

## **Research Note**

# **Minimal-Impact Education Can Reduce Actual Impacts of Park Visitors**

Minimising visitor impacts is a critical component of protected-area management. Teaching visitors to reduce impacts is preferred to enforcing regulations. But does education actually reduce impacts? Marion and Reid (2007) recently reviewed this question in this journal. They found only two studies that measured changes in site conditions following minimal-impact education, both in the USA. In fact, the effectiveness of minimal-impact education in reducing actual impacts of park visitors has been tested in Australia using controlled experiments (Littlefair, 2003, 2004).

The education programme tested involved verbal interpretation by skilled guides working with ecotourists in World Heritage rainforest. Education for different groups taking the same guided walk was modified experimentally to include five levels: a control group with no environmental information; general environmental education but no minimal-impact information; verbal appeal for specific behaviours; role model demonstration by the guide, and both appeal and role model.

Actual impacts were measured using three parameters that could be zeroed between tours: noise, litter and shortcutting. Each programme was replicated for a number of tours. Actual behaviour was observed covertly during each tour, and impacts and self-reported behaviour measured immediately afterwards.

There were five main results: (1) Minimal-impact education can indeed reduce actual visitor impacts, (2) Education only reduces some types of impacts, (3) Environmental education without minimal-impact messages does not reduce impacts, (4) Different interpretive approaches are differentially effective for different types of impact, (5) Self-reported behaviour did not match actual observed behaviour, so results from studies relying solely on self-reported behaviour must be treated with caution.

These results apply for verbal interpretation for guided ecotourists, not necessarily for signs or leaflets aimed at the general public. We need to test for different types of visitors, impact, and educational materials. And, since wilfully uncaring visitors can produce much more impact than informed caring visitors, parks will still need laws and rangers.

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**References**

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