

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 307



General Situation during April 2004  
Forecast until mid-June 2004

(30 April 2004)

The Desert Locust situation remains extremely serious in Northwest Africa. Widespread hatching and band formation occurred during April in the spring breeding areas in Morocco and in parts of Algeria. Some swarms moved across the region and invaded western Libya where they laid eggs. New swarms formed in Mauritania and in the Western Sahara. Smaller infestations of hopper bands were present in Niger, Sudan, Egypt and Saudi Arabia. A new generation of swarms is expected to form in Northwest Africa and, if not treated, some of these swarms could reach the summer breeding areas in the Sahel in West Africa in June. Although control operations were in progress in all these countries, international assistance is urgently required to supplement the major efforts already made and to prevent the situation from deteriorating further.

**Western Region.** Despite intensive control efforts, widespread hatching and band formation occurred in the spring breeding areas in Morocco. Egg laying and hatching were also reported in Algeria. This was compounded by good rainfall south of the Atlas Mountains. Numerous mature swarms moved into western Libya and laid eggs. Similar populations are likely to be present in southern Tunisia. New swarms started to form in Mauritania and in the Western Sahara. More laying and hatching occurred in northern Mauritania where damage was reported in oases and pastures and control operations were

severely hampered by a lack of pesticide. Hopper bands and adult groups were reported in Niger. During the forecast period, hopper bands that escape detection and control will form swarms in Northwest Africa. Any swarms that are not treated are likely to move towards the summer breeding areas in the Sahelian countries.

**Central Region.** Control operations continued during April in northern Sudan and on the Red Sea coast in Saudi Arabia against hopper bands, and in southern Egypt against groups of adults and hoppers. Although the situation is less worrisome than in the Western Region, there is still a possibility that some adult groups and perhaps a few small swarms could form in Saudi Arabia and northern Sudan. Any infestations that are not detected or treated could move to the summer breeding areas in the interior of Sudan. Similarly, adults and perhaps a few groups could appear in the interior of Yemen from small-scale breeding that might be in progress in the interior of Saudi Arabia. There is also a low risk of groups and swarms arriving in western Sudan from the Western Region.

**Eastern Region.** Limited breeding occurred in the spring breeding areas in western Pakistan during April even though conditions remained mostly dry and unfavourable due to poor rainfall for the third consecutive month. A joint survey between Pakistan and Iran was undertaken in these areas. No locusts were reported elsewhere in the Region.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, 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.

Telephone: +39 06 570 52420 (7 days/week, 24 hr)

Facsimile: +39 06 570 55271

E-mail: [ecl@fao.org](mailto:ecl@fao.org)

Internet: [www.fao.org](http://www.fao.org)

DLIS: [www.fao.org/news/global/locusts/locuhome.htm](http://www.fao.org/news/global/locusts/locuhome.htm)



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### Weather & Ecological Conditions in April 2004

**Good rains fell for a second consecutive month in the spring breeding areas in Northwest Africa and in the interior of Saudi Arabia in April. Good rains also fell over the Horn of Africa and in the interior of Yemen. Consequently, ecological conditions are favourable for breeding in these areas.**

In the **Western Region**, several strong depressions and frontal systems formed off the Atlantic coast of Morocco and moved east across northwest Africa and the Mediterranean during April. Consequently, good rains fell mainly during the first half of the month throughout the spring breeding areas south of the Atlas Mountains from Morocco and Algeria to southern Tunisia and western Libya. Rainfall was heaviest at mid-month in Algeria and Morocco when the Inter-Tropical Convergence Zone (ITCZ) reached 20N over northern Mali. Lighter rain fell at times in the Western Sahara. Westerly and southwesterly winds prevailed over much of Algeria and western Libya during the first decade of the month. Ecological conditions continued to be favourable for breeding over large parts of the spring breeding areas in Morocco (Draa Valley, Hamada du Guir), Algeria (northern Sahara), southern Tunisia and western Libya (Nalut to Ghadames, Al Hamada Al Hamra). Conditions were also favourable in northern Mauritania and in the Western Sahara. In Mali, conditions were dry and unfavourable between Nara and Tombouctou but there were small areas of sparse vegetation in the Adrar des Iforas. In Niger, favourable conditions persisted in the eastern Air Mountains but were starting to dry out further south. Light rain fell at Tillaberi and, at the end of the month, in the northern Air. During the last week of the month, the ITCZ was located at 15N in West Africa, which is much further north than usual at this time of the year.

