

Locust Bulletin

ISSN 2204-9851

GENERAL SITUATION IN FEBRUARY AND OUTLOOK TO MAY 2021

Australian plague locust

Chortoicetes terminifera

The locust population increased markedly in the interior of Queensland and increased slightly over much of the remainder of inland eastern Australia during February. Adult numbers increased considerably in the Longreach-Boulia-Birdsville-Thargomindah areas of Queensland, where frequent Numerous – Medium-Density Swarm densities were observed in contrast to the Isolated – Scattered density adults and occasional nymphs previously identified. High numbers of adults up to Concentration density persisted in the Surat district of Queensland, and up to Medium-Density Swarm in the Lake Cargelligo and Ivanhoe districts of New South Wales. Consistent Present – Numerous-density nymphs were detected in the interior of Queensland, but few nymphs were identified in South Australia and New South Wales apart from bands detected in the Gum Lake district. Frequent trough activities may have facilitated regular short-distance nocturnal migrations with a net shift toward the Channel Country, contributing to the population increase in inland Queensland. No surveys were conducted in Victoria and no reports were received, but locusts are expected to have remained at low levels with some small areas of localised higher densities.

February rainfall was generally average over inland eastern Australia. It was below to very much below average in the Flinders and the southern part of North East Pastoral district of South Australia, in the south-western part (west of Tibooburra-Wilcannia-Ivanhoe-Hay-Deniliquin) of New South Wales, but above to very much above average in the Central West Slopes & Plains and the north-eastern part of Upper Western New South Wales. Temperatures were generally average over inland, warmer in the north but cooler in the south. The La Niña event has passed its peak and is weakening, but above average rainfall and temperatures are expected in autumn. Above median rainfall is more likely in March in the south-eastern inland and in April in the northern part of inland eastern Australia, with warmer overnight temperatures.

In New South Wales, adult numbers increased slightly. Persistent high densities (up to Medium-Density Swarm) were present in the Ivanhoe-Lake Cargelligo areas where high numbers of summer generation nymphs were previously observed. Numerous densities were more common in the remainder of New South Wales. Frequent disturbed weather events facilitated consistent short-distance nocturnal migrations which were detected by both the UNSW insect monitoring radar in Hay and the APLC light-traps in White Cliffs and Fowlers Gap. Consecutive migrations resulted in the population redistributing toward the Channel Country. Only occasional higher numbers of nymphs (bands near Boolaboolka) were identified by surveys, but more reported bands were confirmed in the Riverina, Central West and North West Slopes & Plains by the Department of Primary Industries and Local Land Services.

In inland Queensland, adult population levels significantly increased from previously identified Isolated – Scattered to Numerous – Medium-Density Swarm, while nymphs persisted at Present – Numerous-density. These adults may have resulted from frequent immigrations combined with successful local breeding. Higher adult numbers were also detected in the Maranoa and Warrego district. Persistent reports of high locust and grasshopper numbers were received from the Miles-Goonidwindi areas.

In South Australia, consistent Numerous density adults were identified around Cordillo Downs and Scattered – Numerous-density adults in Innamincka and Wilmington districts. Only occasional nymphs were detected. The outlook for March is for increasing locust activity, with a high likelihood of further successful widespread breeding in inland Queensland and the Riverina, Central West and North West Slopes & Plains of New South Wales, but only limited to localised, sporadic breeding in other States. It is expected that more bands will develop and result in a larger autumn population.

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

9 March 2021

Australian Plague Locust Commission
GPO Box 858 Canberra ACT 2601

Telephone (02) 6272 5076 Toll Free 1800 635 962 Facsimile (02) 6272 5074

Website <http://www.agriculture.gov.au/aplc> Email aplc@agriculture.gov.au



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

Surveys detected consistent occurrences of Isolated-density with occasional Scattered-density adults in Queensland, largely in the north. Only one incidence of Present-density nymphs was identified.

