

Changing our attitudes towards invasive 'alien' species

February 9 2017, by Susanna Lidström



Introduced to Australia in 1935 as a means to combat pestilent beetles as an alternative to rampant pesticide use, the cane toad adapted rapidly to its new home wreaking havoc and devastation in its wake.

We often hear that complex environmental problems need to be communicated better – that scientists need to tell 'arresting stories'



before governments and the public will act. But arresting stories can also be profoundly damaging – they are often arresting because they tie-in with taken-for-granted fears, prejudices, and premature judgments. To address and manage environmental change, we need to pay close attention not only to how we act, but also to how we think about nature, and the stories we use to understand it.

Invasive alien species are widely perceived to be a serious threat to global biodiversity. Local "vigilante" volunteer groups enthusiastically take matters into their own hands, ripping up hated invaders such as Japanese Knotweed and smashing cane toads with baseball bats. The media frequently broadcasts eye-catching headlines about 'alien invaders' that are 'coming to get us.' Why, when attempts to address so many other environmental threats are making little headway, does everyone seem to agree about – and be willing to act against – invasive alien species?

In a recent <u>research article</u> we (an international team of environmental management and humanities scholars) suggest that at least part of the answer lies in the term 'invasive aliens.' The way the question is phrased makes few answers possible. Who would not choose to fight against an invading alien? But far from being a 'success story,' the notion of invasive alien species fuels dangerous ideas about the <u>natural world</u>, and is in fact symbolic of our failure to respond appropriately and thoughtfully to complex <u>environmental change</u>.





Removal of invasive species can be costly and labor-intensive. Credit: U.S. Fish and Wildlife Service

Why? The concept of invasive alien species steer our thoughts towards countless science fiction films about space invaders – where characters are easily identified in terms of "good versus evil", "native versus foreign", "belonging and not-belonging". The concept also builds on out-dated, idealised views of the natural world, evoking images of harmonious and balanced native ecosystems that are suddenly interrupted and threatened by 'un-natural' intruders – scenarios far from the complex and interconnected workings of actual ecosystems.

Contemporary science tells us that ecosystems are not characterised by balance or harmony, but rather by change and randomness There is no



objective criterion that makes a species 'good' or 'evil,' 'alien' or 'native.' Describing a species as one or the other requires drawing arbitrary boundaries in space and time. But biodiversity does not recognise national borders. In the USA, South Africa, Australia and other colonised territories, the desired 'natural' state tends to be equated with the time of discovery by Europeans. But these 'pristine' landscapes were often intensively managed by indigenous peoples over thousands of years. There is no clear-cut way to separate 'natural' from 'un-natural' ecosystems, even if human impact is taken as the sole indicator. Many cherished 'natural' ecosystems have been shaped by human activities for centuries or more. Neither is there conclusive evidence showing that introduced species routinely impact existing ecosystems in a negative way. In fact, <u>a recent study</u> suggests that where new species thrive, so do natives.

Nevertheless these ideas are extremely powerful. The binary thought that native = beneficial and foreign = harmful produces a story where the desire to eradicate <u>invasive species</u> appears self-explanatory and unquestionable, as well as achievable. It forms a story that, as geographer <u>Charles Warren notes</u>, "....make[s] intuitive sense in our heads." The ecologist <u>Brendan Larson</u> points out that the concept is an "exemplary performative metaphor," supporting clear responses that are automatically centred on resistance and eradication. It makes us feel empowered and in control: the sense that we are 'doing something.' But this is a fallacy. In <u>South Africa</u>, after twenty years of alien eradication through the flagship Working for Water programme, there are likely more alien species today than when the attempt to eradicate them began. And that is not necessarily a bad thing.





The German wasp is just one of many invasive species in South Africa that are competing with endemic species.

The story about invasive alien species makes sense to us because it is based on persistent, simplistic ways of framing complex processes of change – whether in ecosystems or in human societies. The way the alien species metaphor describes ecosystem change in terms of static, inherent identities corresponds to how human migration is often discussed. Indeed, research suggests that the invasive alien concept is especially widespread in South Africa because it plays into a post-apartheid desire to forge a sense of national identity – a desire that has produced occasional waves of xenophobic violence against migrants from other southern African states. In Europe, calls for stronger border controls and



heightened security employ similar terms whether referring to fears of terrorists, refugees from the Middle East, or 'invasive' plants or animals.

We are not arguing that the phrase invasive alien species is an inherently racist concept – but the elements that make the concept effective emerge from the same impulse to deal with complexity through xenophobia: bounding the world in strict, categorical identities, and portraying the relationship between people, species and places in essentialist terms. Some invasion biologists may argue that this is just semantics, and ask whether unique biodiversity should be allowed to be destroyed in favour of 'alien' monocultures. That would be beside the point. The point is that the concept of invasive <u>alien species</u> simply does not help us understand how nature works, but instead promotes aggressive ways of relating to our environment, and siphons resources that might be better spent elsewhere.

We make sense of the world through stories. The story of <u>invasive alien</u> <u>species</u> is powerful because it plays to pre-existing cultural fears, persistent but out-dated ideas about nature, and a desire for order and control. But it does not help us navigate the rapid biodiversity changes the world is experiencing. To do this we need to transform and update the stories and metaphors we use to understand nature. All stories frame the world in particular ways, opening up some possibilities and closing down others. We need to closely interrogate the work that they do.

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