In the **Central Region**, good rains fell in parts of the interior of the Arabian Peninsula during April. In Saudi Arabia, light to moderate rains fell in the central interior, extending further south into the Empty Quarter and reaching the interior of Yemen near Marib, Al-Jawf and Ataq. Light to moderate rains also fell on the Red Sea coast between Jizan, Saudi Arabia and Bayt Al

Faqih, Yemen. Some of the rains were associated with a low-pressure system over northern Saudi Arabia at mid-month. Consequently, breeding conditions continued to be favourable in Saudi Arabia and were improving in Yemen. Light rain fell in parts of Oman where conditions remained dry. Good rains associated with the Short Rains (Belg) fell in eastern Ethiopia and on the northwestern Somali plateau where green vegetation and moist soil were reported. Significant clouds were present over the southern Red Sea coast of Eritrea and northern coast of Djibouti where light rains may have fallen. Light rain fell at mid-month on the central coast in Sudan but conditions continued to be dry and unfavourable. In the summer breeding areas in the interior of Sudan, light rain was reported in northern Kordofan at Sodori on 25 April.

In the **Eastern Region**, no significant rainfall was reported in the region for the third month in a row. Consequently, ecological conditions continued to be less favourable than usual for breeding in the spring breeding areas in Baluchistan in western Pakistan and southeastern Iran.



### Area Treated

Since October, more than 1.8 million ha have been treated. Of this, control teams treated nearly 575,000 ha in April as follows:

Algeria	202,152 ha	(1-23 April)
Egypt	43 ha	(3-18 April)
Libya	9,864 ha	(1-20 April)
Mauritania	10,782 ha	(1-20 April)
Morocco	347,205 ha	(1-29 April)
Niger	1,550 ha	(7-29 April)
Saudi Arabia	1,040 ha	(1-19 April)
Sudan	596 ha	(1-24 April)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

##### • SITUATION

During April, groups of adults and swarms formed, at densities up to 850 adults/m<sup>2</sup>, in the centre and north of the country between Akjoujt (1945N/1421W) and Atar (2032N/1308W), and near Ouadane

(2056N/1137W), Zouerate (2244N/1221W) and Bir Moghreïn (2510N/1135W). Most of the infestations also contained groups of hoppers, many of which had reached the fifth instar stage and were fledging by mid-month. Mature adult groups were seen laying eggs in Tiris-Zemmour during the second decade of the month, and hatching was also in progress in the region north of Zouerate. Crop damage was reported in oases and pastures. Control operations continued to be several hampered by a lack of pesticide and only treated 10,872 ha on 1-20 April.

• **FORECAST**

*Hopper bands will form in areas of recent hatching in Tiris Zemmour while swarms will continue to form throughout the centre and the north of the country. Some of these swarms are likely to move north and northeast during periods of southerly and southwesterly winds towards the spring breeding areas in Morocco and Algeria. From about mid-May onwards, an increasing number of adult groups and swarms are likely to start moving south towards the summer breeding areas in the two Hodhs, Tagant and Brakna.*

**Mali**

• **SITUATION**

During April, an isolated immature adult was reported on the 2nd about 200 km west of Tombouctou (1649N/0259W) near the Mauritanian border. No locusts were seen elsewhere during surveys between Nara (1510N0717W) and Tombouctou up to mid-month.

• **FORECAST**

*Isolated adults may be present in parts of the Adrar des Iforas, Tamesna, Tilemsi Valley and Timetrine in areas where conditions remain favourable for survival. By the end of the forecast period groups and swarms could start to arrive in these areas from the north and lay eggs if early rains occur.*

**Niger**

• **SITUATION**

During April, hoppers continued to form many groups and bands in the Tafidet area (1817N/0923E) on the southeastern side of the Air Mountains where breeding previously occurred. By mid-month, most of the hoppers had reached the fifth instar stage and were fledging and forming groups of immature adults at densities up to 150,000 adults/ha. The infestations were mixed with new hatchlings and hoppers of all instars. Scattered adults were seen laying in one area on the 10th. Ground teams treated 1,550 ha on 7-29 April.

• **FORECAST**

*Small swarms are expected to form in the southeastern Air Mountains and mature. By the end*

*of the forecast period additional groups and swarms could start to arrive in Tamesna and Air from the north and lay eggs if early rains occur.*

**Chad**

• **SITUATION**

No reports received.

