Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

CENTRE FOR INVASIVE SPECIES SOLUTIONS

Biocontrol across borders : Coordinating a nation-wide mass-rear and release network in Australia

XVII International Symposium on Biological Control of Weeds

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Centre for Invasive Species Solutions

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ACKNOWLEDGEMENT OF COUNTRY

The Centre for Invasive Species Solutions (CISS) acknowledges the continuing connection of Aboriginal and Torres Strait Islander peoples to culture, Country and community in Australia and pays respect to the Elders past, present and emerging.

We are committed to caring for Country by protecting Australia's unique biodiversity, landscapes, and cultural heritage from the impact of invasive species. We commit to including Aboriginal and Torres Strait Islander Australians as the Original Custodians of Country and holders of deep ecological knowledge and sophisticated land management practices in our efforts to sustain Australia's landscapes and ecosystems.

We also acknowledge Māori as tangata whenua and Treaty of Waitangi partners in Aotearoa New Zealand, and offer our respect to the mana whenua of the land on which we meet today.

Nation-wide weed biocontrol mass-rearing and release network for enhanced drought resilience in Australia's agricultural landscapes

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AGRICULTURE VICTORIA

Queensland Government

CSIRO

NSW GOVERNMENT

Project Partners

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This project received funding from the Australian Government's Future Drought Fund

Nation-wide weed biocontrol mass-rearing and release network for enhanced drought resilience in Australia's agricultural landscapes

- 5 year project (July 2025 - June 2030)
- $6 million funding from FDF, plus $5 million from partners
- 7 target weeds (6 WONS)
- 9 biocontrol agents
- 4 delivery partners
- Hundreds of enabling partners

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Outcomes

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- Increased ability of landholders to manage priority weed threats at a landscape scale
- Improved landscape function and resilience to drought
- Strong collaborative networks between farmers and other stakeholders to foster collective learning, capacity-building and knowledge sharing

Key elements

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Cross-jurisdictional	◦National and state-level approvals ◦No local govt level approvals
Harmonised monitoring program	◦No standardised monitoring protocol ◦Long-term monitoring has been ad hoc
Australian Weed Biocontrol Network	◦Community of practice ◦Centralised sharing of knowledge

Legislation - South Australia

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- Plants and certain related items (e.g. growing media) may require treatment or be subject to other requirements for **entry into SA**
- Movement of **declared weed material** across and within state borders may require a permit
- A scientific research permit is required if **research is to be carried out** in any of the state's protected areas
- SA will be **shifting to a new Biosecurity Act** and requirements may change

