

warning level: **THREAT**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 407



**General Situation during August 2012
Forecast until mid-October 2012**

(3 Sep 2012)

The Desert Locust situation continued to remain serious during August as widespread breeding occurred in Niger. The situation is less clear in northern Mali but is likely to be similar. Breeding on a smaller scale occurred in Mauritania and Chad. Only low numbers of adults were reported in Sudan and along the Indo-Pakistan border. During the forecast period, a second generation of breeding will occur in Niger and probably in Mali, causing locust numbers to increase further. As vegetation dries out, small groups, bands and swarms are expected to form in both countries from October onwards. Survey operations should be maintained in all affected countries and control operations carried out when possible in order to reduce locust numbers, the potential threat to crops and pastures and eventual migration to Northwest Africa.

Western Region. Breeding continued in the summer breeding areas of the northern Sahel, mainly in Niger within a large portion of the northern desert and in the central pasture zone, and to a lesser extent in Mauritania and Chad. The situation is less clear in northern Mali due to insecurity but there was an unconfirmed report in late August of hopper bands, suggesting that significant breeding may be in progress. During August, green vegetation extended over a much larger area of the northern Sahel compared to the same time last year. In some places, it was present 100-150 km further north than

usual. This suggests that conditions are favourable for a second generation of breeding in Mali and Niger which is likely to commence in about mid-September and cause locust numbers to increase, perhaps dramatically, in October. Once vegetation begins to dry out, locusts will concentrate and gregarize, forming small groups, bands and swarms from October onwards. Migration to northwest Mauritania and to southern Algeria and Libya will probably not occur until after October. No locusts were reported elsewhere in the region.

Central Region. Low numbers of solitary adults were present in parts of the summer breeding areas in Sudan where ecological conditions are more favourable than usual. Small-scale breeding is almost certainly in progress and will continue during the forecast period in these areas as well as in the western lowlands in Eritrea. Limited breeding could also occur in areas of recent rainfall on the Red Sea coast of Yemen and in the interior. No locusts were reported elsewhere in the region.

Eastern Region. Low numbers of solitary adults were present in one area along both sides of the border in Rajasthan, India and Cholistan, Pakistan during August. Although the monsoon rains have been relatively poor so far this year, ecological conditions are favourable to allow small-scale breeding in a few areas along both sides of the Indo-Pakistan border. No significant developments are likely.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and are available on the Internet.

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No. 407

DESERT LOCUST BULLETIN



Weather & Ecological Conditions in August 2012

Good rains continued to fall in the summer breeding areas of the Sahel from Mauritania to Sudan where conditions are much more favourable for breeding than usual. Green vegetation extended over a much larger area and was further north this year compared to August 2011.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) position was slightly further north during this month compared to previous years, reaching Akjoujt (Mauritania), north of Tessalit (Mali), Iferouane (Niger), and Faya (Chad). Consequently, good rains fell in central and southern Mauritania, central Mali, central and northern Niger (Tamesna, Air Mountains, pasture areas), central and northeast Chad, and south of Tamanrasset in southern Algeria. Showers were weaker and more variable in northern Mali (Adrar des Iforas, Tamesna). The extent of greening and green vegetation in the summer breeding areas was much greater during August of this year compared to last year at the same time, especially in the main wadis in the Adrar des Iforas, the southern Tamesna Plains in Mali and Niger, the pasture areas in central Niger, and in northeast Chad from Abeche to Fada. In many areas, green vegetation was present some 100-150 km further north than usual. As a result, breeding conditions are favourable over a much greater area than one year ago.

In the **Central Region**, the ITCZ reached as far north as Merowe, Sudan and good rains fell up to Dongola and east to the Eritrean Highlands during August. Consequently, vegetation was green west of the Nile up to 200 km further north than usual. Ecological conditions were favourable for breeding over a much larger area of the interior of Sudan and western Eritrea than last year at this time. Good rains fell in eastern Ethiopia and vegetation was becoming green near Dire Dawa. Good rains also fell on the Red Sea coast and in the Hadhramaut interior of Yemen, but vegetation remained generally dry.

In the **Eastern Region**, light to moderate monsoon rains fell in parts of Rajasthan, India and adjacent

areas of Tharparkar and Cholistan deserts in Pakistan during August. Although the monsoon rains this year in western Rajasthan (Jaisalmer) are about 25% below the long-term average, they are sufficient for Desert Locust breeding. Heavier rains fell in eastern Rajasthan (Jodhpur-Barmer). As a result, green vegetation coverage was spotty, mainly concentrated in a few places of Tharparkar, in parts of Rajasthan near Barmer, Jaisalmer and Bikaner, and on the border near Ranakdhar (Tharparkar) and Ghotki district, Pakistan.



