

Saddling up against the threat to our National Parks

November 7 2013

Research team leader, Associate Professor Catherine Pickering, said the Griffith study looked at the number and types of weed seeds which can be dispersed through horse manure. The findings have been published in the journal *Ecological Management and Restoration*.

"We reviewed 15 studies on [seed germination](#) from horse dung; six from Europe, four from North America, three from Australia and one study each from Africa and Central America," Associate Professor Pickering said.

"Of the 2739 non-native plants that are naturalised in Australia, 156 have been shown to germinate in horse dung. What is very concerning is this includes 16 of the 429 listed [noxious weeds](#) in Australia and two weeds of national significance."

The study found a similar threat is emerging overseas with seeds from 105 of the 1596 invasive/noxious [plant species](#) in North America also germinating in horse dung.

"Not only are the seeds dispersed through dung but the manure provides the means by which the introduced plant to take hold," Associate Professor Pickering said.

"Habitat disturbance from trampling has been demonstrated to further facilitate the germination of seedlings from dung in both natural and experimental studies."

The study highlights the range of plant species which have the potential to be dispersed over long distances but the extent to which this dispersal is harmful depends on the individual plant species.

Some [plants](#) germinate from dung and go on to reach maturity and flower, while others germinate but don't survive.

But there are other factors to consider.

"Additional threats come in the form of trampled soils and vegetation, nutrient addition via dung and urine, and changing hydrology via damage to riverine systems," Associate Professor Pickering said.

"To maintain the conservation value of protected areas, it is vitally important to understand and manage the different potential weed dispersal vectors, including horses.

"Legislators everywhere should take these into consideration before opening parks to this recreational activity."

Provided by Griffith University

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