The delayed summer rainfall may have limited seasonal breeding, but low-density nymphs are still likely to appear in much of tropical Queensland with some localised medium to high-density populations. Only limited breeding is likely in New South Wales and South Australia based on their very low background populations.

There is only a low risk of a widespread infestation, but the possibility exists for localised infestations in subtropical Queensland developing during autumn.

Migratory locust***Locusta migratoria***

Surveys in February did not detect any migratory locust. However, the locust habitat conditions in the Central Highlands and Coalfields, Darling Downs and Granite Belt districts of Queensland remained reasonably favourable. Localised breeding is likely to produce some low to medium density populations. High-density gregarisation is unlikely to result from the current very low background level.

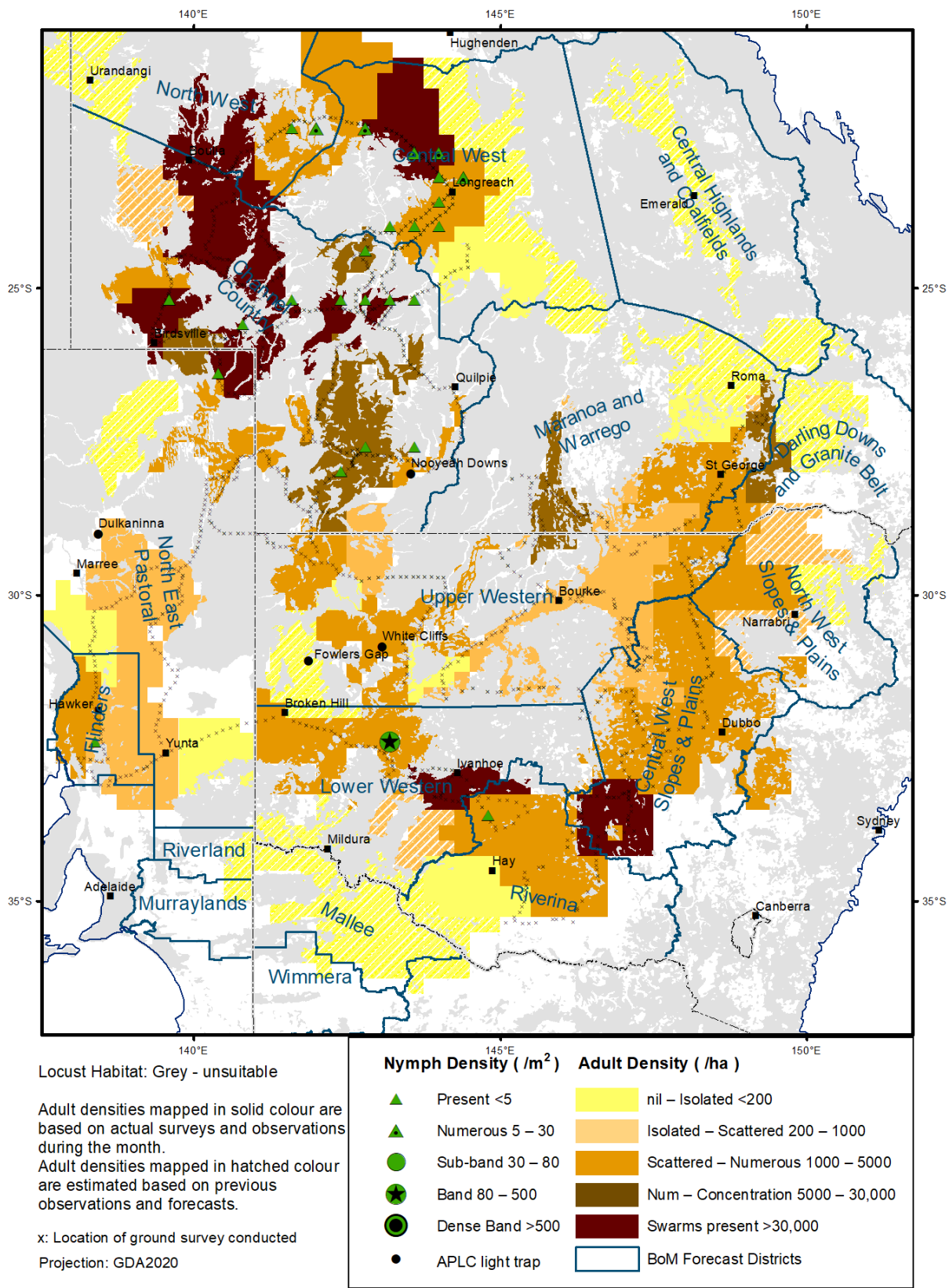
There is a very low risk of a widespread infestation developing during autumn.

