

Locust Bulletin

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GENERAL SITUATION IN DECEMBER 2019 AND OUTLOOK TO APRIL 2020

Australian plague locust

Chortoicetes terminifera

The locust population level remains very low over its range in eastern Australia due to ongoing drought conditions and high temperatures. Only occasional adults were recorded on APLC surveys and no nymphs were observed during December. Remaining pasture vegetation in most regions is very dry. Surveys in December found no evidence of significant breeding in those parts of western Queensland and New South Wales that received heavy rainfall at the start of November.

Surveys in Central West Queensland in early December identified low density adult locusts in the Longreach–Blackall area and occasional adults in Southwest Queensland. There was no significant rainfall in inland Queensland during December and habitats in most regions are very dry. There was a limited vegetation response in those areas that received heavy rainfall (>40 mm) in early November, which became dry again during December.

Surveys in New South Wales during December identified very few locusts in the Central West, Far West or Far Southwest regions. Low density adult locusts were identified in the Bourke–Wilcannia area but no nymphs were detected in the Bourke district of the Far West region that received heavy rainfall in early November. There was no significant rainfall in inland regions during December and habitats are dry.

No surveys were warranted in South Australia during December. There was no significant rainfall in South Australia during December and grassland habitats in inland regions remain very dry.

No surveys were conducted in Victoria during December and grassland habitats in inland regions remain very dry.

The January–March outlook is for very low population densities to continue in inland eastern Australia. Ongoing drought and poor habitat conditions provide limited opportunities for successful locust breeding. There is insufficient time for more than one complete generation before autumn and multiple generations would be necessary for populations to increase to widespread high densities this season. The Bureau of Meteorology seasonal outlook indicates that below average rainfall and above average temperatures are likely to continue over coming months. Habitats in most regions are therefore likely to remain unfavourable with only limited breeding possible.

There is a very low likelihood of high-density populations or infestations developing in any region during summer or March.

6 January 2020

Spur-throated locust***Austracris guttulosa***

The summer breeding population level remains very low. Surveys during 2018-19 indicate the current adult population is one of the lowest on record in the regions covered. Surveys during spring and December 2019 recorded only occasional low density adults in Queensland.

Surveys of the Central West and Southwest regions of Queensland during December recorded Isolated density adults in areas associated with residual green vegetation. No adults were recorded in New South Wales, Victoria or South Australia.

Localised heavy rainfall in parts of the Queensland Central Highlands and Central West at the start of November produced a short-lived vegetation response and some localised suitable breeding habitat. However, the very low background breeding population could produce only low density nymphs and there is likely to be high mortality without further significant rainfall.

There is a very low risk of a widespread infestation developing during summer or autumn 2020.

Migratory locust***Locusta migratoria***

This species was not recorded on any surveys during spring or December. Migratory locust habitats have become increasingly dry in the Queensland Central Highlands, South Central and Central West regions where it is commonly observed. Given the very low current adult population level, only limited breeding is likely during summer, even with average rainfall.