Area Treated

No control operations were reported during August.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During the first decade of August, scattered mature solitary adults were present in the centre and south from Moudjeria (1752N/1219W) to Nema (1636N/0715W). Some of the adults were copulating. Small-scale breeding continued during the month between Aioun El Atrous (1639N/0936W) and Nema where low numbers of solitary hoppers were present and immature adults were seen from the second week onwards.

• FORECAST

Small-scale breeding will continue in the south, causing locust numbers to increase slightly. Fledging is likely to take place until the end of September while a second generation of egg-laying could start by mid-September in those areas that remain favourable with hatching in early October. Scattered adults may appear in the west and northwest by the end of the forecast period.

Mali

• SITUATION

During August, no locusts were seen during surveys carried out near Kayes (1426N/1128W) in the west and between Nara (1510N/0717W) and Mopti (1430N/0415W) in the centre of the country. On the 26th, there was an unconfirmed report of hopper bands in the Adrar des Iforas at In Adjerakane (1831N/0208E) between Kidal (1827N/0125E) and Tin Essako (1826N/0229E). Regular surveys could not be

undertaken in the north due to insecurity.

- **FORECAST**

A second generation of breeding is expected to occur in parts of Tamesna, Adrar des Iforas and Timetrine, causing locust numbers to increase further. Hatching is likely to commence by the end of September and hoppers are likely to form small groups and bands in October. All efforts are required to undertake the necessary survey and control operations.

Niger

- **SITUATION**

During August, egg-laying and hatching continued within a widespread area of southern and central Tamesna, the Air Mountains, and in central pasture areas between Filingué (1421N/0319E), Tahoua (1457N/0519E), Tanout (1458N/0852E), and Termit (ca. 1540N/1125E). Solitarious hoppers of all instars were present. Fledging commenced during the second week, and solitarious adults were maturing in most areas by the end of the month. Immature and mature solitarious adults were also seen northwest of Filingué and in the south between Zinder (1346N/0858E), Diffa (1318N/1236E) and the Chad border.

- **FORECAST**

A second generation of breeding is likely to commence by mid-September with hatching during October. As vegetation dries out, hoppers are expected to concentrate and form small groups and bands while adults could form small groups and swarms. All efforts are required to undertake the necessary survey and control operations.

Chad

- **SITUATION**

At the end of August, isolated first to third instar hoppers mixed with immature and mature solitary adults were present in a few places in the east near Arada (1501N/2040E) while only isolated adults were seen near Abeche (1349N/2049E). No locusts were seen in Kanem.

- **FORECAST**

Small-scale breeding will cause locust numbers to increase mainly in the east and northeast. Fledging is expected to occur from mid-September onwards. Regular surveys are recommended in all areas.

Senegal

- **SITUATION**

No surveys were carried out and no locusts were reported in August.

- **FORECAST**

No significant developments are likely.

Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sierra Leone and Togo

- **FORECAST**

No significant developments are likely.

Algeria

- **SITUATION**

No locusts were seen during helicopter surveys undertaken in the south between Tamanrasset (2250N/0528E) and the borders of Niger and Mali from 28 July to 6 August.

- **FORECAST**

Small-scale breeding may occur in the extreme south in areas of recent rainfall along the border of Mali and Niger, causing locust numbers to increase.

Morocco

- **SITUATION**

No surveys were carried out and no locusts were reported in August.

- **FORECAST**

No significant developments are likely.

Libya

- **SITUATION**

No reports were received during August.

- **FORECAST**

No significant developments are likely.

Tunisia

- **SITUATION**

No surveys were carried out and no locusts were reported in August.

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During August, low numbers of mature solitarious adults, up to 250 adults/ha, were seen in Northern Kordofan near El Obeid (1311N/3010E) and in River Nile State near Atbara (1742N/3400E) and Berber (1801N/3400E).

- **FORECAST**

Small-scale breeding is almost certainly in progress and will continue during the forecast period, causing



No. 407



No. 407

DESERT LOCUST BULLETIN

locust numbers to increase but remain below threatening levels in West and North Darfur, Northern Kordofan, River Nile, Northern and Kassala states.

Eritrea

• SITUATION

No surveys were carried out and no locusts were reported during August.

• FORECAST

Small-scale breeding is expected to occur in the western lowlands, causing locust numbers to increase slightly. Surveys should be carried out to monitor the situation.