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 hotline 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 via aplc@agriculture.gov.au or made through the website at https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts.

Locust distribution map–*Chortoicetes terminifera*

Australian Plague Locust Distribution

01 - 27 February 2021



Australian plague locust**(*Chortoicetes terminifera*)****SITUATION IN FEBRUARY AND OUTLOOK TO MAY 2021****NEW SOUTH WALES****NORTH WEST SLOPES & PLAINS****Northwest Local Land Services****Locusts and conditions**

- No surveys were conducted in February within this district other than along part of its boundary between Walgett and Mungindi where Isolated – Numerous density adults were identified in mid-February.
- LLS officers followed up 9 locust reports from nymphal bands in early February to adult swarms at the end of the month, indicating localised high densities of locust populations.
- This region received about average February rainfall (50 – 100 mm) in the northern half and above average (100-200 mm) in the south. Habitat conditions remained favourable for locust breeding.

Forecast

- The likelihood of breeding is high with the forecast average rainfall forecast for March (25 – 50 mm) and the autumn (50 – 200 mm). Bands are likely to form while swarms persist.
- There is a low probability of any significant immigration during autumn but there could be some short-distance emigration to adjacent west or southwest areas under suitable weather conditions.

Risks

- There is a moderate to high risk of a widespread regional infestation developing during autumn.

CENTRAL WEST SLOPES & PLAINS**Central West Local Land Services****Locusts and conditions**

- Surveys in February identified Isolated to Low-Density Swarm adults with higher densities in the Lake Cargelligo-Condobolin areas. No nymphs were detected.
- LLS officers investigated seven reports of nymph and adult sightings.
- This region received monthly rainfall from about average (50 – 100 mm) to very much above average (100 – 200 mm) in the Nyngan district. Pasture vegetation remained favourable to locusts.

Forecast

- The likelihood of breeding is moderate to high with the forecast average rainfall for March (10 – 25mm) and autumn (25 – 100 mm). Localised bands and swarms are likely to develop in autumn.
- There is a low to moderate probability of significant immigration from the North West Slopes & Plains into this region during autumn but there could be some short-distance emigration to adjacent west or southwest areas under suitable weather conditions.

Risks

- There is a moderate risk of a widespread regional infestations developing during autumn.

RIVERINA**Riverina, Murray, and part of Western Local Land Services****Locusts and conditions**

- Surveys in early February identified Isolated to Concentration density adults, with higher numbers in the north. Only occasional Present-density nymphs were detected.

- LLS officers confirmed seven reports of nymph activity during the second half of February.
- The UNSW insect monitoring radar in Hay detected frequent nocturnal locust overflights during February with heavy migration activities in early February, indicating short-distance migrations of mature locust adults in surrounding areas.
- Rain occurred only in early February and the monthly total was from very much below average (0 mm) in the southwest to average (<50 mm) towards the northeast. Some localised green pasture vegetation persisted.

Forecast

- Locust numbers are likely to experience a low to moderate increase with the possibility of localised bands and swarms developing during autumn. Uneven rainfall (0 – 50 mm) is forecast for March with more to the east and above average totals (25 – 200 mm) for autumn with a similar distribution pattern.
- There is a low to moderate probability of migration from and to adjacent regions.

Risks

- There is a low to moderate risk of a widespread infestation developing during autumn.

