

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 335

(4 September 2006)



## General Situation during August 2006 Forecast until mid-October 2006

The Desert Locust situation remained calm during August. Low numbers of locusts were reported in the summer breeding areas in the Sahel of West Africa in Mauritania and Niger, and are probably present in northern Mali. So far, small-scale breeding is in progress in Mauritania. Limited control operations were undertaken against small infestations in northwest Libya. No locusts were reported in the Central Region except for a few adults in southern Egypt. In Southwest Asia, scattered adults were present along both sides of the Indo-Pakistan border. Unusually heavy rains and floods occurred in Ethiopia, Saudi Arabia, Pakistan and India, which should allow ecological conditions to remain favourable for breeding for several months. During the forecast period, breeding will continue in the Sahel of West Africa and Sudan and along the Indo-Pakistan border, causing locust numbers to increase with a slight risk of a few small local outbreaks developing by mid-October.

**Western Region.** Isolated adults were present and breeding on a small-scale during August throughout a large portion of southern and central Mauritania. Although similar populations were seen in the Tamesna and Air Mountains in Niger and are thought to be present in northern Mali, so far breeding has not been reported in either country. Nevertheless, as good rains have fallen and ecological conditions are favourable in most of the summer breeding areas, small-scale breeding will occur during the

forecast period and locust numbers will increase with a slight risk of a few local outbreaks developing by mid-October. Therefore, it is critical that surveys are undertaken on a regular basis in these areas throughout the summer. In Northwest Africa, small infestations were present in northwest Libya and ground teams treated 120 ha of solitarious and *transiens* adult groups mixed with hoppers.

**Central Region.** No locusts were reported during August in the region except for isolated mature adults at one place in southern Egypt. Unusually heavy rains and floods occurred near Dire Dawa, Ethiopia and on the Red Sea coast of Saudi Arabia near Jizan. The latter is a key breeding habitat for Desert Locust and ecological conditions are likely to remain favourable there for several months. Good rains also fell in adjacent coastal areas in Yemen. Regular surveys should be undertaken along the coastal plains in both countries because there is a good chance that breeding will take place during the forecast period and local outbreaks may occur. Surveys should also continue in the summer breeding areas in Sudan and western Eritrea.

**Eastern Region.** Scattered solitarious adults were present in parts of the summer breeding areas on both sides of the Indo-Pakistan border during August. Unusually heavy rains caused flooding in some places in Rajasthan, India and in the Tharparkar Desert of Pakistan. Consequently, ecological conditions should remain favourable longer than in most years and breeding is likely to extend beyond the forecast period, causing locust numbers to increase with a slight risk of local outbreaks developing. Therefore, regular surveys should be maintained in both countries for several more months.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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### Weather & Ecological Conditions in August 2006

**Good rains fell in the Sahel of West Africa and Sudan during August, and ecological conditions were favourable for breeding in most areas. Unusually heavy rains and flooding occurred in Ethiopia, Saudi Arabia, and along the Indo-Pakistan border where breeding conditions are expected to remain favourable for several months.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated between 15N and 20N over the Sahel during August. Consequently, light to moderate rains fell south of about 18N in southern Mauritania, northern Mali (Timetrine, Tilemsi Valley, Adrar des Iforas, Tamesna) and Niger (Tamesna, Air). Annual vegetation continued to develop and conditions were favourable for breeding in most places. At times, the ITCZ reached as far north as 24N over southern Algeria, causing localized showers north of 18N in northern Mali and in the extreme south of Algeria near Bir Bou Mokhtar as well as southwest of Tamanrasset. In Niger, heavier showers fell in the southern Air Mountains (Tabelot, 57 mm), in the northeast (Bilma, 64 mm), and in the northwest (Tazerzait Plateau). As a result, vegetation is expected to improve in these areas. In northwest Libya, good rains fell in parts of the Al Hamada Al Hamra region and breeding conditions were said to be favourable.

In the **Central Region**, the ITCZ oscillated between 15N and 20N over northern Sudan during August. Consequently, good rains fell over a large portion of the summer breeding areas in the interior of Sudan, mainly in North Darfur, North Kordofan and near Kassala, and in western Eritrea during the first two decades of the month. Less rain fell further north in the Baiyuda Desert south of Dongola, Sudan. Although less rain fell during the last decade of August in these areas, ecological conditions remained favourable for breeding. Heavy rains in the Ethiopian Highlands caused the Awash and Dechatu rivers to flood in the Dire Dawa area. Light to moderate rains fell along the Red Sea coastal plains from Al Mukha, Yemen and Jizan, Saudi Arabia for the second consecutive month. Some of the rains extended

further north along the plains in Saudi Arabia to Lith while heavy rains in the Asir Mountains caused flooding on the coast near Jizan. Ecological conditions were favourable for breeding and are likely to remain so for the next few months. Light rain fell in the interior of Yemen near Marib and Shabwah in early August and again at the end of the month but vegetation was drying out. Light to moderate rain fell at times in some coastal and interior areas of Oman.

