

warning level: **CAUTION**

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 356

(2 June 2008)



## General Situation during May 2008 Forecast until mid-July 2008

The Desert Locust situation was generally calm during May except for the uncertainty about locust infestations in eastern Ethiopia. There is a high risk that locusts may be present and breeding in the Ogaden, which could give rise to hopper bands and perhaps small swarms. All efforts are required to undertake the necessary survey and control operations. Locust numbers declined in Iran where breeding had occurred in April. Limited control operations were carried out against small infestations in central Algeria and northwest Mauritania. During the forecast period, scattered adults will appear in the summer breeding areas in the northern Sahel between Mauritania and Sudan and along both sides of the Indo-Pakistan border. Small-scale breeding will occur after the seasonal rains commence in these areas. Only limited surveys are likely to be possible this summer in some of the areas in the Sahel.

**Western Region.** The situation remained calm during May. Small-scale breeding continued in central Algeria where ground control operations treated 1,280 ha of hopper groups and adults. Local breeding also continued in northwest Mauritania where 9 ha of hoppers and adults were controlled. Low numbers of adults are expected to move during June towards the summer breeding areas in southern Mauritania, northern Mali, northern Niger, southern Algeria and eastern Chad where they will mature and lay eggs

once the summer rains begin. Only limited surveys, if any, can be carried out in Mali, Niger and Chad due to insecurity. No locusts were reported elsewhere in the Region during May.

**Central Region.** Although locusts were not seen during surveys in southern Ethiopia in May, there is a high probability that they are present and breeding in the Ogaden in eastern Ethiopia where good rains fell in April and early May. If so, small hopper bands could form in the coming weeks that, if not treated, could become small swarms. Elsewhere in the Region, the situation remained calm. Only low numbers of adults were seen on the Red Sea coast in Yemen and similar infestations may be present on the coast in northwest Somalia. Locusts are expected to appear in the summer breeding areas in the interior of Sudan, western Eritrea and Yemen where they will breed on a small-scale in areas that receive rainfall. Only limited surveys, if any, can be carried out in western Sudan.

**Eastern Region.** Locusts declined in the spring breeding areas in western Pakistan and southeast Iran. Nevertheless, small infestations remained on the southeast coast in Iran. Scattered adults are likely to appear in the summer breeding areas along both sides of the Indo-Pakistan border in June and breed on a small scale once the monsoon rains arrive.

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, 00153 Rome, Italy. It is also available on the Internet.

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### Weather & Ecological Conditions in May 2008

**Mainly dry conditions prevailed in the spring and summer breeding areas except for eastern Ethiopia and northern Somalia where good rains fell and breeding conditions improved during May. Conditions are likely to improve in the interior of Yemen.**

In the **Western Region**, dry conditions prevailed in the spring and summer breeding areas during May. In Morocco, annual vegetation was dry along the southern side of the Atlas Mountains except for some places in the Draa and Ziz-Ghris valleys. During the last two decades, light rain fell in central Libya and, to a lesser extent, in southeast Algeria. Isolated showers may have fallen locally in parts of southern Mauritania (near Tamchekket and south of Kiffa and Tintane), the Adrar des Iforas in Mali (northeast of Gao and between Tessalit and Kidal), Tamesna and Air Mountains in Niger, and the central and southern Sahara in Algeria. Consequently, vegetation may be sufficiently green in some of these areas to allow low numbers of Desert Locust to survive but not to breed except on a very limited scale. In central Algeria, vegetation was green in the Mouydir and Ahnet areas. In northwest Mauritania, breeding conditions were favourable in irrigated areas near Oujf.

In the **Central Region**, seasonal rains continued to fall during the first half of May in eastern Ethiopia and ecological conditions became favourable for breeding in the Ogaden and in the southern zones of Bale and Borena. Dry conditions prevailed in the summer breeding areas in the interior of Sudan and western Eritrea. Light rains occurred in western Darfur near Geneina during the first decade and between Ed Dueim and Kassala during the second decade. Heavier rains fell on the western side of the Red Sea Hills near Haiya. Light rains may have also fallen in parts of the highlands and western lowlands in Eritrea. In Yemen, light to moderate rains fell at times during the first decade and again at the end of the month in the summer breeding areas in the interior near Marib, Bayhan and Shabwah where breeding conditions are expected to become favourable in some places. Light rains also fell on the Red Sea coast but vegetation

remained dry. In Saudi Arabia, unusually heavy rains fell in the southwestern interior near Najran on 1 May. In Oman, ecological conditions were not favourable for breeding even though light rains fell in some places in the northern regions of Dhahera, Dakhliya and Sharqiya.