UPPER and LOWER WESTERN

Western Local Land Services

Locusts and conditions

- Surveys in February identified more Numerous-density adults in the western part of Upper Western region in addition to widespread Isolated – Scattered density and persistent higher numbers (up to Medium-Density Swarm) in the Menindee-Ivanhoe area, where Band-density nymphs were also detected. No nymphs were detected by surveys in other parts of this region.
- The light trap at White Cliffs captured about 300 locusts on the night of 9-10 February and 30 on next night after zero captures in early February, indicating there was an immigration wave into this area during 9 – 13 February. The light-trap at Fowlers Gap also showed a capture peak of 35 and 17 on the two consecutive nights between 10 and 12 February. There was another migration wave during 15 and 22 February when both light traps captured increased locust activity. The light-trap at Fowlers Gaps showed another migration period in early February while the light-trap in White Cliffs did not capture any locusts at the same time. Frequent trough activities facilitated regular short-distance migrations, shifting the locust population towards the northwest in general.
- February rainfall was uneven, from 0 mm in the southwest to about 150 mm in the northeast of this region, from very much below average to very much above average. Almost no rain fell to the west of Tibooburra-Wilcannia-Ivanhoe. No rain fell in Menindee-Pooncarie areas, 5.6 mm in Ivanhoe, but 101 mm in Bourke and 138 mm in Byrock. Pasture vegetation remained in good condition over the eastern part of Upper Western district.

Forecast

- Locust numbers are likely to show a low to moderate increase with some localised bands developing from sporadic breeding after localised rainfall. Above average rainfall (up to 25 mm) is forecast for March with more in the south-eastern part of this region. A similar rainfall pattern is forecast for autumn, with rainfall totals up to 100 mm in the northeast of this region.
- There is a moderate likelihood of migration activity, a high likelihood of redistribution within this region, plus some migration between adjacent regions.

Risks

- There is a low to moderate risk of a widespread infestation developing during autumn.

All locust activity should be reported to your [Local Land Services](#) (1300 795 299) or the [Department of Primary Industries](#). A toll-free call to the APLC hotline 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 via aplc@agriculture.gov.au or sent through the web page at https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts.

QUEENSLAND

CENTRAL HIGHLANDS AND COALFIELDS**Isaac and Central Highlands Regional Councils; Banana Shire****Locusts and conditions**

- No surveys were conducted in this district in February.
- No reports of locust activity were received from this region.
- February rainfall was irregular, from 10 mm to over 100 mm, and was below average over much of the eastern part of this region.
- Pasture vegetation continued drying out over much of the region.

Forecast

- The locust population is likely to remain at low to moderate levels in autumn. March rainfall is forecast to be average (10 – 50 mm) for this region, but possibly above average for autumn (50 – 200 mm).
- Sporadic localised high-density breeding could occur in some areas.
- There is a low probability of any significant migration.

Risks

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

DARLING DOWNS AND GRANITE BELT**Western Downs and Goondiwindi Regional Councils****Locusts and conditions**

- Surveys were conducted in mid-February only between Mungindi and St George, with frequent Scattered-density adults identified but no nymphs detected.
- Locust reports continued to be received from the Miles-Goondiwindi areas, and were investigated by Biosecurity Queensland staff.
- February rainfall was from a few millimetres to over 50 mm, from very much below average in the eastern part to localised above average in the west.
- Pasture vegetation dried out significantly over much of the region.

Forecast

- The locust population is likely to increase slightly in autumn, with March rainfall forecast to be above average (10 – 50 mm) and most likely above average for autumn (50 – 200 mm).
- Bands are likely to form from sporadic localised high-density breeding.
- There is a low probability of any significant migration.