Ethiopia

• SITUATION

During August, no locusts were seen during surveys carried out in the east near Dire Dawa (0935N/4150E) and in the northeast near Kombolcha (1107N/3944E).

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No reports were received during August.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No surveys were carried out and no locusts were reported during August.

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

During August, no locusts were seen during surveys on the Red Sea coast south of Shalatyn (2308N/3535E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During August, no locusts were seen during surveys carried out in the Asir Mountains near Al Barzah (2157N/3942E) and Khamis Mushait (1819N/4245E),

and in the interior.

• FORECAST

No significant developments are likely.

Yemen

• SITUATION

No surveys were carried out and no locusts were reported during August.

• FORECAST

Low numbers of adults are likely to be present in a few places along the Tihama where they could breed on a small scale in areas of recent rainfall. Small-scale breeding could also occur in the summer breeding areas of the interior in areas of recent rainfall.

Oman

• SITUATION

During August, no locusts were seen during surveys carried out in Dakhliya Region between Ibri (2314N/5630E) and Nizwa (2255N/5731E). No locusts were reported in other regions.

• FORECAST

No significant developments are likely.

Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, Syria, Tanzania, Turkey, Uganda and UAE

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

No reports were received during August.

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

During the first half of August, no locusts were seen during surveys carried out in the summer breeding areas of Cholistan. During the second half of the month, isolated mature solitary adults were seen at eight places south of Rahimyar Khan (2822N/7020E) along the Indian border.

• Forecast

Small-scale breeding will occur in parts of Cholistan and Tharparkar, causing locust numbers to increase slightly but remain below threatening levels.

India

• SITUATION

During August, isolated mature solitary adults were present at a few locations north of Jaisalmer (2652N/7055E) near the Pakistani border.

- **FORECAST**

Small-scale breeding will occur in parts of Rajasthan, causing locust numbers to increase slightly but remain below threatening levels.

Afghanistan

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.



Announcements

Desert Locust warning levels. A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Locust reporting. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLo Desert Locust Information Service (ecllo@fao.org). Information received by the end of the month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

Locust tools and resources. FAO has developed a number of tools that National locust information officers and other interested individuals can use for Desert Locust early warning and management:

- **MODIS.** Vegetation imagery every 16 days (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/.Locusts/.Regional/.MODIS/index.html)
- **MODIS.** Daily rainfall imagery in real time (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/.Locusts/index.html)
- **RFE.** Rainfall estimates every day, decade and month (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/.Locusts/index.html)

- **Greenness maps.** Dynamic maps of green vegetation evolution every decade (<http://www.devocast.eu/user/images/dl/Form.do>)
- **FAODLIS Google site.** A platform for sharing problems, solutions, tips and files for eLocust2, eLocust2Mapper, RAMSES and remote sensing (<https://sites.google.com/site/faodlis>)
- **FAOLOCUST Twitter.** The very latest updates are posted on Twitter (<http://www.twitter.com/faolocust>)
- **FAOLocust Facebook.** A social means of information exchange using Facebook (<http://www.facebook.com/faolocust>)
- **Slideshare.** Locust presentations and photos available for viewing and download (<http://www.slideshare.net/faolocust>)
- **eLERT.** A dynamic and interactive online database of resources for locust emergencies (<http://sites.google.com/site/elertsite>)

SWAC website. A new website for the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC) is now available at <http://www.fao.org/ag/locusts/SWAC>. Comments are welcome.

New information on Locust Watch. Recent additions to the web site (www.fao.org/ag/locusts) are:

- **Desert Locust situation updates.** Archives Section – Briefs
- **Sahel Crises.** Information Section

Sahel locust threat. An updated information package explains the current threat to the Sahel in West Africa by Desert Locust. It is available at: <http://www.fao.org/ag/locusts/en/info/2002/index.html>.

2012 events. The following activities are scheduled or planned:

- **CLCPRO.** Experts meeting on locust threat in Sahel, Nouakchott, Mauritania (3-5 September)
- **CRC.** 28th Session, Jeddah, Saudi Arabia (24-28 November)
- **SWAC.** 28th Session, New Delhi, India (5-7 December)



No. 407

DESERT LOCUST BULLETIN



No. 407

DESERT LOCUST BULLETIN



Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

NON-GREGARIOUS ADULTS AND HOPPERS

ISOLATED (FEW)

- very few present and no mutual reaction occurring;
- 0 - 1 adult/400 m foot transect (or less than 25/ha).

SCATTERED (SOME, LOW NUMBERS)

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1 - 20 adults/400 m foot transect (or 25 - 500/ha).

GROUP

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

ADULT SWARM AND HOPPER BAND SIZES

VERY SMALL

- swarm: less than 1 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • band: 50+ ha

RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.