In the **Eastern Region**, monsoon rains continued to fall in the summer breeding areas along both sides of the Indo-Pakistan border during August. Unusually heavy rains occurred from the 18<sup>th</sup> to the 22<sup>nd</sup> in Rajasthan, India between Barmer and Jaisalmer and in adjacent areas of the Tharparkar Desert in Pakistan. Severe flooding was reported in Rajasthan near Barmer where nearly 600 mm of rain (more than double the annual average) fell in three days as well as in Mirpurkhas, Pakistan. Consequently, ecological conditions are expected to remain favourable for locust breeding in Tharparkar and southern Rajasthan for several months.



### Area Treated

Libya 120 ha (10-11 August)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

##### • SITUATION

During August, scattered solitary mature adults were present and breeding on a small scale in the centre (Tagant, northern Brakna) and in the south (Trarza, the two Hodhs), mainly south of 18N. Although most of the hoppers were first and second instar, some fourth and fifth instar hoppers were reported during the second half of the month. Locust densities remained very low with no more than 100 hoppers and 65 adults seen at a single location.

##### • FORECAST

*Locust numbers are expected to increase further in the centre and south (Trarza, Brakna, Assaba, Tagant, the two Hodhs) as small-scale breeding continues during September. If vegetation begins to dry out, adults will appear in the northwest (Inchiri and southwest Adrar) where they could breed if rains occur.*

## Mali

### • SITUATION

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

### • FORECAST

*Scattered adults are likely to be present and breeding on a small scale in a few places in Timetrine, Tilemsi Valley, Adrar des Iforas and Tamesna. Locusts may also be present in areas of recent rainfall between Tombouctou and Araouane.*

## Niger

### • SITUATION

During August, scattered solitarious immature and mature adults were seen in parts of the central Air Mountains, on the Tamesna Plains between Tahoua (1457N/0519E) and Agadez (1700N/0756E) as well as northwest of In Abangharit (1754N/0559E), and between Tanout (1505N/0850E) and Agadez.

### • FORECAST

*Small-scale breeding is likely to be in progress or will occur in parts of Tamesna, the Air Mountains and near Tanout, causing locust numbers to increase slightly during the forecast period. As vegetation begins to dry out in October, locusts are expected to concentrate in remaining green areas and increase in density.*

## Chad

### • SITUATION

No locusts were reported during the first decade of August in the summer breeding areas in the west (Kanem) and in the east (Biltine and Ennedi) of the country.

### • FORECAST

*Isolated adults may be present in a few places in Kanem, Batha, Biltine and BET provinces, mainly north of 15N, and breed on a small scale in areas of recent rainfall.*

## Senegal

### • SITUATION

No locusts were seen during surveys carried out in the north up to 20 August.

### • FORECAST

*No significant developments are likely.*

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

### • FORECAST

*No significant developments are likely.*

## Algeria

### • SITUATION

No locusts were seen during surveys carried

out in August in the central Sahara near Adrar (2753N/0017W), in the south near Tamanrasset (2250N/0528E) and along the Malian border near Bir Bou Mokhtar (2120N/0056E).

### • FORECAST

*Scattered adults may be present and breeding near the Algerian border, primarily near In Amenas and to a lesser extent near Illizi and Djanet.*

## Morocco

### • SITUATION

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

### • FORECAST

*No significant developments are likely.*

## Libyan Arab Jamahiriya

### • SITUATION

During the second week of August, solitarious fledglings and adults were present at densities of 3-5 adults/m<sup>2</sup> in the northwest of the country in the Al Hamada Al Hamra region at 20 locations south of Ghadames (3010N/0930E) and at four locations near Nalut (3152N/1058E). Solitarious first and second instar hoppers at densities up to 4 hoppers/m<sup>2</sup>, mixed with *transiens* adult groups, were reported at three places southeast of Ghadames and ground control teams treated 120 ha on the 10-11 August.

### • FORECAST

*Small-scale breeding could continue in areas of recent rainfall in the Al Hamada Al Hamra causing locust numbers to increase slightly.*

## 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, no locusts were seen during surveys carried out in the summer breeding areas of North Kordofan, the Baiyuda Desert, and on the western side of the Red Sea Hills.