• **FORECAST**

*There is a low risk of small adult groups or swarms appearing by the end of the forecast period in the summer breeding areas where egg laying could occur if early rains fall.*

**Senegal**

• **SITUATION**

No locusts were reported during April.

• **FORECAST**

*There is a low risk of a few adult groups and perhaps swarms arriving in the north if there is an early movement of swarms from Northwest Africa.*

**Algeria**

• **SITUATION**

A late report indicated that hatching commenced on 27 March near Tindouf (2741N/0811W), in the central Sahara near Adrar (2753N/0017W), and in the northern Sahara near Bechar (3135N/0217W), Naama (3318N/0200W), El Bayadh (3340N/0100E), Laghouat (3349N/0243E) and Ghardaia (3225N/0337E).

During April, there were many reports of immature and mature adult groups and small swarms in the spring breeding areas south of the Atlas Mountains from Bechar to Ouargla (3157N/0520E) and Biskra (3448N/0549E), a distance of some 700 km. Populations were also present in the Atlas Mountains near Djelfa (3440N/0314E). By the third decade, infestations appeared in the northeast near Khenchla (3526N/0706E) and the Tunisian border. Many of the mature adults were copulating. No locusts were reported in the south near Tamanrasset or in the southeast near Illizi.

Ground and aerial control operations treated 202,152 ha on 1-23 April.

• **FORECAST**

*Locust numbers are expected to increase as more hatching occurs in the northern Sahara south of the Atlas Mountains and, to a lesser extent, in the central Sahara. The new hatchlings are likely to form hopper groups and bands. Any hopper infestations*



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*that escape detection and control will form swarms in June that, unless treated, will almost certainly move south towards the Sahelian countries. There is a low risk that some of these could also move further east across North Africa.*

### **Morocco**

#### • SITUATION

Widespread hatching occurred south of the Atlas Mountains and hopper groups and bands formed throughout April. Most of the hoppers were present in the Draa Valley but there were other infestations in the Hamada du Guir, north of Bouarfa (3230N/0159W) in the northwest and along the Atlantic coast between Tan-tan (2827N/1109W) and Sidi Ifni (2924N/1012W). By the 17th, a few of the hoppers had reached the fourth instar. Hopper densities were 2-800/m<sup>2</sup> and there were a few bands containing up to 2,000 hoppers/m<sup>2</sup>. Laying swarms at densities up to 120 adults/m<sup>2</sup> were present in the Souss Valley, in the Anti-Atlas Mountains and near Bouarfa. There was one report of a mature swarm on the coastal plains north of the Atlas Mountains between Safi and El Jadida at Ait Ouassaih (3244N/0820W) on 4 April.

In the Western Sahara, fifth instar hopper groups and bands were present at densities up to 20 hoppers/m<sup>2</sup> between the Mauritanian border and Guelta Zemmur (2508N/1223W) and in a few places along the coast between Dakhla (2343N/1557W) and Laayoune (2708N/1313W). Most of the hoppers were fledging and the new adults were forming immature swarms at densities up to 40 adults/m<sup>2</sup> and 100 ha in size.

Aerial and ground control operations treated 347,205 ha on 1-29 April.

#### • FORECAST

*A few more swarms are likely to form in the Western Sahara and move either towards the north or the south. New hatching and band formation are likely to occur in the Souss Valley, the Anti-Atlas Mountains and near Bouarfa. As current hopper infestations south of the Atlas Mountains develop and fledge, swarms are expected to form from bands that are not treated. Any swarms that escape survey and control operations will almost certainly move south towards the Sahelian countries.*

### **Libyan Arab Jamahiriya**

#### • SITUATION

In early April, mature adult groups and small swarms began arriving from the west and laid eggs along the Algerian and Tunisian borders between Nalut (3152N/1058E) and Ghat (2459N/1011E). There were 32 reports of swarms during the first three weeks of the month. Most of the swarms were concentrated between Nalut and Ghadames (3010N/0930E) at densities of up to 25 adults/m<sup>2</sup>. Ground and aerial control operations treated 9,864 ha up to 20 April.

#### • FORECAST

*Hatching will commence early in the forecast period and numerous hopper bands are likely to form between Ghat and Nalut. There is a low risk of additional adults and swarms arriving from the west. Breeding may have also occurred further east in the country towards Sebha and Hon. By the end of the forecast period, fledging should start and new adults are expected to form small swarms. Adults that are not detected or treated are expected to move south towards the Sahelian countries.*

### **Tunisia**

#### • SITUATION

Although no reports were received, swarms almost certainly arrived in southern Tunisia and laid eggs during April. If so, hatching may have already commenced and hoppers could be forming bands.

