

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 321



## General Situation during June 2005 Forecast until mid-August 2005

(5 July 2005)

Although there was an increase in the number of solitary locusts in the summer breeding areas in the Sahel in West Africa during June, there was no indication of an invasion and substantial control operations were not necessary. Nevertheless, ground teams treated small areas in central Niger and southern Algeria where local breeding was in progress. In Sudan, several Southern Circuit swarms laid eggs in Darfur that hatched and hopper bands formed. A few other swarms moved across central Sudan and one may have reached northern Ethiopia. Elsewhere, insignificant infestations were present in southern Egypt, northern Somalia and in the interior of Saudi Arabia and Yemen. Small-scale breeding will occur during July and August in the Sahel in West Africa and Sudan and cause locust numbers gradually to increase.

**Western Region.** During June, solitary adults began to appear in southeastern Mauritania, northern Mali and in Tamesna, Niger. Small-scale breeding continued in central Niger near Tanout where control operations treated several hopper groups and bands. Hoppers and adults were also controlled in southern Algeria where small-scale breeding had occurred. The situation is less clear in Chad where breeding and control operations may have occurred in June. In Northwest Africa, control operations ended in the spring breeding areas and no further locusts have been seen. During the forecast period, locust numbers will continue to increase in the northern Sahel as

small-scale breeding occurs in those areas that receive rainfall. Intensive surveys must be maintained on a regular basis in all areas throughout the summer.

**Central Region.** Several Southern Circuit swarms that arrived in late May from West Africa laid eggs in Darfur, Sudan in June and, by the end of the month, hatching and band formation had commenced in a few places. A small number of swarms moved across central Sudan from Darfur to eastern Sudan and one reportedly continued to northern Ethiopia where it dispersed. Locust numbers will increase during the forecast period in the summer breeding areas in Darfur and Kordofan, Sudan as more eggs hatch and hoppers form bands. Elsewhere, local breeding occurred near Aswan, Egypt and solitary adults were present in a few farms in the Western Desert. Scattered solitary adults were reported in the interior of Saudi Arabia and Yemen, and in parts of northern Somalia.

**Eastern Region.** No locusts were reported in the region and dry conditions prevailed except in parts of Rajasthan, India where pre-monsoon rains fell. No significant developments are likely during the forecast period.

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 June 2005

**Early rains fell in many of the summer breeding areas in the Sahel in West Africa and in a few places in Sudan during June. Consequently, ecological conditions for breeding were improving in many areas. Dry conditions prevailed elsewhere in the recession area.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued its seasonal progression towards the north in June, oscillating between 15N and 20N over West Africa, and reaching 25N over Mauritania at the end of the month. Early rains fell sporadically in parts of the summer breeding areas between Mauritania and Chad. Good rainfall occurred in southern and central Mauritania between Aleg, Tidjikja and Aioun El Atrous, and in the southeast near Nema and perhaps north of Oualata. At the end of the month, heavy rain fell in some of these places. In Mali, rain fell in the centre near Tombouctou, in the Adrar des Iforas in the north and perhaps in the Touadenit region in the northwest. Rains also fell in the Tamesna on both sides of the Mali/Niger border. In Niger, good rains fell in the south and in some places in the Air Mountains. Consequently, ecological conditions were improving in all of the above-mentioned areas. In southern Algeria, showers fell at times south of the Hoggar Mountains where green vegetation persisted in a few places. No significant rainfall was reported in Northwest Africa except in parts of western Libya near Ghat and the Al Hamada Al Hamra where light to moderate showers fell several times during the month.

In the **Central Region**, early seasonal rains fell at times in a few places in the summer breeding areas in Sudan during June, mainly in Darfur where vegetation was becoming green. Ecological conditions were drier in Western and Northern Kordofan, River Nile and White Nile States where less rain was reported. In Eritrea, light rains fell in a few places in the western lowlands but ecological conditions remained generally dry and unfavourable for breeding except in a few wadis. Light to moderate rain fell in the summer breeding areas in the interior of Yemen near Shabwah at mid-month. Dry and hot weather prevailed in

northern Somalia where ecological conditions are not favourable for breeding.

In the **Eastern Region**, light rain fell during the first half of June in some places in the summer breeding area in Rajasthan, India and ecological conditions were improving. Dry conditions prevailed elsewhere in the region.



