

# Locust Bulletin

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## GENERAL SITUATION IN OCTOBER AND OUTLOOK TO JANUARY 2021

### Australian plague locust

### *Chortoicetes terminifera*

The locust population level remained generally low in much of inland eastern Australia, but parts of the Central West, Far West and Far Southwest regions of New South Wales currently have areas of moderate to high nymph and adult presence. Surveys in October 2020 identified consistent low numbers of adults and occasional nymphs in parts of the Northwest, Southwest and Central West regions of Queensland, and in the Far North and Northeast regions of South Australia. In New South Wales high density nymphs and adults were detected in the Nyngan-Cobar areas where dense hatchings were previously observed or reported.

October rainfall was above average across much of south-eastern Australia. Large parts of the Far North and Northeast of South Australia and southwest New South Wales received very much above average rainfall. Rainfall was also above average in areas of north-western Victoria and eastern New South Wales, but about or slightly below average across large parts of Queensland and central New South Wales. Temperatures were above average, especially in eastern Queensland and New South Wales. As La Niña event is likely to continue at least into February 2021, above average rainfall is expected in much of eastern Australia and there is a high probability of locust breeding within favourable habitats.

Surveys in Queensland in mid-October identified only a few nymphs in the Boulia area with consistent low numbers of adults between Longreach and Urundangi. As there were only light to moderate rains in late October apart from some localised storms during the month, localised breeding could possibly produce some bands and swarms within widespread low to medium density populations.

In New South Wales, surveys in October were conducted with the focus on monitoring potential population upsurges in the Central West, while new locust reports were noted within the region and adjacent areas. Surveys detected widespread low numbers of nymphs and adults in the Warren-Brewarrina-Mungindi-Moree-Coonamble areas, frequent medium numbers in the Nyngan-Wilcannia-Ivanhoe-Hillston areas with some bands and swarms detected, while low numbers of adults were observed in the Broken Hill-Tibooburra areas. With favourable habitat conditions expected to remain, a high rate of locust breeding is likely to produce more bands. Under suitable weather systems, redistributions and aggregations are possible and thus swarms are likely to appear in many areas from now into December.

Limited surveys were conducted in late October in South Australia. Frequent low numbers of adults were observed in the Yunta-Peterborough-Hawker areas, low to medium density nymphs near Wilmington, and occasional adults between Lyndhurst and Innamincka with medium density nymphs near Innamincka. With suitable habitats resulting from September and October rainfalls, localised low to medium-density populations might occur in these areas in subsequent generations.

No surveys were carried out in Victoria and no locust reports were received. Overall local population density is expected to remain low.

The outlook for the remainder of 2020 is for an increase in overall population level, with widespread medium to high densities possible in New South Wales but limited to localised in other States. It is likely that more swarm formation will occur late in the spring generation and nymphal bands would result in the summer generation from their successful breeding.

There is a moderate likelihood of more widespread high-density populations and region-wide infestations developing during late spring and summer.

6 November 2020

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

Surveys in October identified consistent low numbers of adults between Longreach and Urandangi in Queensland, with very few adults in New South Wales and South Australia. The light trap at Fowlers Gap caught one adult on the 15<sup>th</sup> October.

The widespread September rainfall produced some vegetation responses, but only average October rainfall occurred in much of central Queensland which is unlikely to have resulted in early breeding. Nonetheless the patchy October rainfall may have induced population aggregation, while forecast above average rainfall in coming months should generally improve habitat conditions. Consequently, widespread low to medium densities of nymphs are likely to appear from sporadic breeding in much of Queensland with some localised high-density populations most likely to occur in the Central Highland region, but only limited breeding likely in New South Wales and South Australia given the very low background population.

There is a low risk of a widespread infestation but possible region-wide infestation in subtropical Queensland developing during late spring and summer.

