Identity crisis? News reports on invasive species feature misleading images of unrelated organisms

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Public interest in invasive species and their impacts on ecosystems is steadily growing, fuelled by scientific efforts1 and heightened media coverage. News outlets play a crucial role in raising awareness and garnering public support for invasive species management. This increased attention presents an opportunity for scientists to celebrate greater engagement with these critical issues.

One significant challenge, however, lies in ensuring that the images featured in media reports on invasive species accurately portray those species, instead of other unrelated organisms. This is a pertinent issue for reports on invasive species of lesser known and diverse groups, such as many invertebrates. Problems are especially likely to occur when journalists are only provided with common names and lack access to accurate images of the organisms. This tends to promote the undesirable sourcing of images from stock image repositories, which can contain vast inaccuracies.

Consider recent media coverage on the Red Imported Fire Ant (Solenopsis invicta), one of the world’s most damaging and widespread invasive species2. Mainstream news reports from the past year discussing S. invicta infestations in Australia3,4, Asia5 and Europe6,8 featured images depicting a variety of other ant species (Fig. 1), all of which were incorrectly identified as ‘Fire Ant’ in the captions. The credits of many images suggested they were sourced from stock image repositories such as iStock (istockphoto.com) and Getty Images (gettyimages.com). In an image search for ‘Red Imported Fire Ant’ on these two platforms, only three out of the top 40 images depicted ants of the ‘Fire Ant’ genus Solenopsis; all others displayed species from morphologically and taxonomically distinct genera (e.g. Atta, Formica, Iridomyrmex, Myrmica, Oecophylla, Pogonomyrmex, Tapinoma) (Fig. 1).

The repercussions of these inaccurate depictions of the wrong organisms as invasive species in news reports are nontrivial. They can perpetuate negative stereotypes about native species, misdirect management efforts, or cause unwarranted public alarm. For
instance, one article\textsuperscript{5} from a leading news outlet in Southeast Asia described the severe medical effects of venomous stings of \textit{S. invicta}, yet featured an image of \textit{Oecophylla smaragdina}, a common native ant species which not only lacks a sting, but moreover plays key roles in multiple ecosystem functions in the region\textsuperscript{9}.

At a fundamental level, scientific inaccuracies in media reports damage scientific credibility. The persistence of taxonomic inaccuracies and confusion in media reports on the serious issue of biological invasions risks eroding public trust in conservation initiatives.

As scientists, we should take proactive measures to mitigate the spread of taxonomic inconsistencies in the media. Unfortunately, once an article is published in the rapid news cycle, identifying and rectifying errors becomes arduous. Therefore, it is crucial to establish effective communication with journalists from the outset.

As far as possible, we should provide journalists with accurate images that emphasise distinctive features which can aid in species identification. If such images are not in our possession, we can point journalists to reliable taxon-specific image repositories\textsuperscript{10} or photographers and illustrators with taxonomic expertise. At bare minimum, we should provide journalists with species’ scientific names, underscore the importance of using these consistently, and explain the pitfalls of exclusively using common names.

Addressing taxonomic inconsistencies in the media ultimately requires concerted efforts from both scientists and journalists. By working together to promote accuracy and transparency in media portrayals, we can safeguard the integrity of ecological science and bolster effective conservation practices. This collaboration not only enhances public understanding but also strengthens support for vital conservation efforts worldwide.


\textbf{REFERENCES}

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FIGURES

A ‘Red Imported Fire Ant’ according to...

Scientists

Mainstream Media
e.g. The Guardian, The Telegraph, Channel News Asia, Euro News

Stock Image Repositories
e.g. Getty Images, iStock

Figure 1. Mainstream news reports on invasive species feature misleading images of unrelated organisms. Multiple media reports on infestations by the Red Imported Fire Ant (Solenopsis invicta) in
Asia, Australia and Europe over the past year featured inaccurate images depicting ant species from a variety of other genera. Such images tend to be sourced by journalists from stock image repositories, which contain numerous images of ant species incorrectly labelled ‘Red Imported Fire Ant’. Scientists can take proactive steps to mitigate the spread of taxonomic inaccuracies in mainstream media. All images obtained from AntWeb (photographer April Nobile).