

ALA helps to stop pests in their tracks

The Atlas of Living Australia (ALA) and its large network of biodiversity data providers are helping our national biosecurity system to protect Australia's flora and fauna from the threat of invasive species.



The ALA's Biosecurity Alert System

Australia is one of the most biodiverse continents on the planet, but the health of our environment, and agriculture, is under constant threat from introduced and invasive species. International border controls and quarantine measures are an important barrier to biosecurity threats, but inevitably some pests, weeds and diseases elude these controls. As such, early detection of biosecurity threats post-border is crucial to effectively eradicating or managing biosecurity threats in Australia.

The ALA is Australia's largest open-source biodiversity data infrastructure with more than 850 data providers and 132 million occurrence records, including both native and exotic species.

As such, the ALA is often the first platform where new species incursions are publicly recorded in Australia.

However, until recently, there was no automated method for notifying biosecurity agencies of these threats.

To ensure biosecurity agencies are notified of new incursions, the ALA has collaborated with the Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) to develop the ALA's Biosecurity Alerts System. This system provides email notification to users of occurrences of invasive species for which they have an environmental, animal or plant health concern. Since 2020, the ALA has sent more than over 1,000 notifications of occurrences of possible biosecurity concern to the Department.

The ALA is now working to expand the Biosecurity Alerts System and are actively engaging governments at all levels to partner with us.

We are working closely with users to improve and refine the Alerts functionality, and have now developed spatially specific alert notifications defined by users such as state/territory boundaries and biosecurity zones. We are also actively seeking new sources of biosecurity data to further enhance the value of the alerts system.

The ALA's Biosecurity Alerts System provides unique access to aggregated biosecurity data and complements existing methods of surveillance to further bolster biosecurity incursion surveillance. Learn about some of ALA's other biosecurity initiatives at <https://www.ala.org.au/biosecurity>



The Asian shore crab (*Hemigrapsus sanguineus*) is considered a biosecurity threat to Australia, and was detected in Victoria in 2020. Image credit: This image was taken in the USA and uploaded to iNaturalist by Chris Alice Kratzer (CC-BY-SA)

Providing an extra layer of biosecurity defense

The value of the ALA's Biosecurity Alerts System has already been demonstrated through the detection of multiple new incursions of pests and weeds in Australia. For example, a suspected sighting of the Asian shore crab (*Hemigrapsus sanguineus*) by a member of the public on Port Phillip Bay in Victoria was uploaded as a record into the ALA and provided the earliest available alert of the incursion.

Furthermore, detections of both Red Imported Fire Ants (*Solenopsis invicta*) and Mouse-ear hawkweed (*Hieracium pilosella*) reported through the ALA have assisted efforts to eradicate these threats in Australia. These episodes have demonstrated that the ALA notification system can provide over nine months earlier warning of an incursion than would otherwise have been detected.

Early awareness of incursions into Australia by exotic species provide the best scenario for implementing successful management and eradication programs. If left unchecked, exotic species can spread rapidly and compete with native flora and fauna.

The Biosecurity Alerts System also includes a facility to validate and amend reports, which can be important for clarifying Australia's pest status.

Citizen science apps such as iNaturalist, among others, feed data into the ALA and directly contribute to the national biosecurity surveillance system.

"The ALA alert system is simple and is proving to be an important asset to our operational capability," said Andrew Pearce, from DAFF's Environmental Biosecurity Office. **"This is a layer of defence we haven't had before and it has excellent potential for further development and expansion to deliver a low cost biosecurity surveillance and monitoring capability"** he said.

ALA's Biosecurity Alerts System is an excellent example of how the ALA provides trusted biodiversity data to support biosecurity program managers and deliver better outcomes for Australia's environment and industries.



For more information visit ala.org.au or contact support@ala.org.au