In the **Eastern Region**, light to moderate rains fell during May in the eastern portion of the spring breeding area in Baluchistan, Pakistan between Panjgur, Dalbandin, Kharan, Khuzdar and Lasbela. Vegetation was drying out or already dry in most of the breeding areas of western Pakistan and southeastern Iran. In the summer breeding areas along the Indo-Pakistan border, ecological conditions were improving because of light rains that fell in Rajasthan, India between Jodhpur and Bikaner, and in adjacent areas of Cholistan, Pakistan.



### Area Treated

Algeria	1,280 ha (May)
Iran	20,000 ha (March-April, no details)
Mauritania	16 ha (April, updated)
	9 ha (May)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

###### • SITUATION

During May, scattered solitarious immature and mature adults were present at densities up to 300 adults/ha in cropping areas in the valleys of Kediet Imert south of Oujf (2003N/1301W). Isolated late instar hoppers as well as new hatchlings were seen in a few places. Local infestations have persisted in these areas throughout the winter and spring. Ground teams treated 9 ha during May.

###### • FORECAST

*Low numbers of adults could persist in irrigated areas in the northwest near Oujf. Scattered adults are likely to appear in the summer breeding areas in the south and lay eggs once seasonal rains commence. There is a moderate risk that breeding could commence earlier than normal this year if good rains fall in the west in June.*

##### **Mali**

###### • SITUATION

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

• **FORECAST**

*Scattered locusts are likely to be present and will persist in parts of the Adrar des Iforas where small-scale breeding will occur in areas that receive rainfall.*

**Niger**

• **SITUATION**

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

• **FORECAST**

*Low numbers of locusts are likely to be present and will persist in parts of the central Air Mountains and near Arlit. Small-scale breeding will occur in areas that receive rainfall.*

**Chad**

• **SITUATION**

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

• **FORECAST**

*Low numbers of locusts are likely to appear in the east and northeast where they will eventually breed in areas that receive rainfall.*

**Senegal**

• **SITUATION**

No locusts were seen in the north during surveys carried out in the last decade of May.

• **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**

During May, locust infestations persisted in parts of the central Sahara. Immature and mature solitarious adults, at densities up to 500 adults/ha, and a few solitarious hoppers were present in the Ahnet and Mouydir areas northwest of Tamanrasset (2250N/0528E). Solitarious and *transiens* hoppers of all instars at densities of up to 50 hoppers/m<sup>2</sup> were seen south of Adrar (2753N/0017W) mixed with some adults. Ground teams treated 1,280 ha. Elsewhere, isolated immature adults were present in the northwest near Bechar (3135N/0217W). No locusts were seen between Illizi (2630N/0825E) and Errachidia (3154N/0425W), and southwest of Beni Abbes (3011N/0214W).

• **FORECAST**

*Limited breeding could continue in parts of the central Sahara near Adrar, Djanet and Tamanrasset.*

*Locust numbers are likely to increase south of Tamanrasset as adults move from the central to the southern Sahara where they could eventually breed on a small scale if rainfall occurs.*

**Morocco**

• **SITUATION**

No locusts were reported during May.

• **FORECAST**

*No significant developments are likely.*

**Libyan Arab Jamahiriya**

• **SITUATION**

During May, scattered solitarious adults were present in the southeast near Kufra (2411N/2315E) and Jebel Arkenu (2215N/2445E).

• **FORECAST**

*Scattered adults may be present in the southwest between Ghat and Sabha where small-scale breeding could occur in areas of recent rainfall.*

**Tunisia**

• **SITUATION**

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

• **FORECAST**

*No significant developments are likely.*

**CENTRAL REGION**

**Sudan**

• **SITUATION**

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

• **Forecast**

*Small-scale breeding and low to moderate numbers of locusts are likely to persist in crops in the Nile Valley in the north. Low numbers of adults are likely to appear in the summer breeding areas near Kassala and in North Kordofan and breed on a small scale in areas that receive rainfall.*

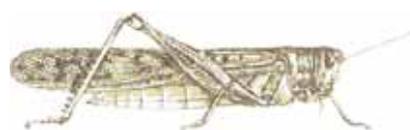
**Eritrea**

• **SITUATION**

No locusts were seen during a survey on the Red Sea coastal plains near Sheib (1551N/3903E) on 21-22 May.

