

Study shows effect of feral buffalo on Kakadu

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Dr Lynda Prior recording data on tree cover in the savanna at the Buffalo Farm.

The ecological effect of feral buffalo on Kakadu National Park has been the focus of a research study by a team of prominent Charles Darwin University researchers.

Research fellow with CDU's School for Environmental Research (SER), Dr Lynda Prior, Adjunct Professor SER, Professor David Bowman, Lecturer Geographical Information Systems, Dr Guy Boggs and SER PhD candidate, Caroline Lehmann, recently published their ground-breaking paper in the Journal of Biogeography.

The study investigated the changes in woody vegetation in both floodplains and eucalypt savanna over a 40-year period using spatial analysis of variation in density of feral buffalo in Kakadu National Park.

Dr Prior said the study revealed that although the density of woody vegetation on the floodplain had increased during the 40-year study period, buffalo were not the major cause.

“The correlation between the densities of feral buffalo and the prevalence of woody cover in Kakadu National Park was weak,” she said.

“Rather, the observed increases in woody cover in both savanna and flood plains concords with regional trends and may be related to an increased level of atmospheric CO₂, increasing rainfall and changing fire regimes during the study period.”

Professor Bowman said that feral buffalo built up to high densities in Kakadu until 1985, after which a control program almost eliminated the animals.

“In 1990, a buffalo farm was established within Kakadu National Park to supply meat to traditional owners, to compensate for the loss of the wild buffalo,” he said.

“However, these buffalo were at much lower densities than the feral buffalo had been, and were managed to minimise environmental impacts.

“Our study compared trends in woody vegetation when buffalo were high-density feral, low-density managed or absent.”

The study analysed sequences of digitised and geo-rectified aerial photographs acquired from dates up to 2004 to chart changes in woody cover on the floodplain and in the savanna.

Provided by Charles Darwin University

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