Harmonised Monitoring

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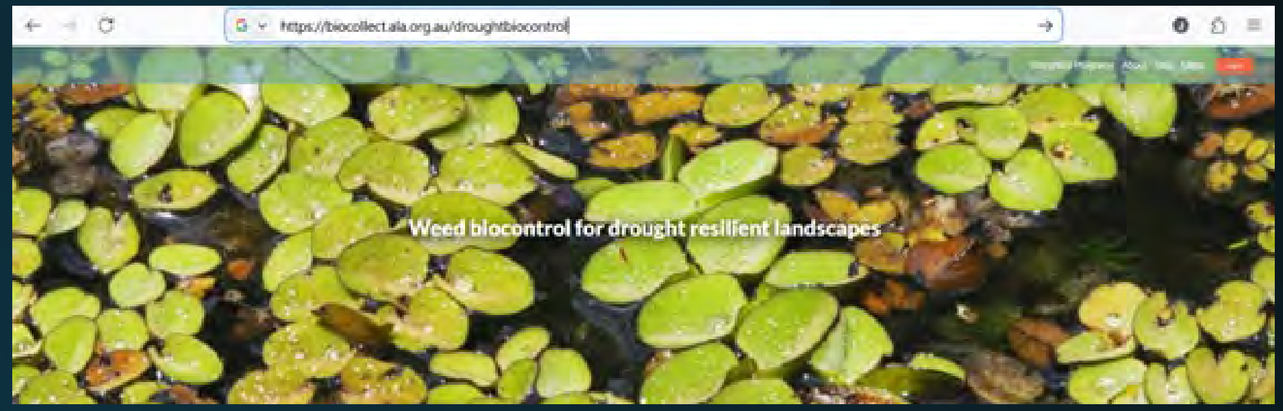
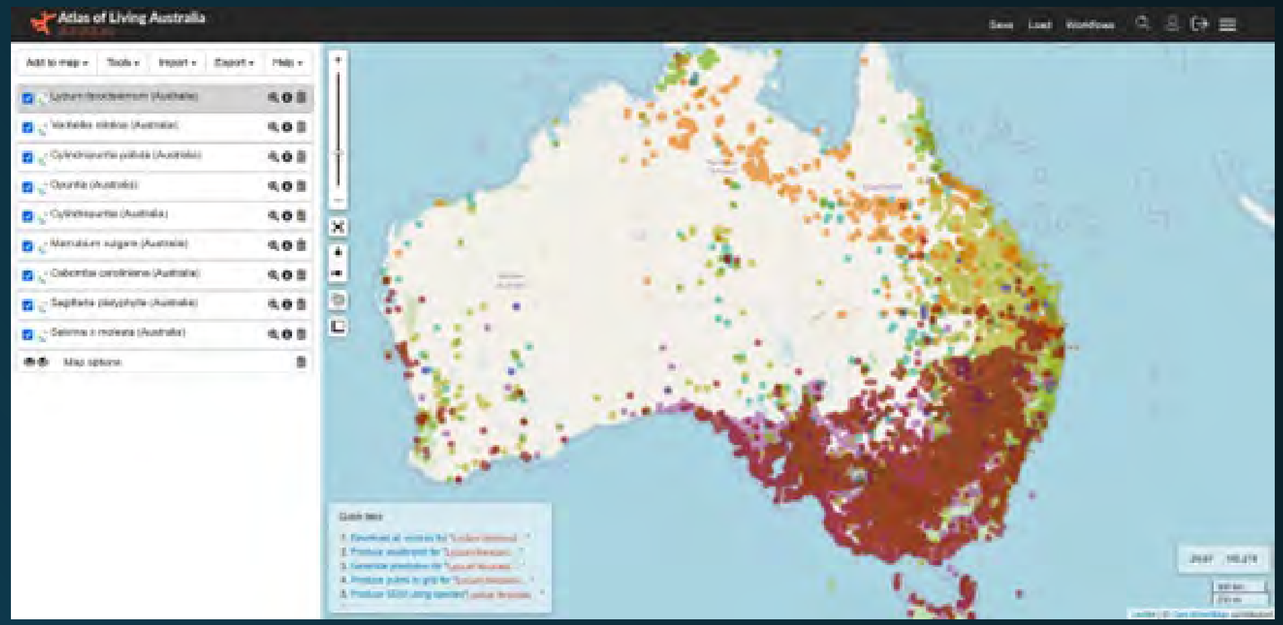
BioCollect platform (currently in prototype form with limited functionality) portal will support coordinated field data collection by Delivery Partners and Enabling Partners





Australian Weed Biocontrol Network

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- National community of practice
- Allows for sharing experience and improve access to hard-won knowledge for land managers and scientists
    - where/how to access biocontrol agents
    - inter-jurisdictional approvals
    - expected ‘success’ of an agent
    - how to conduct and report monitoring programs

Cabomba

33

Sites established

1331

Units distributed

170

Stakeholders reached

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Delivery Partners: NSW DPIRD & CSIRO

Invasive weed: Cabomba caroliniana (cabomba)

Biocontrol agent: Hydrotimetes natans, a stem-boring weevil

Cabomba weevil (left) and cabomba, from presentation at 23rd NSW Weed Conference, Port Macquarie, 4 - 7 August 2025.

Cabomba

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David Officer (NSW DPIRD) sampling water quality, plant biomass and weevil presence at Nana Glen, NSW (29 January 2026)

Nathan Pugh (NSW DPIRD) releasing *Hydrotimetes natans* weevils (Nov 2025) at a Cabomba study site at Glenugie, NSW.

November 2025, CSIRO undertook a field release of cabomba weevils in Lake Kurwongbah (QLD) in partnership with SEQwater

Horehound

20 Sites established

500 Units distributed

167 Stakeholders reached

CENTRE FOR INVASIVE SPECIES SOLUTIONS

Delivery Partners: AgVic, NSW DPIRD

Invasive weed: Marrubium vulgare (horehound)

Biocontrol agent: Chamaesphecia mysiniformis, the Horehound Clearwing moth

Horehound clearwing moth, image provided by AgVic

Horehound

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First release of the horehound clearwing moth at Gunbower forest in Dec 2025, using egg sticks

Looking for potential horehound clearwing moth release/monitoring sites with staff from North Central Catchment Management Authority

Opuntioid Cacti

16 Sites established

15,900 Units distributed

74 Stakeholders reached

CENTRE FOR INVASIVE SPECIES SOLUTIONS

Delivery Partners: QDPI and NSW DPIRD

Invasive weed: Opuntia genera (Opuntioid cacti)

Biocontrol agents:

Lagocheirus funestus (Brown prickly pear longicorn beetle), Dactylopius tomentosus (californica var. parkeri), a cochineal insect, and Coenopoeus palmeri (longicorn beetle)

Infected segments during mass-rearing. Image provided by QDPI

Lagocheirus funestus releases in South Australia – Wallaroo by Northern & Yorke Landscape Board. Photo Credit: Nick Nicollas, N&Y Landscape Board

Opuntioid Cacti

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Castlereagh Macquarie County Council Staff help to monitor Hudson pear cochineal impact at Cumborah, NSW on 12 November 202

QDPI Biosecurity staff releasing the Hudson pear cochineal at Cooladdi, QLD, Dec 2025

Opuntioid Cacti

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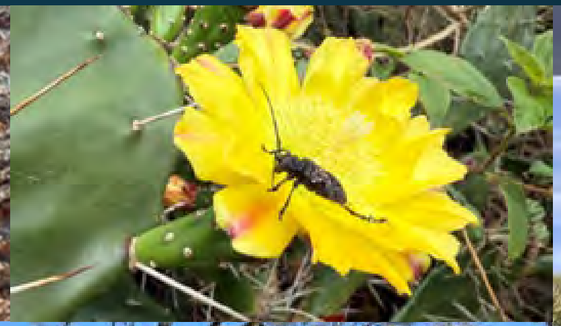
Lagocheirus funestus releases in South-west Queensland by Biosecurity Queensland (QDPI) staff, Clarence River NSW and South Australia. Photo Credit QDPI, NSW DPIRD & SA Landscape Board



Opuntioid Identification and Best Practice Workshop, delivered by NSW DPIRD

Prickly Acacia

Queensland Government

25 Sites established

10,000 Units distributed

15 Stakeholders reached

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Delivery Partners: QDPI

Invasive weed: Vachellia nilotica (Prickly Acacia)

Biocontrol agent: Acaciothrips ebneri, a gall thrip

Prickly Acacia gall thrip in QDPI rearing facilities. Image thanks to John Virtue

A field day in Hughenden (NW Qld) in Oct 2025, with 15 properties attending

Prickly acacia

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Community engagment - prickly acacia. Images from QDPI

Sagittaria

33

Sites established

500

Units distributed

180

Stakeholders reached

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Delivery Partners: NSW DPIRD and AgVic

Invasive weed: Sagittaria platyphylla (Sagittaria)

Biocontrol agent: Listronotus appendiculatus, a fruit-feeding weevil

Sagittaria infestation in an irrigation channel in NSW.

Sagittaria weevil - image thanks to Rae Kwong

Sagittaria

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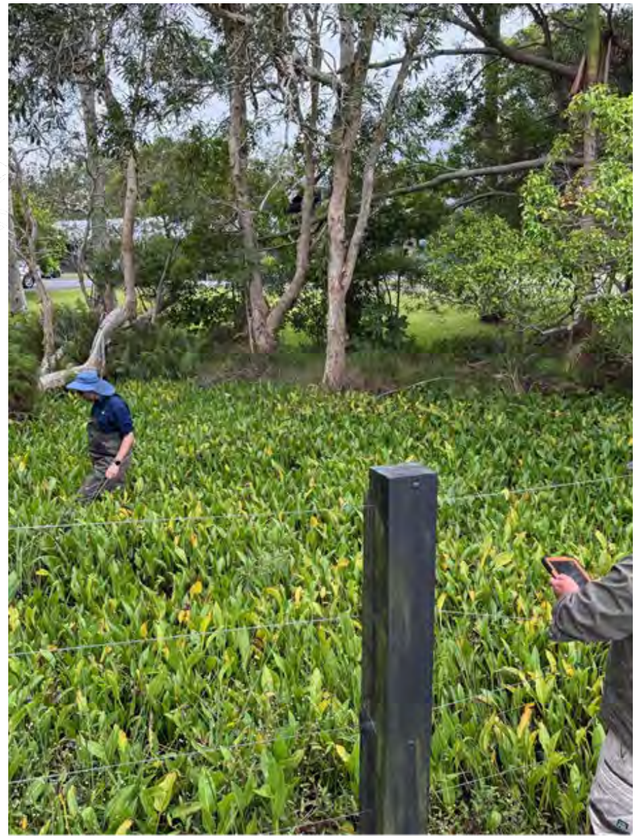
AgVic and NSW DPIRD staff, collecting Listronotus appendiculatis and evaluating their impact on Sagittaria at Byron Bay, NSW

Sagittaria weevil release in an irrigation channel in NSW.