### Area Treated

More than 4,300 ha were treated in June compared to 1.6 million ha in June 2004, bringing the total area treated since the beginning of the upsurge (October 2003) to nearly 12.9 million ha.

|                  |                       |
|------------------|-----------------------|
| Algeria          | 1,200 ha (4-7 June)   |
| Chad (1)         | 1,900 ha (16-30 June) |
| Egypt            | 50 ha (4-14 June)     |
| Morocco          | 6 ha (2-3 June)       |
| Niger            | 263 ha (1-12 June)    |
| Saudi Arabia (1) | 600 ha (June)         |

(1) *unconfirmed or estimated*

*Note: Reporting delays and discrepancies may affect the accuracy of these figures.*



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

##### • SITUATION

Isolated mature adults first appeared in the summer breeding areas in the southeast between Nema (1636N/0715W) and the Malian border on 12 June. During the remainder of the month, scattered adults were seen at a few more places in the same area. No locusts were present between Kiffa and Aioun El Atrous or in the northwest between Akjoujt and Atar.

##### • FORECAST

*Small-scale breeding will occur in the southeast near Nema where hatching should commence during the second half of July and low numbers of hoppers will appear shortly thereafter. Breeding is expected to take place in other areas of the south, depending on the extent and distribution of rainfall in the coming weeks.*

##### **Mali**

##### • SITUATION

In the northern Adrar des Iforas, there was an

unconfirmed report from nomads of two mature swarms appearing from the north along the Algerian border on 1-2 June. On the 6<sup>th</sup>, groups of immature adults were reported between Kidal (1827N/0125E) and Tessalit (2011N/0102E). Scattered adults were seen elsewhere in the Adrar des Iforas and in the Timetrine during the remainder of the month.

- **FORECAST**

*Small-scale breeding is expected to commence in areas of recent rainfall in parts of the Adrar des Iforas, the Tilemsi Valley, Timetrine and Tamesna. Intensive surveys should be carried out on a regular basis in all of the above-mentioned areas during the forecast period.*

## **Niger**

- **SITUATION**

During June, small-scale breeding continued in the Tanout (1505N/0850E) area where mature solitarious and transiens adults, hatching and band formation were reported in several places. Early instar hopper band densities varied from 100-200 hoppers/m<sup>2</sup>. By mid-month, some of the hoppers had reached third instar. No infestations were seen during surveys east of Tanout. Control operations treated 263 ha from 1 to 12 June.

In Tamesna, isolated immature adults were present northwest of Agadez (1700N/0756E) on 18 June, groups of gregarious-appearing mature adults were seen to the southwest on the following day, and isolated mature adults were seen near Agadez at the end of the month. No locusts were seen during surveys elsewhere in the Tamesna. The situation is less clear in the Air Mountains.

- **FORECAST**

*Fledging is expected to commence early in the forecast period near Tanout and the new adults are likely to form several small groups. Some of the adults may remain in situ while others could move northwards to Tamesna and the Air Mountains. Small-scale breeding will occur in areas of recent rainfall in Tamesna and perhaps in parts of the Air.*

## **Chad**

- **SITUATION**

A late report indicated that several Southern Circuit swarms appeared in the west (Chari-Baguirmi, Hadjer-Lamis and Guera) and southwest (Mayo-Kebbi) in early May and subsequently moved east across the country to Batha, Ouaddai and Wadi Fira regions during the first decade of June. Although most of the swarms were immature and low density (100-2,000 adults/ha), a few mature swarms and copulating adults were seen. During the second half of June, control operations reportedly treated 1,900 ha. Further details and clarification are awaited.

- **FORECAST**

*Adults and perhaps a few small groups or swarmlets from the Southern Circuit migration may have laid eggs in areas of recent rainfall in parts of Kanem and Batha, and in the east between Abeche and Fada. Consequently, locust numbers could increase during the forecast period and hoppers may form a limited number of groups or bands. Intensive surveys should be carried out on a regular basis in all of the above-mentioned areas.*

## **Senegal**

- **SITUATION**

No locusts were reported during June.

- **FORECAST**

*No significant developments are likely.*

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

- **FORECAST**

*No significant developments are likely.*

## **Algeria**

- **SITUATION**

During June, small-scale breeding occurred locally in the southern Sahara north of Tamanrasset (2250N/0528E) where up to 15 late instar solitarious hoppers and 20 immature adults were seen per bush during the first week. Control operations treated 1,200 ha from 4 to 7 June. No locusts were seen during surveys carried out in the Sahara as well as in the spring breeding areas in the north.