• **FORECAST**

*Low numbers of adults could appear in the western lowlands and breed once seasonal rains commence.*



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### Ethiopia

#### • SITUATION

During May, no locusts were seen during surveys near Harar (0919N/4206E) on the 7<sup>th</sup> and 8<sup>th</sup>, in the highlands about 350 km southwest of Harar at mid-month, and in the south near Mega (0403N/3819E) on the 19<sup>th</sup> and 20<sup>th</sup>. At the end of the month, there was an unconfirmed report of hoppers near the Kenyan border at Rama (0357N/4111E). No surveys were carried out in the Ogaden in May.

#### • FORECAST

*Breeding may be in progress in parts of the Ogaden that could cause small hopper groups and bands to form. All efforts are required to monitor the situation carefully and undertake control operations as necessary.*

### Djibouti

#### • SITUATION

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

#### • FORECAST

*No significant developments are likely.*

### Somalia

#### • SITUATION

A late report indicated that surveys were not carried out during April but there were unconfirmed reports of locusts on the northwestern coast. No surveys were carried out and no locusts were reported during May.

#### • FORECAST

*Scattered adults may be present on the plateau between Boroma and Burao where small-scale breeding could occur in areas of recent rainfall.*

### Egypt

#### • SITUATION

During the first half of May, no locusts were seen during surveys carried out on the Red Sea coast near Abu Ramad (2224N/3624E), along the shores of Lake Nasser and in the Western Desert near Sh. Oweinat (2219N/2845E).

#### • FORECAST

*No significant developments are likely.*

### Saudi Arabia

#### • SITUATION

No locusts were reported during May on the Red

Sea coastal plains or in the spring breeding areas in the interior, including the farms on the northern edge of the Empty Quarter where hopper band control took place in April.

#### • FORECAST

*No significant developments are likely.*

### Yemen

#### • SITUATION

During the first week of May, an immature solitary adult was seen on the northern Red Sea coast between Al Zuhrah (1541N/4300E) and Suq Abs (1600N/4312E). No locusts were seen during surveys on the central coast southeast of Hodeidah (1450N/4258E).

#### • FORECAST

*Scattered adults may be present in parts of the summer breeding areas in the interior. Small-scale breeding could occur in areas of recent rainfall, causing locust numbers to increase slightly.*

### Oman

#### • SITUATION

No locusts were seen during surveys carried out during May in the northern regions of Batinah, Dhahera and Musandam.

#### • 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

A late report indicated that ground control operations treated about 20,000 ha of locust infestations in the western Jaz Murian basin near Kahnuj (2757N/5742E) in March and April.

During May, locusts declined in the spring breeding areas in the southeast. Low numbers of solitary hoppers of all instars, fledglings and scattered immature and mature solitary adults were present at a few places on the southeast coast near Chabahar (2517N/6036E) during the first week. No locusts were seen during surveys on the coast near Bander-e Lengheh (2634N/5452E).

#### • FORECAST

*Locust numbers will continue to decline in the southeast as vegetation dries out and adults move east towards the Indo-Pakistan border.*

## Pakistan

### • SITUATION

No reports have been received since mid-April.

### • FORECAST

*Scattered adults are likely to appear in the summer breeding areas in Tharparkar, Khipro and Cholistan and breed with the onset of the monsoon rains.*

## India

### • SITUATION

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

### • FORECAST

*Scattered adults are likely to appear in Rajasthan and breed with the onset of the monsoon rains.*

## 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 caution (yellow) and threat (orange) periods, locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the last 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 (ecl@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.

**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.

**Climate change.** Potential impacts of climate change on Desert Locust are under discussion. More details can be found on Locust Watch in the Activities

section (<http://www.fao.org/ag/locusts/en/activ/index.html>).

**Google group.** FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding data management and analysis, GIS, eLocust2 and satellite imagery. Interested information officers should contact DLIS (ecl@fao.org) for details.

**MODIS imagery.** Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can be downloaded in different formats suitable for GIS at: [http://iridl.ldeo.columbia.edu/maproom/Food\\_Security/Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/index.html). Comments and questions can be addressed to Pietro Ceccato (pceccato@iri.columbia.edu).

**New information on Locust Watch.** Recent additions to the web site are:

- **Locust risk.** The current risk map was updated (home page)
  - **2008 Iran/Pakistan joint survey.** Results and photos from the annual 30-day survey (Publications – Reports section)
  - **Master Trainers Manual.** The sessions and overheads for eLocust2 were updated (Publications – Documents section)
- Links to the above information can be found in the *Latest Additions* section on Locust Watch.