Nathan Pugh and Paddy Stanton (NSW DPIRD) evaluating the abundance of Listronotus appendiculatis and its impact on Sagittaria at Byron Bay, NSW

Salvinia

33 Sites established

6000 Units distributed

50 Stakeholders reached

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Delivery Partners: NSW DPIRD and NT DLPE

Invasive weed: Salvinia molesta (Salvinia)

Biocontrol agent: Cyrtobagous salviniae, a growth-tip feeding weevil

Salvinia infestation covering 100% of the surface at a long-term study site, a farm dam in Lawrence, NSW, Nov 2025

Same location, Feb 2026

Salvinia

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Salvinia

3

Training days

11

Indigenous rangers attending

Northern Territory Government staff assist with monitoring Salvinia at Byron Bay, NSW on 12 Nov 2025

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Salvinia

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Group photo at Byron Bay wetlands of personnel from NSW DPIRD, NT Government, Parks Australia, Djurrubu Rangers, Malak Malak rangers, and consultants involved at Byron Bay wetlands - Nov 2025

African boxthorn

40

Sites identified

0

Units distributed

436

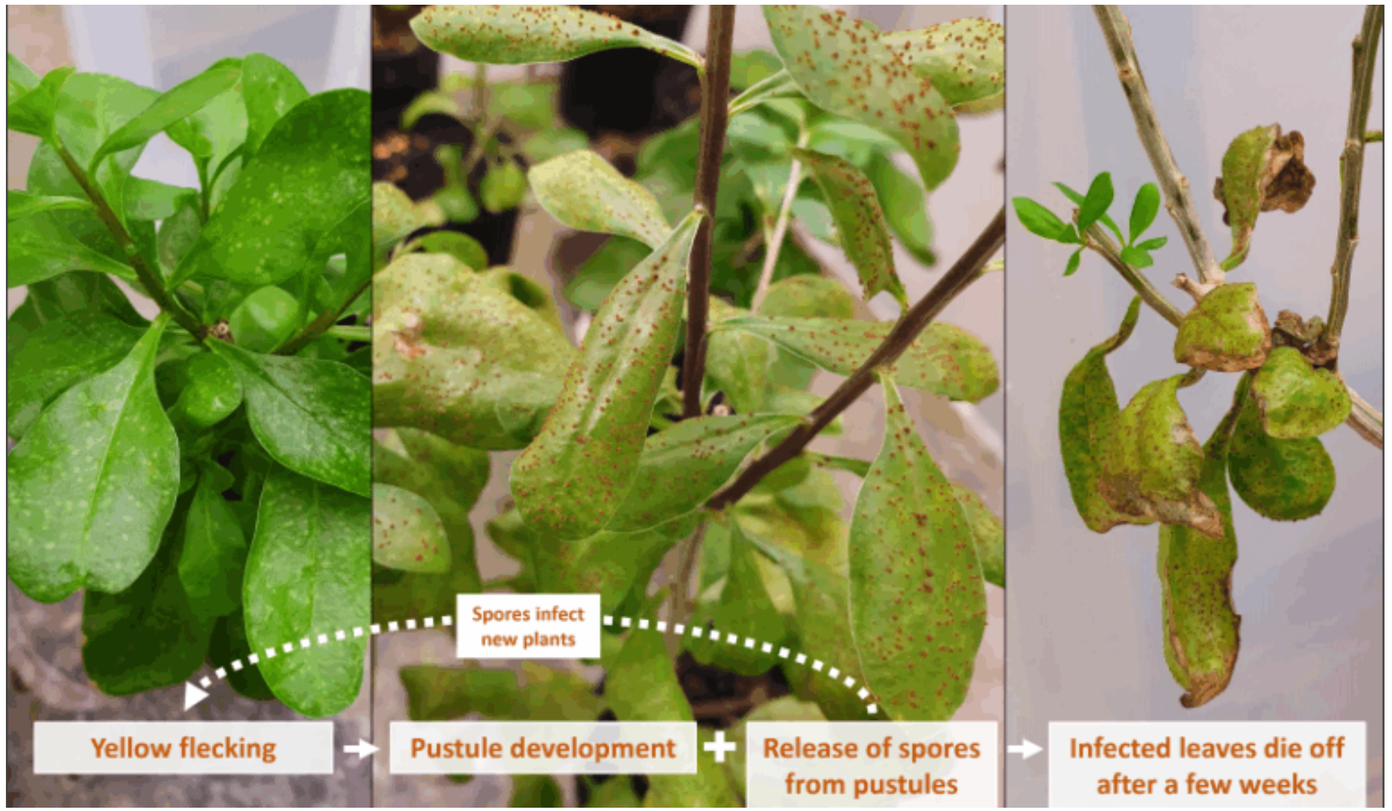
Stakeholders reached

CENTRE FOR INVASIVE SPECIES SOLUTIONS

Delivery Partners: CSIRO, AgVic

Invasive weed: Lycium ferocissimum (African Boxthorn)