#### • FORECAST

*Breeding is likely to be in progress in the south where hoppers are expected to continue to mature and form bands. Small swarms may form during the forecast period.*

### **Burkina Faso, Cape Verde, Gambia, Guinea Bissau and Guinea Conakry**

#### • FORECAST

*No significant developments are likely.*

### **ATLANTIC OCEAN**

The ship report of locusts off the coast of Western Sahara on 25 March mentioned in Bulletin No. 306 was confirmed as solitary Desert Locust adults.

### **CENTRAL REGION**

#### **Sudan**

#### • SITUATION

During April, many small hopper bands of mixed instars at densities up to 500 hoppers/m<sup>2</sup> were present along the Nile in the northern interior near Dongola (1910N/3027E) where additional laying was reported in the first week. Hatching occurred near Abu Hamed (1932N/3320E) where first and second instar bands formed during the first half of the month. Ground control operations treated 570 ha near Dongola and



26 ha near Abu Hamed. Survey and control operations were concluded on 24 April. No locusts were seen on the northern coastal plains of the Red Sea during the first half of April.

• **FORECAST**

*Additional hatching may occur near Dongola. Low numbers of small adult groups and perhaps a few small swarms may form near Dongola and Abu Hamed. There is a risk that adults, groups and perhaps some small swarms could start to appear in the summer breeding areas near Atbara and west of the Nile from the north and northeast. If early rains occur, the adults are expected to mature rapidly and lay eggs. There is a low risk of adults and swarms arriving in western Sudan from the Northwest and West Africa in June.*

**Eritrea**

• **SITUATION**

No reports received.

• **FORECAST**

*No significant developments are likely.*

**Somalia**

• **SITUATION**

No reports received.

• **FORECAST**

*Isolated adults may be present in a few places on the plateau between Hargeisa and Boroma where small-scale breeding could occur in areas of recent rainfall.*

**Ethiopia**

• **SITUATION**

No locusts were seen during surveys carried out between Dire Dawa (0935N/4150E) and the northern Somali border in April.

• **FORECAST**

*No significant developments are likely.*

**Djibouti**

• **SITUATION**

No reports received.

• **FORECAST**

*No significant developments are likely.*

**Egypt**

• **SITUATION**

In late March, isolated solitarious adults were present near Jebel Uweinat (2202N/2510E).

During April, low numbers of transiens adults were copulating and laying in a few places along the Lake Nasser shoreline near Allaqi (2240N/3255E), Tushka (2254N/3135E), Kalabasha (2328N/3232E), Sheniara (2340N/3231E) and Khor Galal (2355N/3241E). Patches of first to third instar hoppers at densities

of 10-15/m<sup>2</sup> were seen in two places in the Western Desert near Dakhla Oasis (2530N/2900E). Ground control operations treated 43 ha on 3-18 April.

• **FORECAST**

*Locusts are likely to persist near Lake Nasser where further hatching will occur causing small hopper groups and bands to form. Small groups of adults may form in Dakhla from current hopper populations.*

**Saudi Arabia**

• **SITUATION**

During April, low numbers of hopper bands at densities up to 50 hoppers/m<sup>2</sup> matured on the Red Sea coast near Yenbo (2405N/3802E) and fledging commenced during the second week. Ground teams treated 1,040 ha on 1-19 April.

• **FORECAST**

*Small adult groups and perhaps a few small swarms may form on the Red Sea coastal plains near Yenbo. As vegetation dries out, any adults that escape survey and control operations are likely to move towards the summer breeding areas in northeast Africa. Small-scale breeding may be in progress in the spring breeding areas in the interior where a few adult groups could form.*

**Yemen**

• **SITUATION**

No locusts were seen during surveys carried out on the Red Sea coastal plains during April.

• **FORECAST**

*Locusts may appear in the interior between Marib and Ataq and lay eggs in areas of recent rainfall. Isolated adults may be present on the Red Sea coastal plains where small-scale breeding could occur.*

**Oman**

• **SITUATION**

No locusts were present in the north during April.

• **FORECAST**

*A few isolated adults may appear on the Batinah coast or in the northern interior and breed on a small scale if conditions become favourable.*

**Iraq**

• **SITUATION**

No reports received.



