

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 443



**General Situation during August 2015
Forecast until mid-October 2015**

(2.9.2015)

The Desert Locust situation remained calm during August. Only low numbers of solitarious adults were present in parts of the summer breeding areas in the northern Sahel of Mauritania, Niger, Chad and Sudan. Nevertheless, widespread good rains fell throughout all of these areas and ecological conditions have become favourable that will allow small-scale breeding to occur during September and October. As a result, locust numbers are expected to increase gradually in Mauritania, Mali, Niger, Chad, Algeria, Sudan and Eritrea. Similarly, small-scale breeding is likely along both sides of the Indo-Pakistan border. Regular surveys should be conducted in all concerned countries during the forecast period.

Western Region. The situation remained calm in August. Low numbers of solitarious adults were seen during surveys in southern Mauritania, the Air Mountains in Niger and in western and northeast Chad. Surveys were not possible in northern Mali due to prevailing insecurity. Widespread good rains fell for a second consecutive month throughout the summer breeding areas in the northern Sahel between Mauritania and Chad, extending to southern Algeria and northern Mauritania. Consequently, relatively large areas of annual vegetation became green in the northern Sahel and breeding conditions were extremely favourable. During the forecast period, small-scale breeding will cause locust numbers to increase in southern Mauritania, northern Mali and Niger, Chad and southern Algeria.

Central Region. The situation remained calm during August. Low numbers of solitarious adults remained near cropping areas along the Nile Valley in northern Sudan. Widespread good rains fell in the summer breeding areas from western Sudan to the western lowlands in Eritrea for a second consecutive month, causing annual vegetation to become green in most areas. Consequently, small-scale breeding is expected to occur during the forecast period, causing locust numbers to increase in both countries. A few isolated adults were present in southern Egypt. Elsewhere, mainly dry conditions prevailed and no significant developments are likely.

Eastern Region. No significant infestations were reported and the situation remained calm during August. An isolated adult was seen near the India border in Cholistan, Pakistan. Breeding conditions continued to improve along both sides of the Indo-Pakistan where small-scale breeding will cause locust numbers to increase slightly during the forecast period.

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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Weather & Ecological Conditions in August 2015

Good rains fell for a second consecutive month throughout the summer breeding areas of the northern Sahel from Mauritania to western Eritrea, causing large areas to become green. Monsoon rains continued along both sides of the Indo-Pakistan border.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) moved northwards over the northern Sahel of West Africa during the first decade of August and was 150-300 km further north than usual over northern Mali and Niger and reached southern Algeria. Thereafter, it retreated southwards but still remained further north than normal. Consequently, good rains fell throughout the summer breeding areas of the northern Sahel between Mauritania and Chad. Good rains also fell in northwest and northern Mauritania and in the Hoggar Mountains and extreme south of Algeria. As a result, annual vegetation became green in southern Mauritania, along wadis in the Adrar des Iforas in northern Mali, on the southern plains of the Tamesna in Mali and Niger, over large portions of central Niger from Tahoua to Chad, throughout most of the northern Sahel in Chad as well as wadis in the northeast, and along several wadis northwest of Tin Zaouatene in southern Algeria. In Morocco, small areas of green vegetation persisted in a few places of the Draa and Ziz-Ghris valleys.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards over the interior of Sudan during the first decade of August and reached the Baiyuda Desert, which is its climatological normal mean position for this time of year. Thereafter, it retreated nearly 125 km southwards, which is unusual. Nevertheless, light to moderate rains fell in the summer breeding areas of the interior of Sudan and western Eritrea during August. This caused annual vegetation to become green over large portions of West and North Darfur, in North Kordofan near Sodiri, in parts of the Baiyuda Desert, and in the east near Kassala as well as several wadis on the western side of the Red Sea Hills between Derudeb and the Nile Valley. Vegetation was also becoming green in the southern part of the

western lowlands in Eritrea and along Khor Barka. Good rains fell in the Yemeni Highlands and parts of the Asir Mountains in Saudi Arabia between Mecca and Jizan that may run off onto the Red Sea coastal plains and cause conditions to improve slightly. Light rain fell in the Abraq area of southern Egypt. Elsewhere, dry conditions prevailed in the region.

In the **Eastern Region**, seasonal rains associated with the southwest monsoon continued to fall in the summer breeding areas along both sides of the Indo-Pakistan border during August. Although no rain fell during the first decade of the month, good showers occurred during the second decade in central and northern Rajasthan, extending to adjacent areas of Khipro and Cholistan deserts in Pakistan. Lighter rain fell in southern Rajasthan and adjacent areas of Tharparkar desert in Pakistan. Consequently, annual vegetation was becoming green in Rajasthan and near the border in Cholistan, Khipro and Tharparkar deserts.



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 last decade of August, isolated immature and mature solitary adults were seen in the south between Kiffa (1638N/1124W) and Tidjikja (1833N/1126W), and in the southeast between Nema (1636N/0715W) and Oualata (1717N/0701W).