- **FORECAST**

*Low numbers of locusts may persist in a few places in the south where ecological conditions are favourable. Small-scale breeding could occur in areas that receive rainfall.*

## **Morocco**

- **SITUATION**

During the first two decades of June, low numbers of late instar hoppers, fledglings and immature adults persisted in the northeast near the Algerian border and south of Oujda in a limited area between Touissit (3429N/0146W) and Guenfouda (3428N/0159W). Ground control operations treated 6 ha on 2-3 June. No locusts were reported during the last decade of the month.



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### • FORECAST

*No significant developments are likely.*

### Libyan Arab Jamahiriya

#### • SITUATION

During June, no locusts were seen during surveys carried out in the southwest near Ghat and in the northwest near Mizda.

#### • FORECAST

*No significant developments are likely.*

### Tunisia

#### • SITUATION

No locusts were seen during survey carried out along the borders of Algeria and Libya in June.

#### • FORECAST

*No significant developments are likely.*

## CENTRAL REGION

### Sudan

#### • SITUATION

During the first half of June, a limited number of mature Southern Circuit swarms and groups were seen copulating and laying eggs in western and Northern Darfur. A few more immature and mature swarms reportedly arrived in these areas from eastern Chad. To the east, local populations of mature solitary adults were present in Northern Kordofan northwest of El Obeid (1311N/3010E) and Ed Dueim (1400N/3220E). Isolated immature adults were seen at two places along the Atbara River in River Nile State. A few swarms moved across central Sudan from Darfur, passing through the En Nahud (1246N/2828E) area in Western Kordofan on 12 June, continuing towards El Obeid on the 14<sup>th</sup> and reaching Gedaref (1401N/3524E) in eastern Sudan on the 16<sup>th</sup>. The swarm departed shortly thereafter towards the east.

During the second half of June, there was an unconfirmed report on the 18<sup>th</sup> of a swarm laying north of Zalingei (1251N/2329E) in Western Darfur. On the 23<sup>rd</sup>, hatching commenced near Geneina (1327N/2230E) and first instar hoppers were forming medium density bands. Copulating and egg-laying at densities of up to 10 adults/m<sup>2</sup> continued to be reported in Northern Darfur.

### • FORECAST

*Locust numbers will increase as additional hatching and band formation are expected to occur in Western and Northern Darfur and commence in parts of Western and Northern Kordofan and perhaps in the Eastern Region near Gedaref and Kassala. Fledging is likely to start at the end of July in Darfur where new adults could form small groups and a few swarms from early August onwards. Solitary breeding will probably occur in parts of Northern Kordofan and along the Atbara River.*

### Eritrea

#### • SITUATION

No locusts were seen during surveys carried out in the western lowlands near the border with Sudan from 11 to 18 June.

#### • FORECAST

*There is a low to moderate risk that a few Southern Circuit swarms or groups may have arrived in the western lowlands from adjacent areas of eastern Sudan. If so, the adults are likely to mature quickly and lay eggs that would hatch by mid July. Intensive surveys are suggested to monitor the situation.*

### Ethiopia

#### • SITUATION

No locusts were seen during surveys carried out between Dire Dawa and the Somali border on 14-19 June. On the 23<sup>rd</sup>, there was an unconfirmed report of a locust swarm from eastern Sudan that split up and dispersed in the northern districts of Amhara and Tigray. Further details and confirmation are awaited.

#### • FORECAST

*If the swarm is confirmed, there is a risk that the adults will lay eggs in the north that could hatch during the second half of July. The resulting hoppers could form small bands and fledge from mid-August onwards.*

### Djibouti

#### • SITUATION

No locusts were seen during a survey carried out on the coast between Tadjourah (1147N/4253E) and Obock (1157N/4317E) as well as on the northern coastal plains between Obock and the Eritrean border on 11-12 June.

#### • FORECAST

*No significant developments are likely.*

### Somalia

#### • SITUATION

Scattered immature and mature solitary adults were seen during surveys carried out on 11-23 June near the coast at Berbera (1028N/4502E) and on the escarpment between Burao (0931N/4533E) and

Erigavo (1040N/4720E). During the last week of the month, there were unconfirmed reports of swarms in the northeast near Ufeyn (1047N/4948E), Gardo (0930N/4910E), Elbu (0900N/4903E) and Dangorayo (0844N/4920E). So far, only solitary Desert Locust adults have been found in these places.