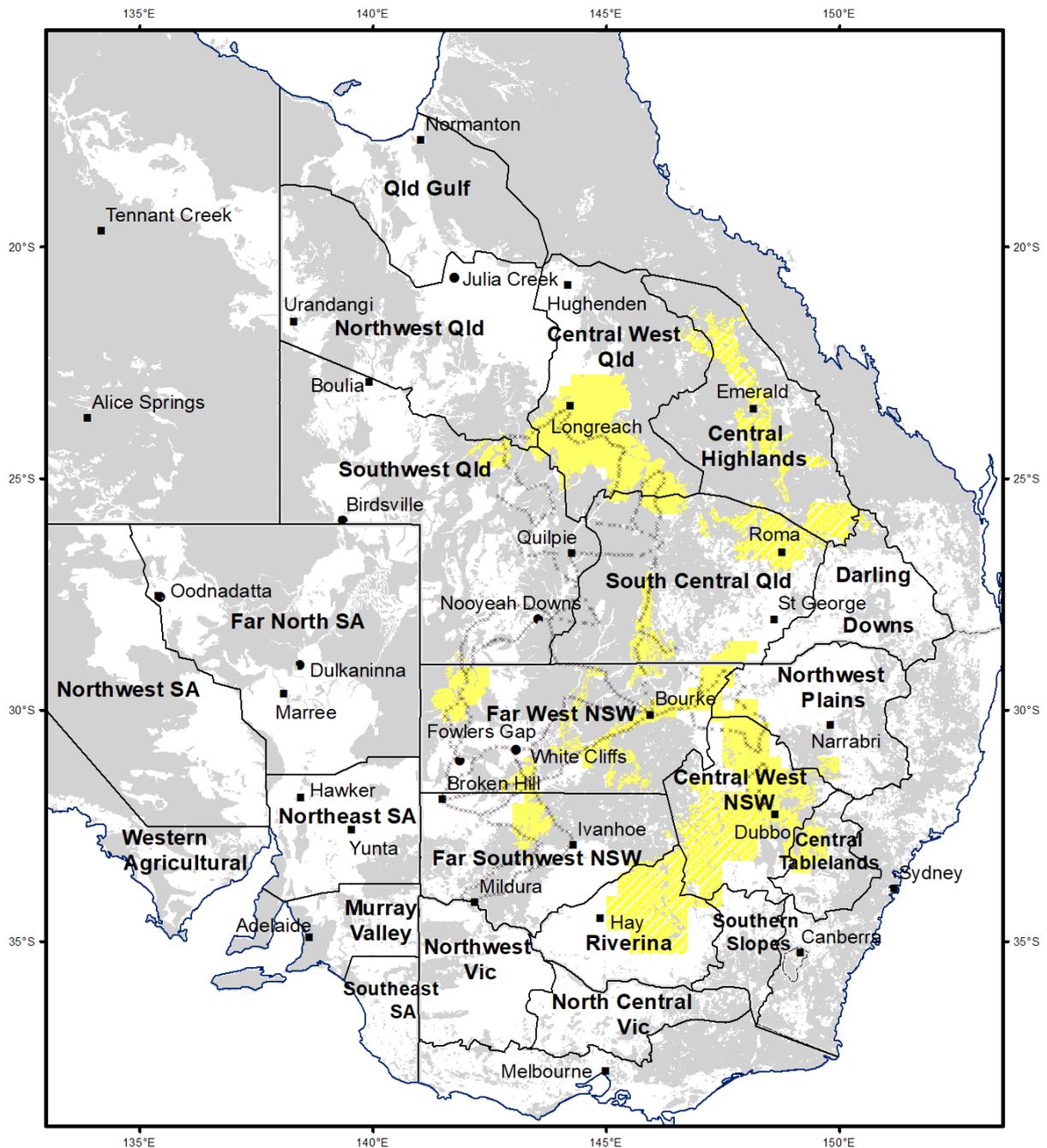
There is a low risk of a widespread infestation developing during summer or autumn 2020.

It is important that any locust activity be reported as soon as possible to your local biosecurity authority, primary industries department or to the commission. A toll-free call to the APLC can be made on 1800 635 962. An answering machine is attached to this phone for after-hours calls. Reports can also be emailed to APLC at apl@agriculture.gov.au or made through the website at <http://www.agriculture.gov.au/aplc>

Locust distribution map – *Chortoicetes terminifera*

Australian Plague Locust Distribution

December 2019



Locust Habitat: Grey - unsuitable

Densities estimated for areas of locust habitat, based on current surveys and previous surveys (lined shade)

x: Location of ground survey conducted

Reference: unprojected geographical

Nymph Density (/m ²)		Adult Density (/ha)	
○	Present <5	■	nil-Isolated <200
⊕	Numerous 5-30	■	Isolated-Scattered 200-1000
⊕	Sub-band 30-80	■	Scat-Numerous 1000-5000
⊕	Band >80	■	Num-Concentration 5000-30,000
●	APLC light trap	■	Swarms present >30,000

Australian plague locust**(*Chortoicetes terminifera*)****SITUATION IN DECEMBER 2019 AND FORECAST TO APRIL 2020****NEW SOUTH WALES****CENTRAL WEST and NORTHWEST PLAINS****Central West, Northwest and Central Tablelands Local Land Services****Locusts and conditions**

- Locust population density remains very low in these regions. Surveys in December recorded only isolated density adults in the Narromine–Coonamble district of Central West Local Land Services (LLS) region.
- There was no significant rainfall during December and pasture vegetation is very dry in most areas.

Forecast

- The locust population is expected to remain at a very low level in these regions during summer and March.
- There is a very low probability of any immigration from other regions during summer or autumn.

Risks

- There is a very low risk of a widespread regional infestation developing during summer or autumn.