Risks

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

CENTRAL WEST**Barcaldine, Longreach, and Blackall-Tambo Regional Council; Flinders and Winton Shires****Locusts and conditions**

- Surveys conducted in the western part of this district identified consistent Isolated-density adults in the south and Numerous – Low-Density Swarm adults in the north, with frequent Present – Numerous density nymphs. Large number of grasshoppers were detected.
- February rainfall ranged from 25 mm to over 100 mm (169 mm in Winton), with above average rainfall received in the northwest.
- Pasture vegetation remained favourable for locusts in the west of this district.

Forecast

- Locust numbers are likely to increase moderately with possible localised higher densities from breeding and immigration with forecasts of average March rainfall (10 – 50 mm) and above average autumn rainfall (50 – 100 mm). Bands and swarms are likely to develop in autumn.
- There is a moderate probability of redistribution and migration in autumn.

Risks

- There is a low to moderate risk of a widespread infestation, with the development of some localised higher-density infestations possible in autumn.

MARANOA AND WARREGO**Maranoa Regional Council; Murweh, Paroo, and Balonne Shires****Locusts and conditions**

- Surveys conducted during the second half of February identified Isolated to Concentration-density adults in the southern part of this region, with higher numbers in the Surat and Cunnamulla districts. No nymphs were detected.
- February rainfall ranged from 25mm to 100 mm, about average overall but higher in the east (91 mm in St George and 75 mm in Surat).
- Pasture vegetation remained in reasonably good condition.

Forecast

- Locust numbers are likely to moderately increase with possible localised higher densities from breeding and immigration, with about average March rainfall (10 – 50 mm) and similar autumn rainfall (50 – 200 mm).
- There is a moderate probability of migration in autumn.

Risks

- There is a low to moderate risk of a widespread infestation, with the development of some localised higher-density infestations possible in autumn.

NORTH WEST**Mt Isa, Cloncurry, McKinlay, Boulia, and Winton Shires****Locusts and conditions**

- Surveys identified frequent Numerous – Medium-Density Swarm adults with occasional Present – Numerous-density nymphs in the south-eastern part of this district.
- February rainfall range from 10 mm to over 100 mm, with higher total rainfall in the northeast (125 mm in Mount Isa and 165 mm in Julia Creek) but was generally about average to above average in the region.
- Pasture vegetation remained in reasonably good condition.

Forecast

- Locust numbers are likely to increase at low to moderate levels during autumn, from local breeding and immigration. With forecast below average March rainfall (up to 50 mm) but above average totals (25 – 100 mm) for autumn, higher numbers of locust are possible from localised sporadic breeding.
- There is a low to moderate probability of migration activity.

Risks

- There is a low to moderate risk of a substantial widespread infestation developing during autumn, but with a moderate probability of some localised infestations.

CHANNEL COUNTRY

Boulia, Diamantina, Barcoo, Quilpie, and Bulloo Shires

Locusts and conditions

- Surveys identified persistent Numerous – Medium-Density Swarm adults with occasional Present-density nymphs detected.
- Locust population increased markedly from previously-observed sparse Isolated – Scattered-density adults and occasional nymphs in this district, indicating significant immigration had occurred to reinforce local breeding.
- February rainfall was uneven but about average, from nil in the southwest (0 mm in Birdsville, 6.6 mm in Boulia) to over 50 mm in the east (27 mm in Windorah, 45 mm in Thargomindah, and 65 mm in Quilpie).
- Pasture vegetation remained generally unfavourable for locusts over much of the region but with sufficient green vegetation along drainage systems.

Forecast

- Locust numbers are likely to increase at low to moderate levels during autumn. Forecast rain is for average March rainfall (up to 25 mm) but above average total rainfall in autumn (up to 100 mm), localised breeding is likely to produce even larger autumn population from the current high population level.
- There is a moderate probability of migration activity.

Risks

- There is a moderate to high risk of a substantial widespread infestation developing during autumn, with a high probability of some localised higher-density infestations.

All locust activity should be reported the [Biosecurity Queensland \(Department of Agriculture and Fisheries\)](#) via the [Customer Service Centre](#) on 13 25 23. A toll-free call to the APLC hotline 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 via aplc@agriculture.gov.au or sent through the website at https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts.