- **FORECAST**

*Scattered adults will probably persist in a few places along the northwest coast and the escarpment if ecological conditions remain favourable for survival. No significant developments are likely.*

## **Egypt**

- **SITUATION**

During June, hatchlings and early instar solitary hoppers were present at densities of 2-10 hoppers/m<sup>2</sup> and mixed with immature adults in the Nokra Valley near Aswan. In the Western Desert, high-density groups of solitary immature adults were reported on farms near Sh. Oweinat (2219N/2845E). Control operations treated 50 ha from 4 to 14 June.

- **FORECAST**

*A limited number of small adult groups could form in the Nokra Valley and eventually move towards Sh. Oweinat or perhaps south towards the summer breeding areas in the interior of Sudan.*

## **Saudi Arabia**

- **SITUATION**

During June, scattered immature adults, probably produced from local breeding, were present in the northern interior about 100 km south of Hail (2731N/4141E). Control operations were carried out within an area of 600 ha. No locusts were reported along the Red Sea coastal plains during the month.

- **FORECAST**

*No significant developments are likely.*

## **Yemen**

- **SITUATION**

Scattered immature adults were present during June in the interior near Marib at Al-Jubah (1513N/4520E).

- **FORECAST**

*Low numbers of adults may be present in parts of the summer breeding areas in the interior. Small-scale breeding could occur in those places where rainfall occurs and ecological conditions are favourable.*

## **Oman**

- **SITUATION**

No locusts were seen during surveys carried out in Dakhalia and Dofar regions in June.

- **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 a survey on 26 June in the southeast.

- **FORECAST**

*No significant developments are likely.*

### **Pakistan**

- **SITUATION**

No locusts were reported during the second half of May and first half of June.

- **FORECAST**

*A few scattered adults may start to appear in the summer breeding areas in Tharparkar and Cholistan and breed on a small scale with the onset of the monsoon rains.*

### **India**

- **SITUATION**

No locusts were seen during the second half of May and first half of June

- **FORECAST**

*A few scattered adults may start to appear in the summer breeding areas in Rajasthan and breed once the monsoon rains have started.*

### **Afghanistan**

- **SITUATION**

No reports received.

- **FORECAST**

*No significant developments are likely.*



## **Announcements**

**Locust reporting.** 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. During recession periods, countries should report at least once/month.



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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.

**Locust web pages.** The Locust Group has launched an updated version of its web site in English and French at: [www.fao.org/ag/locusts](http://www.fao.org/ag/locusts).

**Locust archives.** Desert Locust reports received by FAO from affected countries from 1952 to the present are available on a series of four CDs in PDF. Please contact the Locust Group for more details.

**Desert Locust booklet.** FAO has produced a booklet for the general public and donor community entitled *Hunger in their wake: Inside the battle against the Desert Locust*, available for download at [www.fao.org/ag/locusts](http://www.fao.org/ag/locusts) (Publications).

**Publications on the Internet.** New FAO publications and meeting reports are available for downloading at [www.fao.org/ag/locusts](http://www.fao.org/ag/locusts) (Publications):

- Report of the Desert Locust joint survey in the spring breeding areas of Pakistan and I.R. Iran, April 2005 (English)

**2005-2006 events.** The following meetings are tentatively scheduled:

- **CRC.** 27th session of the Executive Committee, Khartoum (Sudan), 24-28 July
- **EMPRES/CR.** 6th Consultative Committee, Cairo (Egypt), 13-15 November
- **DLCC.** 39th Session, Rome, 5-9 December
- **EMPRES/CR.** 13th Liaison Officers meeting, Yemen, January 2006
- **EMPRES/WR.** 4th Liaison Officers meeting, Algiers, January/February 2006