OTHER REPORTING TERMS

BREEDING

- the process of reproduction from copulation to fledging.

SUMMER RAINS AND BREEDING

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

DECLINE

- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.

OUTBREAK

- a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.

UPSURGE

- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to- gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.

PLAGUE

- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

- period of deep recession marked by the complete absence of gregarious populations.

WARNING LEVELS

GREEN

- Calm. No threat to crops. Maintain regular surveys and monitoring.

YELLOW

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

ORANGE

- Threat. Threat to crops. Survey and control operations must be undertaken.

RED

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

REGIONS

WESTERN

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during plagues only: Burkino Faso, Cape Verde, Gambia, Guinea and Guinea-Bissau.

CENTRAL

- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi

Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



No. 407

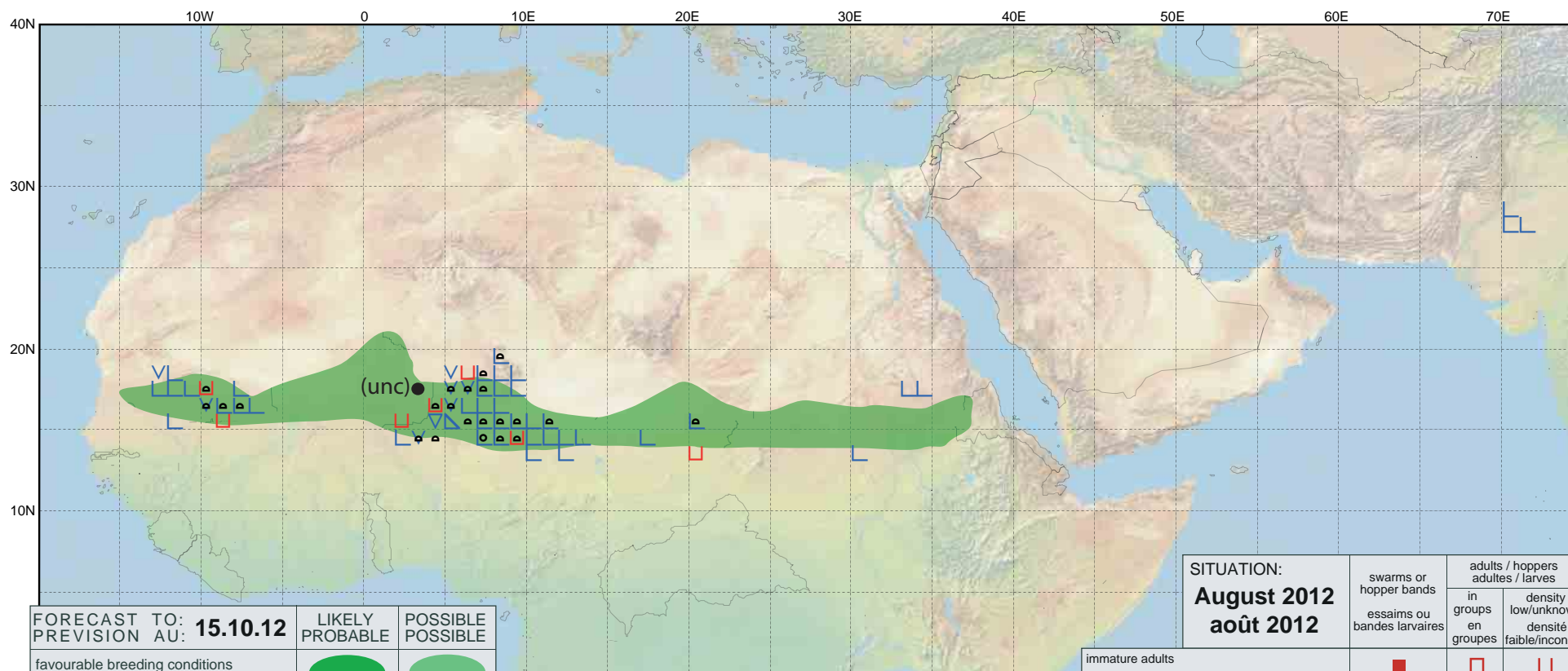
DESERT LOCUST BULLETIN

page **7** of 8



Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.10.12		
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: August 2012 août 2012	swarms or hopper bands	adults / hoppers adultes / larves	
	essaims ou bandes larvaires	in groups en groupes	density low/unknown densité faible/inconnue

immature adults adultes immatures			
mature or partly mature adults adultes matures ou partiellement matures			
adults, maturity unknown adultes, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			