• FORECAST

Small-scale breeding will cause locust numbers to increase slightly throughout the south where hoppers are likely to appear in September and fledge by end of the forecast period.

Mali

• SITUATION

No reports were received during August.

• FORECAST

Locust numbers are expected to increase in the Adrar des Iforas, Tamesna and Timetrine where scattered adults are almost certainly present and breeding in areas of recent rainfall.

Niger

• SITUATION

During the last decade of August, isolated immature and mature adults were seen in a few places in the Air Mountains southwest of Iferouane (1905N/0824E) and east of Timia (1809N/0846E) as well as south and northwest of Agadez (1658N/0759E). No surveys were carried out on the Tamesna Plains or in central areas.

• FORECAST

Locust numbers are expected to increase on the Tamesna Plains and in central areas between Tahoua and Ngourti where scattered adults are almost certainly present and breeding in areas of recent rainfall.

Chad

• SITUATION

During August, isolated immature and mature solitary adults were present at densities up to 300 adults/ha in the west between Mao (1406N/1511E), Salal (1448N/1712E) and Moussoro (1338N/1629E), in the east between Arada (1501N/2040E) and Kalait (1550N/2054E), and in the northeast near Fada (1714N/2132E).

• FORECAST

Small-scale breeding will cause locust numbers to increase in Kanem, Batha, Biltine and BET where hoppers are likely to appear in September and fledge by end of the forecast period.

Senegal

• SITUATION

No reports were received during 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 surveys carried out in the central Sahara between Timimoun (2915N/0014E) and Reggane (2643N/0010E) during August.

• FORECAST

Scattered adults may appear near irrigated areas of the central Sahara in the Adrar area, in runoff areas to the south and west of the Hoggar Mountains and in the extreme south near the Mali border. Small-scale breeding could occur in these areas.

Morocco

• SITUATION

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

• FORECAST

No significant developments are likely.

Libya

• SITUATION

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

• FORECAST

No significant developments are likely.

Tunisia

• SITUATION

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

• FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

• SITUATION

During August, scattered immature and mature solitary adults were present near cropping areas along the Nile River near Merowe (1830N/3149E) and Abu Hamed (1932N/3320E). Scattered mature solitary adults were seen near Kassala (1527N/3623E). No locusts were reported elsewhere in North Kordofan, Northern, and River Nile states as well as on the western side of the Red Sea Hills.

• FORECAST

Small-scale breeding will cause locust numbers to increase between West Darfur and the Red Sea Hills as well as in cropping areas along the Nile and Atbara rivers.

Eritrea

• SITUATION

During August, no locusts were seen on the northern Red Sea coastal plains. No surveys were undertaken in the summer breeding areas of the western lowlands.

• FORECAST

Locust numbers are expected to increase in the western lowlands where scattered adults are likely to be present and breeding in areas of recent rainfall.



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Ethiopia

- SITUATION

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

- FORECAST

No significant developments are likely.

Djibouti

- SITUATION

No reports were received during August.

- FORECAST

No significant developments are likely.

Somalia

- SITUATION

No reports were received during August.

- FORECAST

No significant developments are likely.

Egypt

- SITUATION

During August, isolated immature solitary adults were seen near Lake Nasser in the Tushka (2247N/3126E) area.

- FORECAST

No significant developments are likely.

Saudi Arabia

- SITUATION

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

- FORECAST

No significant developments are likely.

Yemen

- SITUATION

During August, information was received from the summer breeding areas of the interior where scattered adults were seen copulating and laying eggs in areas of recent rainfall between Marib (1527N/4519E) and Al Abr (1608N/4714E).

- FORECAST

Small-scale breeding will cause locust numbers to increase slightly in Ramlat Sabatayn between Marib and Al Abr. Isolated adults may be present in areas of recent rainfall on the Red Sea coast.

Oman

- SITUATION

No locusts were seen during surveys on the Musandam Peninsula and in the south near Marmul (1808N/5516E) during August.

- FORECAST

No significant developments are likely.

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

- FORECAST

No significant developments are likely.

EASTERN REGION

Iran

- SITUATION

No locusts were seen on the southeast coast near Jask (2540N/5746E) during August.

- FORECAST

No significant developments are likely.

Pakistan

- SITUATION

No locusts were seen during surveys carried out in Tharparkar, Khipro and Cholistan deserts during August except for one mature solitary adult near the India border in Cholistan.

- FORECAST

Small-scale breeding will cause locust numbers to increase in Tharparkar, Khipro and Cholistan.

India

- SITUATION

No locusts were seen during surveys carried out in Rajasthan and Gujarat during August.

- FORECAST

Small-scale breeding will cause locust numbers to increase in Rajasthan and Gujarat.