FAR WEST, FAR SOUTHWEST & RIVERINA**Western Local Land Services****Locusts and conditions**

- Surveys in early December identified only occasional isolated density adults in the Bourke–Wilcannia area and vegetation was drying out where heavy rainfall occurred in November. No locusts were detected in other areas of the Far West or Far Southwest regions.
- The Fowlers Gap and White Cliffs light traps recorded no locusts during December.
- There was no significant rainfall in these regions during December and pasture vegetation is very dry in most areas.

Forecast

- Locust numbers are likely to remain very low during summer and March, given the very low current population level and ongoing dry habitat conditions.
- There is a low probability of significant immigration during summer or autumn.

Risks

- There is a very low risk of a widespread infestation developing summer or autumn.

All locust activity should be reported to your Local Land Services or the Department of Primary Industries, NSW. A toll-free call to the APLC can be made on 1800 635 962. An answering machine is attached to this phone for after-hours calls. Reports can be emailed to APLC at apl@agriculture.gov.au or sent through the web page at <http://www.agriculture.gov.au/aplc>

QUEENSLAND**SOUTHWEST AND NORTHWEST****Bulloo, Quilpie, Barcoo, Diamantina and Boulia, Winton, Cloncurry, McKinlay, Richmond, and Mt Isa Shires****Locusts and conditions**

- Surveys in early December identified occasional Isolated density adults in parts of Quilpie and Bulloo Shires. The low density population identified in spring has declined in drying habitats.
- The Nooyeah Downs light trap recorded no locusts during December.
- There was no significant rainfall in these regions during December and ground vegetation remains dry.

Forecast

- Locust numbers are expected to remain low during January–March, with only localised breeding possible in areas that receive heavy summer rainfall.
- There is a low probability of any significant immigration during summer or autumn.

Risks

- There is a low risk of a widespread infestation developing during summer or autumn.

CENTRAL WEST**Longreach, Barcaldine Shires and Blackall-Tambo Regional Councils****Locusts and conditions**

- Surveys in early December identified more consistent Isolated density adult locusts in Longreach and Blackall-Tambo Regional Council (RC) areas. However, no nymphs were detected in those areas that received moderate–heavy rainfall in early November and vegetation was again becoming dry.
- No locusts were recorded at the Longreach light trap during December.
- There was no significant rainfall in these regions during December and vegetation is dry in most areas.

Forecast

- Locust numbers are likely to remain low during January–March, given the previous low background population level and restricted favourable habitats.
- There is a low probability of significant immigration during summer or autumn.

Risks

- There is a low risk of a widespread infestation developing during summer or autumn.

CENTRAL HIGHLANDS and SOUTH CENTRAL**Isaac, Central Highlands, Maranoa, Western Downs and Goondiwindi Regional Councils. Balonne, Murweh and Paroo Shires****Locusts and conditions**

- Surveys in December identified occasional Isolated density adults in the Charleville district.
- There was no significant rainfall in these regions during December and vegetation is mostly dry.

Forecast

- The locust population is likely to remain at low levels in these regions during summer and autumn.
- Sporadic low-density breeding is possible in areas that receive heavy summer rainfall, but this is unlikely to produce a large increase in regional population levels.
- There is a low probability of any significant immigration during summer or autumn.

Risks

- There is a low risk of a widespread infestation developing during summer or autumn.

Locust activity should be reported to Biosecurity Queensland (Queensland Department of Agriculture and Fisheries) on 132523. A toll free call to the APLC can be made on 1800 635 962. An answering machine is attached to this phone for after-hours calls. Reports can be emailed to APLC at aplc@agriculture.gov.au or sent through the website at <http://www.agriculture.gov.au/aplc>.

SOUTH AUSTRALIA

FAR NORTH, NORTHEAST, NORTHWEST & WESTERN AGRICULTURAL REGION**Locusts and conditions**

- Locust numbers are expected to have remained very low during December. No surveys were warranted given the habitat conditions and there were no reports of locust activity.
- The Dulkaninna light trap did not record any locusts during December. The Oodnadatta light trap is currently not operating.
- There was no significant rainfall in these regions during December. Ground vegetation is very dry.

Forecast

- The locust population is likely to remain at very low density during summer and autumn.
- The current very low background population and very dry habitat conditions will limit any opportunities for breeding in these regions.
- There is a low probability of immigration into these regions during summer or autumn.

Risks

- There is a very low risk of a widespread infestation developing during summer or autumn.

