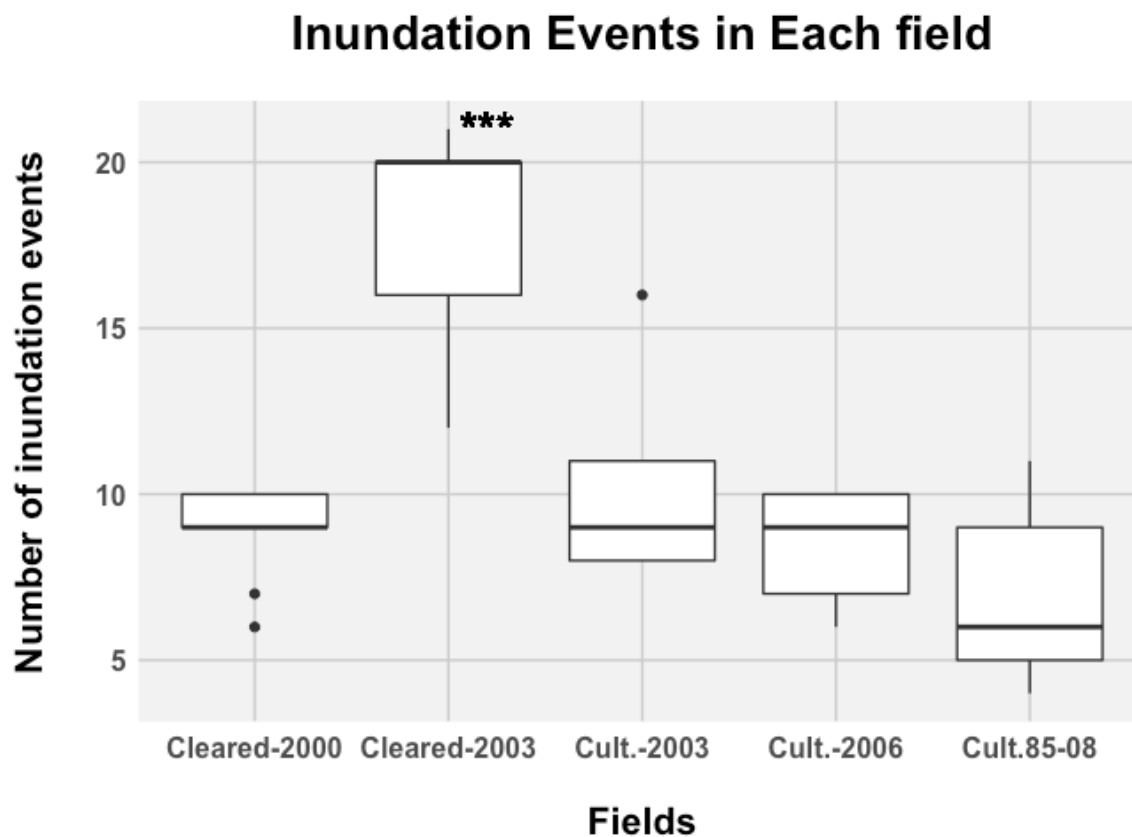


Fig. S2. Boxplot showing the number of flood events for the sites in each field. Floods were recorded from the 32 events that occurred in the 25 years before soil collection (Dawson *et al.* 2017b). ***, $P > 0.001$ for the difference between the Clear. 2003 field and all other fields, by a Tukey HSD test. The differences between the other fields were not significant.

References

- Dawson, S. K., Kingsford, R. T., Berney, P., Catford, J. A., Keith, D. A., Stoklosa, J., and Hemmings, F. A. (2017a). Contrasting influences of inundation and land use on the rate of floodplain restoration. *Aquatic Conservation* **27**(3), 663–674. [doi:10.1002/aqc.2749](https://doi.org/10.1002/aqc.2749)
- Dawson, S. K., Kingsford, R. T., Berney, P., Keith, D. A., Hemmings, F. A., Warton, D. I., Waters, C., and Catford, J. A. (2017b). Frequent inundation helps counteract land use impacts on wetland propagule banks. *Applied Vegetation Science* **20**, 459–467. [doi:10.1111/avsc.12295](https://doi.org/10.1111/avsc.12295)