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### • FORECAST

*Scattered adults may be present in a few places in the summer breeding areas in Kordofan and Darfur and, perhaps to a lesser extent, near Kassala. If so, locust numbers could gradually increase as a result of small-scale breeding in areas of recent rainfall (as far north as 16N in Darfur and Kordofan, and near Shendi).*

### Eritrea

#### • SITUATION

No locusts were seen during a survey carried out in the summer breeding areas in the western lowlands on 16-19 August.

#### • FORECAST

*Isolated adults may be present in parts of the western lowlands and could breed on a limited scale in areas of recent rainfall.*

### Ethiopia

#### • SITUATION

No reports were received 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 locusts were reported during the first week of August.

#### • FORECAST

*No significant developments are likely.*

### Egypt

#### • SITUATION

During August, isolated mature adults persisted at one place in the Red Sea Hills northeast of Aswan (2405N/3256E). Elsewhere, no locusts were seen during surveys along Lake Nasser and in the Western Desert.

#### • FORECAST

*Low numbers of locusts may be present in agricultural areas in parts of the Western Desert. No*

*significant developments are likely.*

### Saudi Arabia

#### • SITUATION

During the first week of August, no locusts were seen during surveys carried out along the central and southern Red Sea coastal plains, and in the interior near Buraydah (2620N/4359E) as well as near the Jordanian border. Surveys were undertaken again on the central coast and interior areas on 26-27 August but no locusts were found.

#### • FORECAST

*Scattered adults may be present or could appear on the Red Sea coastal plains near Jizan and breed in areas of recent rainfall.*

### Yemen

#### • SITUATION

No locusts were seen during surveys carried out in the summer breeding areas in the interior near Marib (1525N/4521E) on 10 August.

#### • FORECAST

*Scattered adults may be present or could appear on the Red Sea coastal plains and breed on a limited scale in areas of recent rainfall.*

### Oman

#### • SITUATION

No locusts were seen during surveys carried out in August on the Musandam Peninsula, on the northern Batinah coast and in the northern interior.

#### • 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 during surveys carried out on the southern coast of Hormozgan province near Bandar Abbas and Jask on August 19.

#### • FORECAST

*No significant developments are likely.*

#### Pakistan

#### • SITUATION

During the second half of July and throughout August, scattered mature adults at densities of up to 15 adults/ha were present at a few locations in Tharparkar, Khipro and Cholistan deserts.

• **FORECAST**

*Small-scale breeding is expected to occur in areas of recent rainfall in Tharparkar Desert, causing locust numbers to increase.*

**India**

• **SITUATION**

During the second half of July, low numbers of solitary adults were present southwest of Jodhpur (2618N/7308E).

No locusts were reported during the first half of August.

• **FORECAST**

*Small-scale breeding is expected to occur in areas where heavy rain fell near Barmer and Jaisalmer last month, causing locust numbers to increase.*

**Afghanistan**

• **SITUATION**

No reports received.

• **FORECAST**

*No significant developments are likely.*



## Announcements

**Locust reporting.** During recession periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent twice/week and affected countries are encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@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.

**eLocust2.** FAO has developed a new version of eLocust in collaboration with affected countries and the French Space Agency (CNES/Novacom) that allows field officers to enter survey and control data directly in the field and transmit it in real time via satellite to their national locust centre. Data can also be downloaded to a PC and visualized on GoogleEarth. The software is in both English and French. FAO DLIS has distributed units to nearly all of the frontline countries so that they can become operational this summer. Photos and more information are available at: [www.fao.org/ag/locusts/en/activ/DLIS/index.html](http://www.fao.org/ag/locusts/en/activ/DLIS/index.html)

**Desert Locust warning levels.** DLIS is experimenting with a colour-coded scheme to indicate the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution* and red for *danger*. The scheme has been 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. Your feedback on the usefulness of this scheme and any suggested improvements is welcome.

**CNLA Mauritania.** The Government of Mauritania has recently approved the establishment of an autonomous National Anti-Locust Centre (Centre National de Lutte Antiacridienne, CNLA), which has its own budget and decision-making authority. Their web site is: [www.claa.mr](http://www.claa.mr). Other countries are encouraged to follow the example of Mauritania.

**EMPRES/CRC website.** Detailed information on EMPRES/CR and the FAO Central Region Commission as well as member country profiles can be found on the new EMPRES/CRC website at: [www.crc-empres.org](http://www.crc-empres.org).

**New information on Locust Watch.** New material is available on the Locust Group's web page, Locust Watch ([www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)):

- Report of the 2006 Iran/Pakistan Joint Border Survey (English) – Publications section
- Fighting the Locusts ... Safely brochure (French and Arabic) – Publications section
- Report of the 25<sup>th</sup> Session of the Central Region Commission (English and Arabic) – Publications section

**DLCC documentation.** The working documents for the 38<sup>th</sup> Session of the Desert Locust Control Committee (DLCC) are being posted on LocustWatch web page ([www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)) as they become available in English, French and Arabic. Please check the page on a regular basis.



