Faecal Indicators and Zoonotic Pathogens in Household Drinking Water Taps Fed from Rainwater Tanks

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Introduction
- Around 15% of Australian people use rainwater for potable and non-potable uses.
- Studies have reported the presence of pathogens in rainwater tanks. Possums and birds have been suspected as possible sources of contamination.

Aims
- Investigate the numbers of Escherichia coli, enterococci, Campylobacter spp. Salmonella spp. C. lamblia and C. parvum in rainwater tanks and connected household taps.
- Investigate the prevalence of above pathogens in faecal samples from possums and various species of birds.

Materials and Methods
- 24 households were surveyed in this study.
- Two water samples (one from tank and one from household tap) were collected from each household.
- Each sample was tested for the numbers of faecal indicators and pathogens.
- Possums (n = 40) and birds (n = 38) faecal DNA samples were also screened for the above pathogens.

Results
- E. coli numbers in rainwater tanks and tap water samples ranged from 1 to 230 and 1 to 300 CFU per 100 mL, respectively.
- Enterococci numbers in rainwater tanks and tap water ranged from 2 to 110 and 1 to 110 CFU per 100 mL, respectively.

Conclusions
- Household tap waters fed from rainwater tanks appear to be highly variable.
- Rainwater should be disinfected prior to drinking.

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