MURRAY VALLEY, MT LOFTY RANGES & SOUTHEAST REGION**Locusts and conditions**

- Locust densities are expected to have remained very low in these regions during December. No surveys were conducted and there were no reports of locust activity.
- There was very light rainfall (<10 mm) in these regions in early December. Ground vegetation is very dry.

Forecast

- The locust population level is likely to remain very low during summer and autumn.
- Dry habitat conditions and low adult numbers will limit any breeding opportunities.
- There is low probability of any immigration during summer or autumn.

Risks

There is a very low risk of a widespread infestation developing during summer or autumn.

Locust activity should be reported to Biosecurity SA (Primary Industries and Regions South Australia) on the Plant Health Hotline on 1300 666 010. A toll-free call to the APLC can be made on 1800 635 962. An answering machine is attached to this phone for after-hours calls. Reports can be emailed to APLC at apl@agriculture.gov.au or sent through the website at <http://www.agriculture.gov.au/aplc>.

VICTORIA

NORTHWEST & NORTH CENTRAL VICTORIA**Locusts and conditions**

- Locust numbers are expected to have remained very low during December. No surveys were warranted and there were no reports of locust activity.
- There was localised moderate rainfall (20-40 mm) in part of North Central Victoria in the first week of December. Pasture vegetation is dry in most areas.

Forecast

- Locust numbers are likely to remain low in this region during summer and autumn.
- There is a low probability immigration during summer or autumn.

Risks

- There is a very low risk of a widespread infestation developing during summer or autumn.

Locust activity should be reported to Department of Economic Development, Jobs, Transport and Resources on 1300 135559. A toll-free call to the APLC can be made on 1800 635 962. An answering machine is attached to this phone for after-hours calls. Reports can be emailed to APLC at apl@agriculture.gov.au or sent through the website at <http://www.agriculture.gov.au/aplc>.

Glossary of locust terms and density categories used in the Locust Bulletin

Locust biology and behaviour

Term	Definition
adult	A fully winged, mature locust capable of breeding and migrating
band	Dense aggregation of nymphs, usually moving forward together
diapause	Period of dormancy induced in anticipation of unfavourable environmental conditions
egg bed	An area of soil containing many egg pods (hundreds per square metre)
fledge	Final nymphal moult to a soft-bodied adult incapable of long-distance flight
instar	Discrete stages of nymphal development each separated by a moult
laying	Female locusts depositing clutches of 20-60 eggs into the ground in froth-lined egg pods
nymph	Juvenile wingless locust. Often referred to as the hopper stage
swarm	Dense aggregation of adults, milling at the same spot or flying closely together

Locust density categories

Where higher densities occur, a large proportion of the regional population is concentrated in very small areas with lower densities elsewhere, so the higher densities cannot be extrapolated over the area of an entire region. A range of density classes is usually found within a surveyed region.

Nymph Densities	Number per m ²		
Present	1	-	5
Numerous	6	-	30
Sub-band	31	-	80
Band		>	80

Adult Densities	Number per m ²		Number per hectare
Isolated	-	0.02	< 200
Scattered	0.03	- 0.1	>200 – 1000
Numerous	0.2	- 0.5	>1000 – 5000
Concentration	0.6	- 3.0	>5000 – 30,000
Low Density Swarm	4.0	- 10	>30,000 – 100,000
Medium Density Swarm	11	- 50	>100,000 – 500,000
High Density Swarm	>	50	>500,000

General density classes	Nymph densities	Adult densities
very low, occasional	Nil-Present	Nil-Isolated
low	Present	Isolated-Scattered
medium	Numerous-Sub-band	Scattered-Numerous
high	Bands	Concentration-Swarms

Reporting locust infestations

It is important that all locust activity is reported as soon as possible to your nearest state agriculture agency office or to the Australian Plague Locust Commission.

State	Authority for reporting locusts
New South Wales	Local Land Services (LLS) or Department of Primary Industries
Queensland	Biosecurity Queensland, Department of Agriculture and Fisheries
South Australia	Biosecurity SA, Primary Industries & Regions South Australia (PIRSA)
Victoria	Biosecurity Agriculture, Department of Economic Development, Jobs, Transport and Resources

Reports to the **Australian Plague Locust Commission** can be made by:

Free call (Canberra):	1800 635 962 (24 hours)
Fax (Canberra):	(02) 6272 5074
Email:	apl@agriculture.gov.au
Website:	http://www.agriculture.gov.au/aplc