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Conference Abstract

Limited public engagement with plant invasions in national parks on Twitter

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Abstract

Protected areas (PAs) are key instruments for conserving biodiversity and can act as partial barriers against the regional spread of alien species. Yet, the number of invasive alien species and the magnitude of their impacts on PAs are increasing globally, creating an urgent need to expand effective management actions. Increased public interest in biological invasions in PAs may lead to greater support for their management.

To assess current public interest, we extracted and analysed data from Twitter, now known as X, which was one of the most popular microblogging social media platforms during the study period. First, we extracted all tweets posted between 2010 and 2020 that contained the scientific name of any plant species recorded as naturalised anywhere in the world, or the term “invasive species”, together with the name of any national park globally and the term “national park”. This approach allowed us to capture potential mentions of species across both their native and non-native ranges. Mentions of species in their native ranges were identified and flagged in the dataset.

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Additionally, using Kruger National Park, South Africa, one of the most widely known protected areas globally, as a case study, we extracted all tweets posted between 2010 and 2020 that contained the term “Kruger” together with: 1) the scientific name of any of the 146 taxa recorded in the recently updated naturalised alien flora of the park; 2) the genus name of some of the most well-known naturalised plant species in the park, some of which also function as common names; and 3) the term “invasive species”.

We found very few relevant tweets. Only 240 tweets mentioned the names of 55 national parks together with the terms “invasive species” and “national park”, of which 185 were unique tweets. Additionally, only ten national parks had at least five tweets. Most of these tweets reported information on the invasion and impacts of invasive species or expressed support for their management. The national park with the most tweets was Crater Lake National Park, Oregon, USA. Many of these tweets supported the decision to close the park to scuba divers to protect it from the introduction of alien species.

Overall, these results suggest that the general public may not be highly interested in, or concerned about, biological invasions in national parks. For Kruger National Park, we obtained 194 tweets containing the terms “invasive species” and “Kruger”. Of these, 70 were unique tweets, of which 40 mentioned alien species in Kruger National Park. Of these 40 tweets, 29 shared results from research conducted in the park, eight were posted by news magazines or organisations focused on public outreach, and three were posted by citizens concerned about alien plant invasions in the park.

However, public interest during the study period was also likely to be context dependent, as some protected areas are more strongly associated with other biodiversity crises, such as poaching. In some iconic national parks in Africa, the viewing of charismatic animals is also the main public focus. Nonetheless, given the high number of tourists visiting protected areas globally and the substantial invasive alien species burden in many protected areas, there is considerable scope for invasive alien species to be mentioned more frequently on platforms such as Twitter.

Keywords

Invasion culturomics, invasive alien species, awareness, societal interest, social media

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Conflicts of interest

The authors have declared that no competing interests exist.