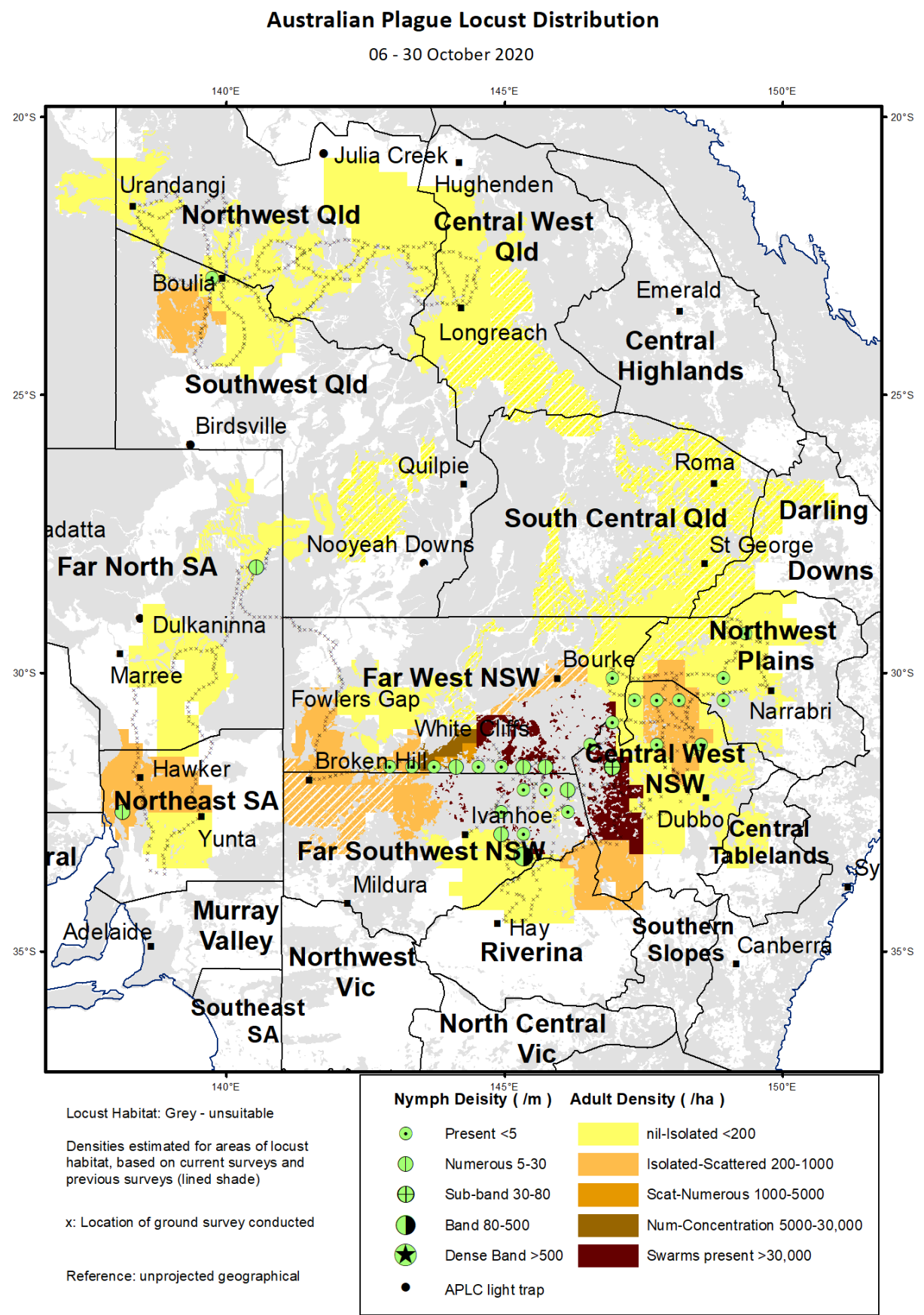
**Migratory locust*****Locusta migratoria***

Surveys in October did not detect any migratory locust, but under improved vegetation conditions from September and October rains, localised breeding is likely in the Central Highlands of Queensland to produce some low to medium density populations. High-density gregarisation is unlikely to develop from the current very low background level.

There is a very low risk of a widespread infestation developing during late spring and summer.

**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 [aplc@agriculture.gov.au](mailto:aplc@agriculture.gov.au) or made through the website at <http://www.agriculture.gov.au/aplc>**

Locust distribution map–*Chortoicetes terminifera*



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

- Surveys in October identified up to Sub Band density nymphs and Low-Density Swarm density adults in the Hermidale-Coolabah areas where hatchings were previously reported. Frequent Present density nymphs and widespread Isolated density adults were detected in other parts of this region.
- Most adults were young with very little fat accumulation observed by the end of October.
- This region received moderate rainfall in late October, from 15mm in the western districts to above 50mm in the eastern districts. With above average rainfall forecast in the next three months, pasture vegetation will stay green in most areas during late spring and summer.