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### • FORECAST

*There is a low risk that a few adult groups could appear from the interior of Saudi Arabia during periods of warm southwesterly winds associated with depressions over northern Arabia.*

### Kuwait

#### • SITUATION

No reports received.

#### • FORECAST

*There is a low risk that a few adult groups could appear from the interior of Saudi Arabia during periods of warm southwesterly and westerly winds associated with depressions over northern Arabia.*

### Bahrain, Israel, Jordan, Kenya, Qatar, Syria Arab Republic, Tanzania, Turkey, UAE and Uganda

#### • FORECAST

*No significant developments are likely.*

### EASTERN REGION

#### Iran

#### • SITUATION

No locusts were seen during surveys carried out on 14 April on the southwestern coast near Bushehr (2854N/5050E) and on the southeastern coast between Jask (2540N/5746E) and Chabahar (2517N/6036E), and in the interior near Iranshahr (2715N/6141E). A joint survey was in progress during the second half of April in many of the spring breeding areas.

#### • FORECAST

*There remains a slight risk of a few adult groups appearing in coastal areas of Bushehr Province from the interior of Saudi Arabia. This could occur during periods of warm southwesterly and westerly winds associated with depressions over northern Arabia. Scattered adults may be present in parts of Sistan-Baluchistan where breeding could occur if rains fall.*

#### Pakistan

#### • SITUATION

During the second half of March, scattered mature adults at densities up to 750/ha were seen in the spring breeding areas in Baluchistan near Gwadar (2508N/6219E) and Turbat (2600N/6303E). Solitary first and second instar hoppers at densities of 1-2 per bush were present in a small area at Akra Band

(2526N/6220E) on the 23rd.

During the first half of April, a joint Iran/Pakistan survey was carried out in the spring breeding areas where locust populations persisted in the above-mentioned places, and hoppers had reached the third instar. Isolated mature adults were seen at two places near Khuzdar (2749N/6639E).

#### • FORECAST

*Locust numbers are expected to decline in Baluchistan unless additional rainfall occurs. Consequently, no significant developments are likely.*

#### India

#### • SITUATION

No locusts were reported from late March up to 22 April.

#### • FORECAST

*No significant developments are likely.*

#### Afghanistan

#### • SITUATION

No reports received.

#### • FORECAST

*No significant developments are likely.*



## Announcements

**Locust reporting.** Affected countries are kindly reminded to make sure that all locust situation reports are sent to FAO HQ by the 28th day of the month so the information can be included in the FAO 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.

**Reporting by e-mail.** After each survey or control operation, affected countries should send completed *FAO Desert Locust Survey and Control Forms* with a brief interpretation of the results by e-mail to [eclo@fao.org](mailto:eclo@fao.org).

**eLocust.** Updated details of a new system for recording and transmitting locust survey and control data collected in the field as well as country maps can be found on the Internet at: [www.fao.org/news/global/locusts/elocust.htm](http://www.fao.org/news/global/locusts/elocust.htm)

**Outbreak photos.** Pictures of the recent outbreaks in the Western and Central Regions are available on the Internet at: [www.fao.org/news/global/locusts/outbreakpix04.htm](http://www.fao.org/news/global/locusts/outbreakpix04.htm)

**Publications on the Internet.** New FAO publications and meeting reports are available for

downloading at [www.fao.org/news/global/locusts/publist.htm](http://www.fao.org/news/global/locusts/publist.htm):

- *EMPRES/CR Workshop on the Use of Green Muscle and PAN to control Desert Locust hopper bands* (English)
- *2nd EMPRES/WR Liaison Officer Meeting report* (French)

**Desert Locust Guidelines.** The French and Arabic versions of the *Desert Locust Guidelines* are now available as well as the English version of *Volume VI. Safety and Environmental Precautions* and an updated index. These can be downloaded from the Internet at: [www.fao.org/news/global/locusts/pubs1.htm](http://www.fao.org/news/global/locusts/pubs1.htm). Please contact the Locust Group if you would like to receive hard copies.

**Desert Locust research award.** The FAO Commission for Controlling the Desert Locust in the Central Region (CRC) is pleased to announce a cash award for outstanding research on Desert Locust. For more details, please contact the CRC Office in Cairo ([munir.butrous@fao.org](mailto:munir.butrous@fao.org)).