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**2006 events.** The following meetings are scheduled:

- **DLCC.** 38th Session, Rome, 11-15 September
- **EMPRES/CR.** 14th Liaison Officer Meeting, Muscat (Oman), 11-15 November
- **SWAC.** 25th Session, Tehran (Iran), 20-23 November
- **EMPRES/WR and CLCPRO.** 5th EMPRES Liaison Officer Meeting and 2nd Session CLCPRO, Nouakchott (Mauritania), December



### 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 km<sup>2</sup>      • band: 1 - 25 m<sup>2</sup>

##### **SMALL**

- swarm: 1 - 10 km<sup>2</sup>      • band: 25 - 2,500 m<sup>2</sup>

##### **MEDIUM**

- swarm: 10 - 100 km<sup>2</sup>      • band: 2,500 m<sup>2</sup> - 10 ha

##### **LARGE**

- swarm: 100 - 500 km<sup>2</sup>      • band: 10 - 50 ha

##### **VERY LARGE**

- swarm: 500+ km<sup>2</sup>      • 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.

##### **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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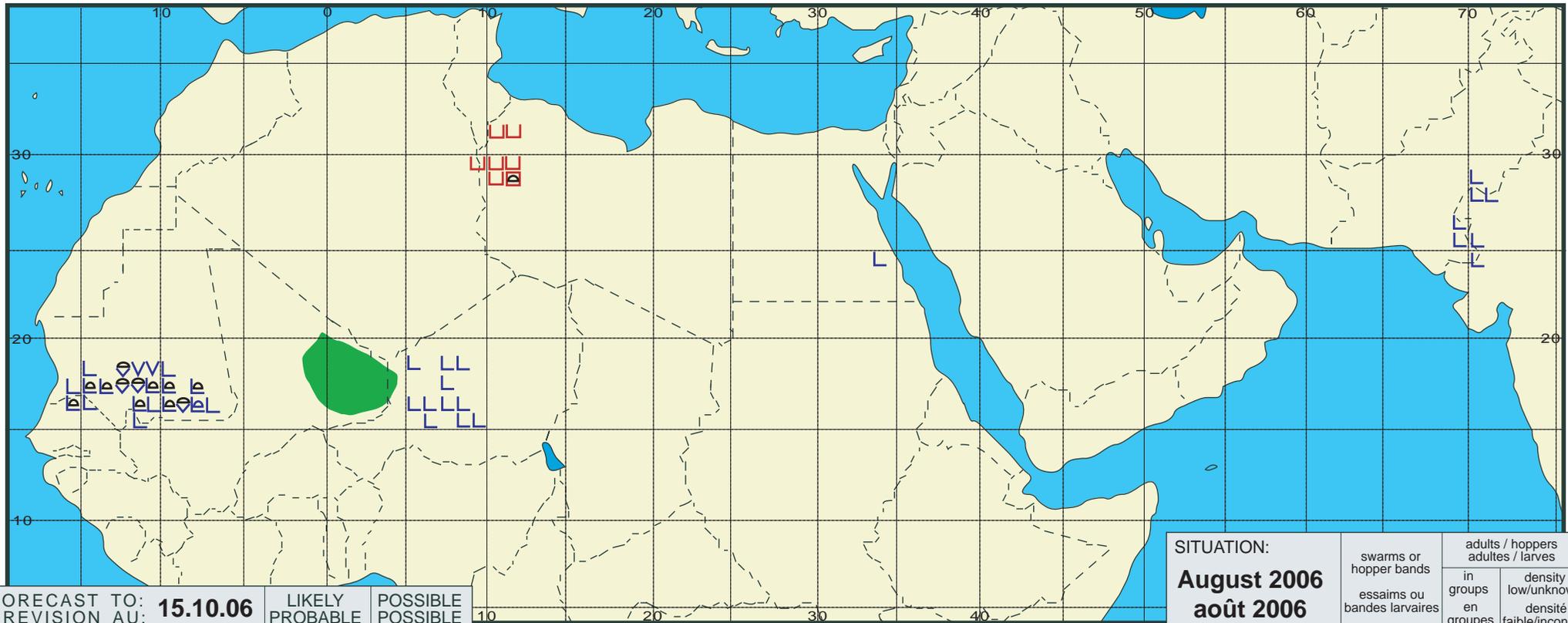
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: <b>15.10.06</b>	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: <b>August 2006</b> <b>août 2006</b>	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)			