**Forecast**

- The likelihood of breeding is high under the influence of the prevailing La Niña weather patterns. Localised Numerous to Band density nymphs are likely to appear from late November after successful breeding of the current population particularly in the Hermidale-Coolabah areas.
- There is a low probability of any significant immigration during late spring and early summer but there could be some short-distance emigration to the south or west under suitable weather conditions.

**Risks**

- There is a low to moderate risk of a widespread regional infestations developing during late spring and early summer.

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

- Surveys in October detected high density populations in the Cobar-Wilcannia-Ivanhoe-Hillston areas. Numerous to Band density nymphs and up to Low-Density Swarm density adults were confirmed after reports received from LLS officers. More nymphs and higher density adults were identified in the eastern part of this region while only occasional Isolated adults were detected between Broken Hill and Tibooburra.
- The light trap at Fowlers Gap captured two adult locusts on the 15<sup>th</sup> October. White Cliffs light trap was not in operation.
- The UNSW insect monitoring radar at Bourke airport remains non-operational pending upgrade.
- Only light to moderate rainfall (15-50mm) was received over much of the northern part of this region, but more than 50mm was received in the south of Broken Hill-Ivanhoe-Condobolin line.
- Further growth response of pasture vegetation is expected as above average rainfall is forecast in coming months.

**Forecast**

- Some swarms can be expected to appear after aggregation influenced by disturbed weathers.
- Locust numbers are likely to see a moderate increase, with some localised bands and swarms expected especially in the south-eastern part of this region in November and December after successful breeding of the current generation.
- There is a moderate likelihood of immigration from adjacent regions and redistribution within this region.

**Risks**

- There is a moderate risk of a widespread infestation developing during late spring and early summer.

**RIVERINA****Riverina and Murray Local Land Services****Locusts and conditions**

- Limited surveys in October identified only occasional isolated adults.
- The upgraded insect monitoring radar in Hay operates 24/7 but did not detect any locust movement in October.
- There was heavy rainfall (>50 mm) in much of this region, but most of this was in late October. Pasture vegetation will remain green with further rainfall forecast for the region in coming months.

**Forecast**

- Locust numbers are likely to see a moderate increase during late spring and summer.
- Low to moderate-density nymphs are likely to occur from late November with localised higher densities in some locations.
- There is a low probability of immigration from adjacent regions during late spring, but possible emigration may occur in summer.

**Risks**

- There is a low to moderate risk of a widespread infestation developing during late spring and summer.

**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 [aplc@agriculture.gov.au](mailto:aplc@agriculture.gov.au) or sent through the web page at <http://www.agriculture.gov.au/aplc>**

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

- Limited surveys in mid-October identified widespread isolated density adults in Winton, Cloncurry, Boulia and Diamantina Shires. Only present density nymphs were detected near Boulia.
- Only light rainfall (<25mm) was received in October.
- Light traps in Birdsville and Nooieah Downs were not in operation in October.
- Pasture vegetation started to dry-off from mid-October. However as more rainfall is forecast for the coming months, vegetation conditions should become more favourable for locust survival and breeding.

**Forecast**

- Locust numbers are likely to remain low during the remainder of spring and early summer, but sporadic breeding in favourable habitats may be triggered by rainfall events.
- There is a low to moderate probability of some immigration from early summer.

**Risks**

- There is a low risk of a widespread infestation developing during late spring and summer.

**CENTRAL WEST****Longreach, Barcaldine and Blackall-Tambo Regional Council. Flinders and Richmond Shire.****Locusts and conditions**

- Limited surveys in mid-October identified isolated density adults in the Longreach and Barcaldine Regional Councils.
- The Longreach light trap was not in operation during October.
- Light to heavy rainfall (10-50mm) was received in October with more in the eastern part of this region.
- Further pasture vegetation growth is expected as more rain is forecast in the coming months.