**2004 events.** The following meetings are scheduled:

- **Desert Locust Control Committee Technical Group Workshop.** 8th meeting, Nouakchott (Mauritania), 2-7 May
- **CLCPRO.** 1st Executive Committee meeting, Niamey (Niger), 14-18 June
- **SW Asia Commission.** 24th session, Kabul (Afghanistan), October
- **Pesticide Referee Group.** 8th meeting, Rome, postponed to later in 2004

**Urgent donor appeal.** FAO launched an appeal to donors on 23 February for \$6 million, which is urgently needed to support Desert Locust control operations in Mauritania, and another \$3 million for Mali, Niger and Chad, in order to prevent the early stages of the current upsurge from developing into a plague. More details are available at: [www.fao.org/news/global/locusts/040223AppealE.htm](http://www.fao.org/news/global/locusts/040223AppealE.htm).

At a donor meeting held in Rome on 8 April and chaired by the Director-General, the original appeal for \$9 million was increased by a further \$8 million to provide further assistance to Northwest and West Africa. More details are available at: <http://www.fao.org/news/global/locusts/presweb.pdf>.

**Press release.** On 27 April, FAO issued a Press Release in English, French and Arabic on the extremely serious Desert Locust situation. More details are available at: <http://www.fao.org/newsroom/en/news/2004/40887/index.htm>



## 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



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### **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, Guinea 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.

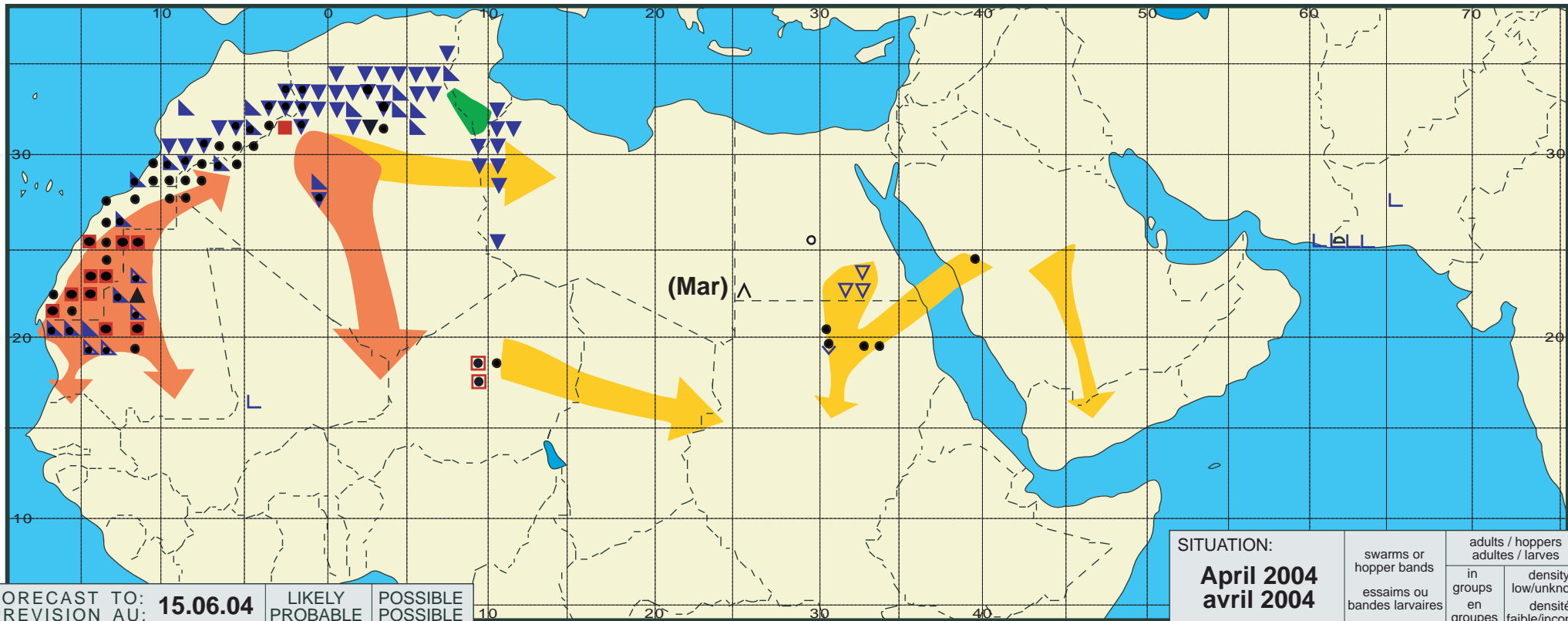




# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
<b>15.06.04</b>		
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>April 2004</b> avril 2004	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)			

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)			