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/ECLC Desert Locust Information Service (eclc@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://iridl.Ideo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html)
- **eLocust3 training videos.** A set of 15 introductory training videos are available on YouTube: <https://www.youtube.com/playlist?list=PLf7Fc-oGpFHEDv1jAPaF02TCfpcnYoFQT>
- **RAMSESV4 training videos.** A set of basic training videos are available on YouTube: <https://www.youtube.com/playlist?list=PLf7Fc-oGpFHGyzXqE22j8-mPDhhGNq5So>
- **RAMSESV4 and eLocust3 updates.** Updates can be downloaded from <https://sites.google.com/site/rv4elocust3updates/home>
- **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>)

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

- **Pesticide Referee Group follow-up.** Working papers (Arabic, English, French, Russian) for the Stakeholder Workshop on the Procurement and Supply of Pesticide for Locust Control, Rome (2-3 September) – Information (News/Events 2015)

Training videos. See the new links above for the eLocust3 and RAMSESV4 training videos on YouTube.

Joyce Magor (14 February 1933 – 16 August 2015). Joyce joined the Anti-Locust Research Centre (ALRC) in the U.K. in 1956 and obtained her PhD in locust biogeography in 1962, having determined the importance of rainfall as a factor in Desert Locust geographical distribution. She continued working on locust information for ALRC, that later became the Centre for Overseas Pest Research (COPR) which in turn evolved into the Natural Resources Institute (NRI), until her retirement in 1993. She was a fellow of the Royal Geographical Society and an honourable recipient of the Order of the British Empire. After she retired, she worked closely with FAO's Desert Locust Information Service (DLIS) and was instrumental in developing the SWARMS GIS. She worked at FAO and continued to prepare case studies and published several papers on Desert Locust management. We would like to express our sincere condolences to her family and Government.



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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

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

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

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.

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.

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.



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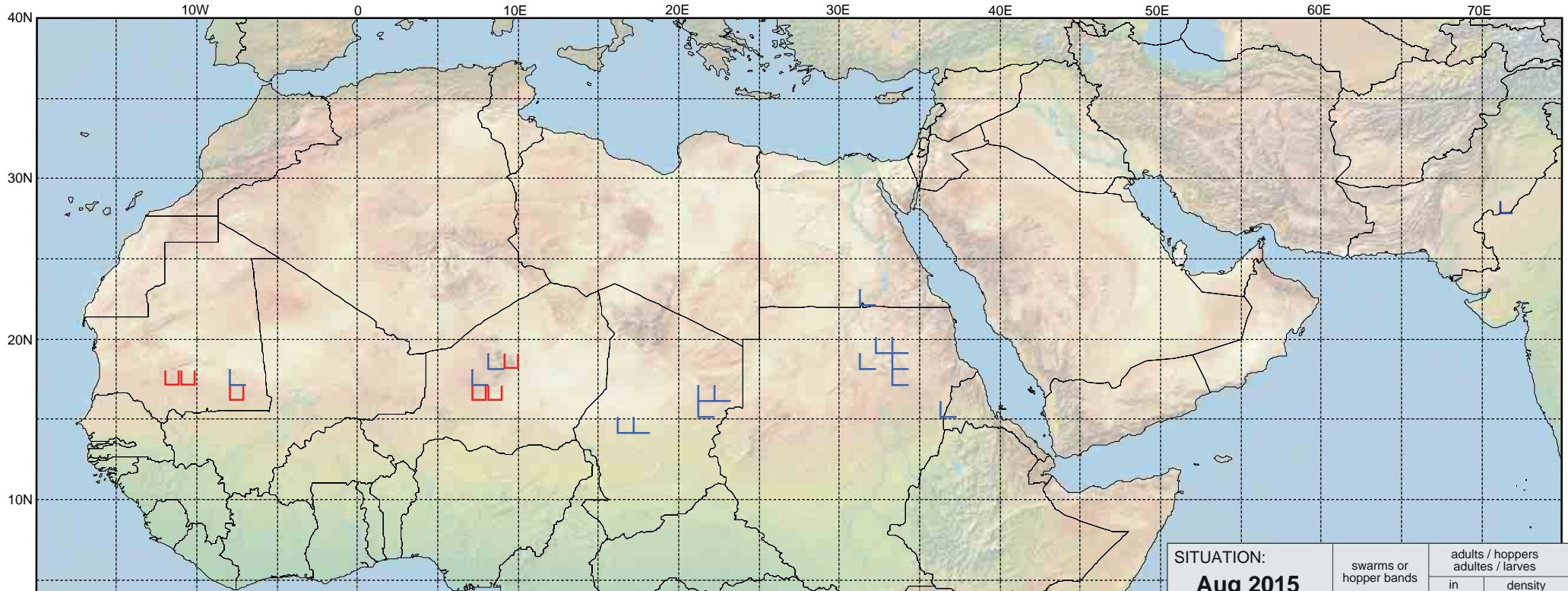
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	15.10.15	LIKELY PROBABLE	POSSIBLE POSSIBLE
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: Aug 2015 août 2015	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)			