**Forecast**

- Locust numbers are likely to remain generally low during the remainder of spring and summer.
- Nymphs are likely to develop at low densities in some habitat areas and improved vegetation conditions may encourage some localised breeding.
- There is a low probability of any significant immigration during late spring and summer.

**Risks**

- There is a low risk of a widespread infestation developing during the remainder of spring or summer.

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

- No surveys were conducted in this region during October.
- October rainfall was uneven in this region, with significant amounts in the eastern part. More than 50mm fell in the Springsure-Injune and Roma-St George areas, while less than 10mm was received in the Charleville-Cunnamulla areas.
- Pasture vegetation remains dry in most areas but has recently become greener in the eastern part of this region.

**Forecast**

- The locust population is likely to remain at generally low levels during late spring and summer.
- Sporadic low to medium-density breeding could occur in some areas after significant rainfall events.

- There is a low probability of any significant immigration during late spring or summer.

**Risks**

- There is a low risk of a widespread infestation developing during spring and December.

**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](mailto:aplc@agriculture.gov.au) or sent through the website at <http://www.agriculture.gov.au/aplc>.**

<b>SOUTH AUSTRALIA</b>
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**FAR NORTH, NORTHEAST, NORTHWEST & WESTERN AGRICULTURAL REGION****Locusts and conditions**

- Limited surveys in October identified Isolated to Scattered adults in the Northeast region and confirmed a report of Numerous density nymphs in the Wilmington area. Occasional Isolated adults in the Far North region and Numerous density nymphs were detected in the Innamincka area.
- The Dulkaninna and Oodnadatta light traps were not in operation during October.
- October rainfall was moderate (25-50mm) in the northern part and heavy (50-100mm) in the southern part of this region.
- Vegetation became green in October and should remain green with above average rainfall forecast in coming months.

**Forecast**

- The locust population is likely to remain at a low level during the remainder of spring and summer.
- Some sporadic low-density breeding is likely and localised low to medium density nymphs can be expected to develop.
- There is a low to moderate probability of some immigration into Far North and Northeast in early summer.

**Risks**

- There is a low risk of a widespread infestation developing during late spring and summer.

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

- No surveys were conducted in this region during this reporting period. No locust reports were received from this region.
- October rainfall was moderate to heavy (25-100mm), with more than 100mm in the Port Augusta-Port Pirie areas.
- Vegetation became green in October and should remain green as above average rainfall forecast for coming months.

**Forecast**

- The locust population is likely to remain at very low densities during the remainder of spring and summer.
- There could be localised sporadic low-density breeding.
- There is a very low probability of any immigration during spring or summer.

**Risks**

There is a very low risk of a widespread infestation developing during spring.

**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 [aplc@agriculture.gov.au](mailto:aplc@agriculture.gov.au) or sent through the website at <http://www.agriculture.gov.au/aplc>.**



<b>VICTORIA</b>
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**NORTHWEST & NORTH CENTRAL VICTORIA****Locusts and conditions**

- No surveys were undertaken in October. No locust reports were received from this region.
- October rainfall was uneven in this region, from moderate (>25mm) to heavy (>50mm).
- A favourable vegetation response is expected, especially in North Central Victoria.

**Forecast**

- Locust numbers are likely to remain generally low during the remainder of spring and into summer.
- There is a low probability of some immigration during late spring but possible emigration in summer.

**Risks**

- There is a low risk of a widespread infestation developing during late spring and summer.

Locust activity should be reported to the Agriculture Victoria Customer Service Centre on 136 186. Alternatively, you can make a report via our online form: <https://forms.bio.vic.gov.au/public-reporting>. Please include photos where possible.

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](mailto:aplc@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 <sup>2</sup>		
Present	1	-	5
Numerous	6	-	30
Sub-band	31	-	80
Band	80	-	500
Dense Band		>	500

Adult Densities	Number per m <sup>2</sup>		Number per hectare
Isolated	-	0.02	< 200
Scattered	0.03	-	0.1
Numerous	0.2	-	0.5
Concentration	0.6	-	3.0
Low Density Swarm	4.0	-	10
Medium Density Swarm	11	-	50
High Density Swarm		>	50

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: [aplc@agriculture.gov.au](mailto:aplc@agriculture.gov.au)  
 Website: <http://www.agriculture.gov.au/aplc>