## 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.

### **REGIONS**

#### **WESTERN**

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

#### **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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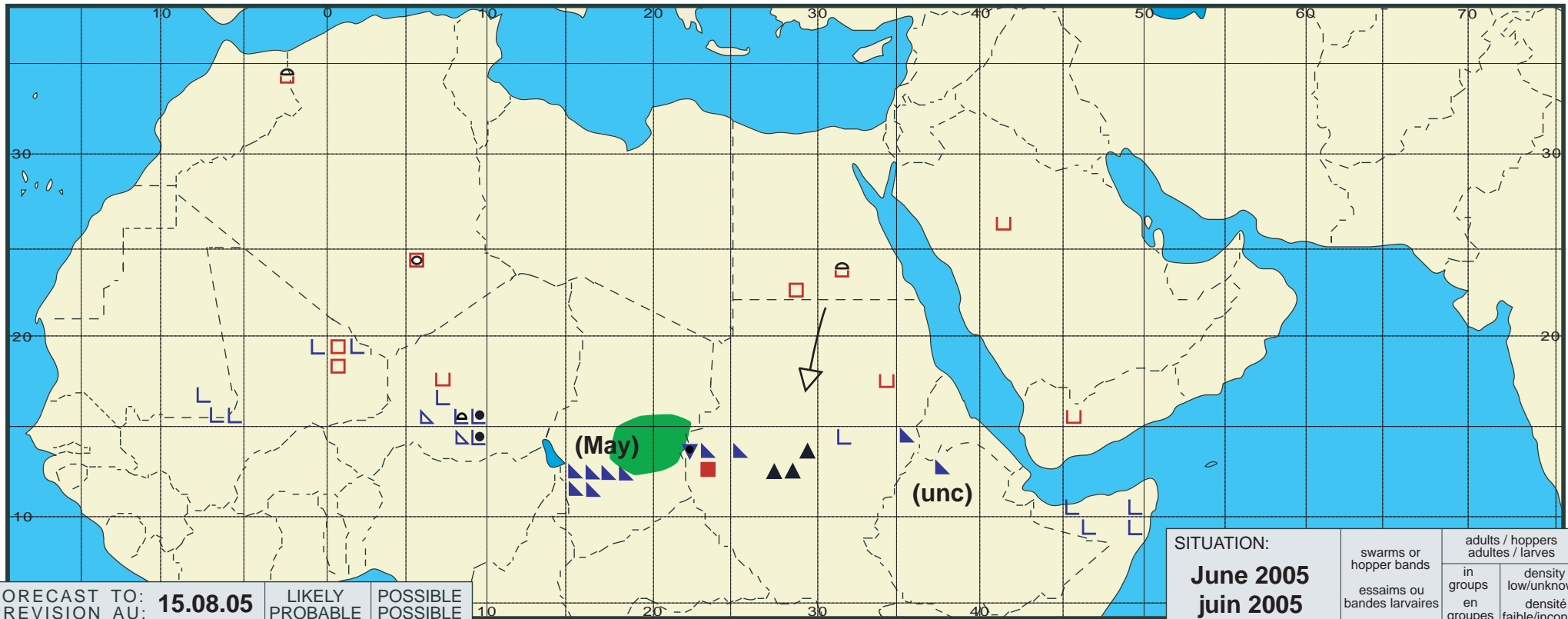
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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| FORECAST TO:<br>PREVISION AU: 15.08.05                                    | LIKELY<br>PROBABLE | POSSIBLE<br>POSSIBLE |
|---|--------------------|----------------------|
| favourable breeding conditions<br>conditions favorables à la reproduction |                    |                      |
| major swarm(s)<br>essaim(s) important(s)                                  |                    |                      |
| minor swarm(s)<br>essaim(s) limité(s)                                     |                    |                      |
| non swarming adults<br>adultes non essaimant                              |                    |                      |

| SITUATION:<br>June 2005<br>juin 2005  | swarms or<br>hopper bands<br>essaims ou<br>bandes larvaires | adults / hoppers<br>adultes / larves |  |
|---|---|--------------------------------------|--|
|   |   | in<br>groups<br>en<br>groupes        | density<br>low/unknown<br>densité<br>faible/inconnue |
| immature adults<br>adultes immatures  |   |                                      |  |
| mature or partly mature adults<br>adultes matures ou partiellement matures                  |   |                                      |  |
| adults, maturity unknown<br>adultes, maturité inconnue                                      |   |                                      |  |
| egg laying or eggs<br>pontes ou œufs  |   |                                      |  |
| hoppers<br>larves   |   |                                      |  |
| hoppers & adults (combined symbol example)<br>larves et adultes (exemple symboles combinés) |   |                                      |  |