**2008 events.** The following activities are scheduled:

- **CRC.** Sub-regional training course, UAE (24 May – 3 June)
- **CRC.** 26<sup>th</sup> Session and 30<sup>th</sup> Executive Committee meeting, Muscat (26-30 July)
- **CLCPRO.** 5<sup>th</sup> Executive Committee meeting, Ouagadougou (20-22 October, to be confirmed)
- **EMPRES/WR.** 7<sup>th</sup> Liaison Officers meeting, Niamey (24-28 November, to be confirmed)
- **EMPRES/WR.** 4<sup>th</sup> Steering Committee meeting, Niamey (1-3 December, to be confirmed)
- **SWAC.** 26<sup>th</sup> Session, Kabul (15-17 December)



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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 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.

##### **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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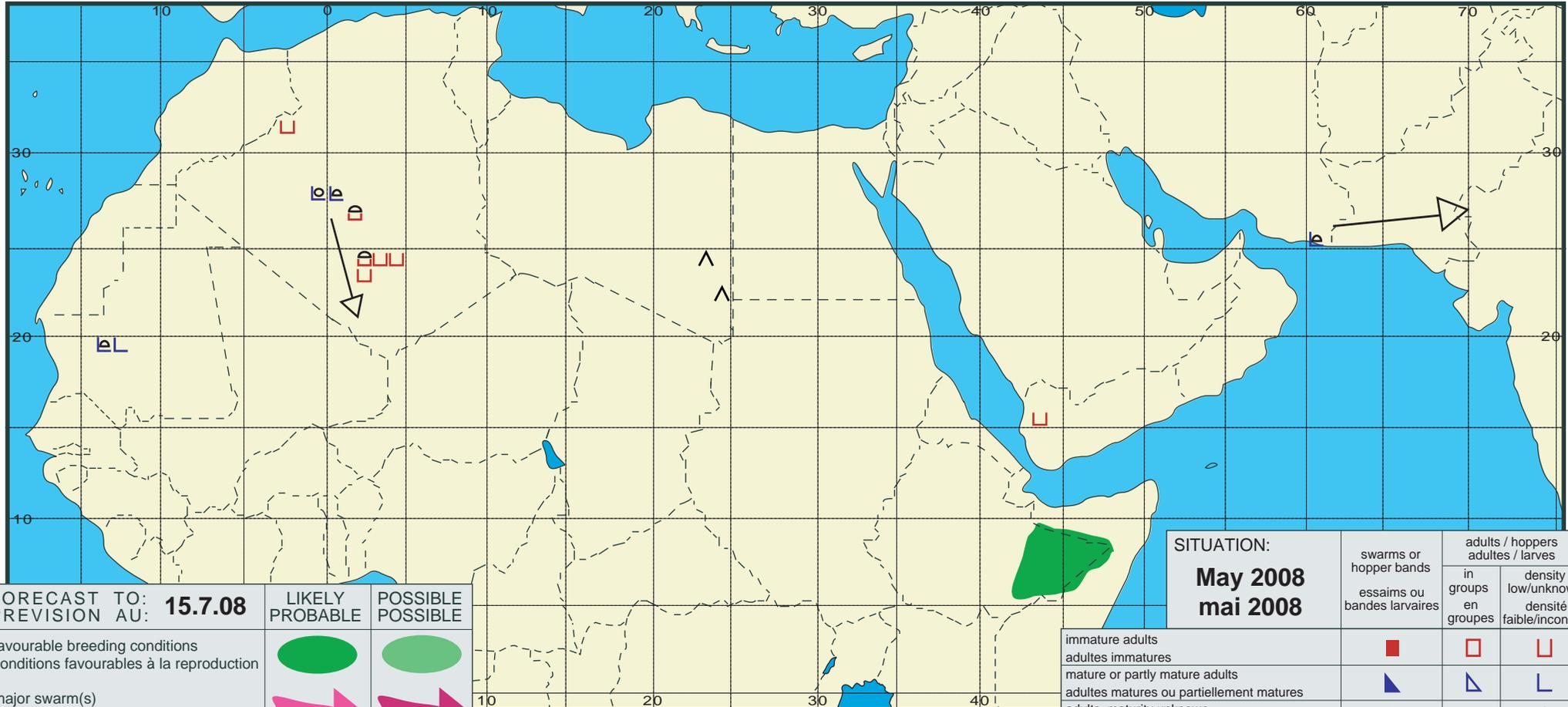
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.7.08		
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:  
**May 2008**  
**mai 2008**

	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves	
		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)			