SOUTH AUSTRALIA

NORTH EAST PASTORAL and FLINDERS**Locusts and conditions**

- Surveys identified persistent Numerous-density adults around Cordillo Downs and Scattered – Numerous density adults in Innamincka and Wilmington districts, with occasional nymphs detected.
- The Dulkaninna light-trap did not record any locusts.
- February rainfall was from very much below average to above average, from zero to over 50 mm, with more in the northwest (2.4 mm in Innamincka, 22 mm in Oodnadatta, 47 mm in Coober Pedy).
- Pasture vegetation was dry over much of the region with some localised green areas remaining.

Forecast

- Locust numbers are likely to increase slightly to moderately from immigrations and localised sporadic breeding. With above average March rainfall (up to 25mm) in the south and a similar pattern of autumn rainfall (up to over 100 mm), only some sporadic low to medium-density breeding is likely, but localised higher density nymphs are possible with the above average rainfall.
- There is a low to moderate probability of migration during autumn.

Risks

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

RIVERLAND and MURRAYLANDS**Locusts and conditions**

- No surveys were conducted in February and no locust reports were received from this region.
- February rainfall was less than 25mm, about average overall but higher in the south (2.6 mm in Renmark, 13.8 mm in Murray Bridge, 20.8 mm in Lamerloo).
- Vegetation remained dry across much of this region.

Forecast

- The locust population is likely to remain at very low densities but some localised low to medium density populations are possible from sporadic, localised breeding or immigration with above average March rainfall (up to 25mm) and similar total autumn rainfall (up to 100 mm).
- There is a low probability of immigration during autumn.

Risks

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

Locust activity should be reported to [Biosecurity SA \(Primary Industries and Regions South Australia\)](#) via the Plant Health Hotline on 1300 666 010. A toll-free call to the APLC hotline 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 via aplc@agriculture.gov.au or sent through the website at https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts.

VICTORIA

MALLEE**Mildura and Swan Hill Rural Cities; Yarriambiack and Buloke Shires****Locusts and conditions**

- No surveys were conducted in February, and no locust reports were received from this region.
- February rainfall was from zero up to 25 mm, from very much below average to average in the direction from northeast to southwest (0.2 mm in Mildura, 2.6 mm in Walpeup and 10.6 mm in Murraville).
- Vegetation continued to dry out during February.

Forecast

- Locust numbers are likely to remain at low levels with a low probability of localised breeding, even with the forecast of above average March rainfall (up to 25 mm) and total autumn rainfall (25 – 100 mm).
- There is a low – medium probability of immigration during autumn.

Risks

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

WIMMERA**Hindmarsh and West Wimmera Shires****Locusts and conditions**

- No surveys were conducted in February, and no locust reports were received from this region.
- February rainfall was from a few millimetres up to 25 mm, below average in the east and about average in the west (2.6 mm in Horsham, 10.2 mm in Edenhope).
- Vegetation became drier and was not favourable for locusts.

Forecast

- Locust numbers are likely to remain at low levels with localised breeding unlikely, even with the forecast of above average March rainfall (up to 25 mm) and total autumn rainfall (25 – 100 mm).
- There is a low – medium probability of immigration during autumn.

Risks

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

Locust activity should be reported to the [Agriculture Victoria Customer Contact Centre](https://forms.bio.vic.gov.au/2020) on 136 186. Alternatively, you can make a report via the online form at <https://forms.bio.vic.gov.au/2020>. Please include photos where possible. A toll-free call to the APLC hotline 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 via aplc@agriculture.gov.au or sent through the website at https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts.

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	–	500
Dense Band		>	500

Adult Densities	Number per m ²		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 – Numerous	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, Department of Primary Industries & Regions
Victoria	Biosecurity and Agriculture Services, Department of Jobs, Precincts 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: aplcc@agriculture.gov.au

Website: https://www.agriculture.gov.au/pests-diseases-weeds/locusts/landholders/reporting_locusts