

Weed Wide Web: Surveillance of Online Trade in Declared Plants

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Summary The trade of plants is a major source of invasive species introductions and establishment. In Australia, a large-scale informal plant trade is facilitated by publicly accessible e-commerce websites. This unregulated trade has enabled a rapidly emerging pathway for the spread of invasive plant species (weeds). The trade of declared weeds is illegal and presents biosecurity professionals with a unique set of problems and significant challenges to address. Thus far, investigations of the online weed trade are done on an ad hoc basis by biosecurity professionals manually searching websites. In response, we have developed a semi-automated method utilising web scrapers to systematically capture the online plant trade. We match search terms based on scientific, common and trade names with text from online plant advertisements to detect weeds being traded. Visual identification with listing images is used to verify detections. Our aim is to quantify and describe the trade to better understand trade dynamics and participant motivations.

Preliminary results show the online trade of weed species is frequent and widespread, with illegal trade present in all states and territories. To date, we have detected more than 100 different species of declared weeds traded online. Cacti, aquatic plants and horticulturally popular, yet invasive, species are the most traded weeds. Misidentification of plants and the use of generic (non-scientific) names by traders is common. This behaviour suggests an overall lack of awareness of the species being traded, their legal status, and the potential consequences of trading a declared weed. Culinary, medicinal and other uses for plants are purported by sellers, providing insight into the desire for certain weeds. These insights and the methodology developed for this project will provide biosecurity professionals with the information and tools required to detect illegal sales and therefore prevent future weed incursions.

Keywords E-commerce, web scraping, online trade, internet, detection, surveillance