Biocontrol agent: Puccinia rapipes, a rust fungus



African boxthorn

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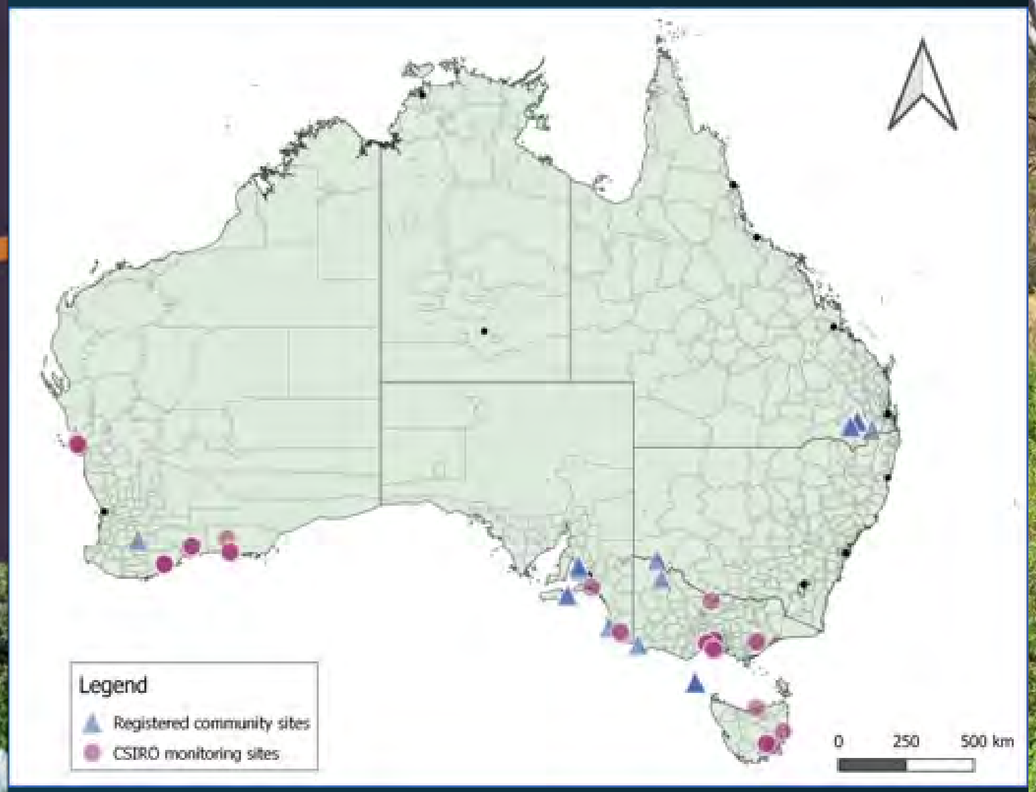

African boxthorn

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City of Greater Geraldton a vibrant future

City partners with CSIRO to battle Boxthorn

Published on Friday, 28 November 2025 at 10:07:45 AM

Combating the spread of the invasive African boxthorn is the aim of a new partnership between the City of Greater Geraldton and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

As part of a national rollout of the African Boxthorn Biocontrol Program, the City has been selected to host several release and monitoring sites.

City of Greater Geraldton Mayor Jerry Clune said the collaboration is a significant step forward in protecting the region's environment and economy.

"African boxthorn is a serious problem, it displaces native vegetation and has a detrimental impact on biodiversity affecting our farmers and community," he said.

"Geraldton and the Midwest host significant populations of boxthorn, making us an ideal candidate for this program.

"By joining forces with CSIRO, we're not only addressing the problematic species locally, we are also contributing to a national solution."

Due to the taxonomy of boxthorn being different to Australian flora, biological control is safe for native plant species as well as being a cost effective and sustainable method of controlling the highly invasive weed.

https://www.cgg.wa.gov.au/news/city-partners-with-csiro-to-battle-boxthorn/15134

Thank you

- CSIRO - Ben Gooden, Jens Froese, Kumaran Nagalingam, Caroline Delaisse, Kyana Pike
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- NSW DPIRD - Andrew McConnacchie, Fritz Heystek, David Officer, Nathan Pugh, Paddy Stanton
- QDPI - Kelli Murree, Boyang Shi, Kunjithapatham Dhileepan

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