

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 318



**General Situation during March 2005  
Forecast until mid-May 2005**

(4 April 2005)

Spring breeding commenced during March in Northwest Africa where a limited number of swarms laid eggs in the northeastern Algerian Sahara and, to a lesser extent, in northeast Morocco. Hatching will take place and low numbers of hopper bands will form during April in these areas and probably elsewhere along the southern side of the Atlas Mountains. Several immature swarms that persisted in southern Senegal and Guinea during March will eventually move towards central Mali in April and May. Despite control operations, several swarms formed along the Sudan/Egypt border near the Red Sea coast. Most of these swarms are likely to move towards the Nile River Valley while a few others may cross the Red Sea to Saudi Arabia. It is essential that intense survey and control operations be maintained in all affected countries. Meanwhile, Sahelian countries should prepare themselves for any swarms that could arrive from Northwest Africa from about late June onwards. In western Pakistan, unusually heavy rains fell for a second consecutive month in the spring breeding areas.

**Western Region.** Small-scale laying started in the Sahara in northeast **Algeria** in early March and in northeast **Morocco** a few weeks later. So far, the laying that was detected in Algeria occurred within a relatively small area of about 150 km by 100 km. Nevertheless, additional laying is likely to occur in the northern Sahara and south of the Atlas Mountains from Morocco to **Tunisia**. Breeding may also extend

further south into the central Sahara in Algeria where unusually good rains fell during March. Hatching will occur from early April onwards and hoppers are expected to form bands during April and May. As below-normal rainfall is expected this spring in Northwest Africa and there are fewer locusts currently present than one year ago, breeding this spring will be only on a small and limited scale. In West Africa, limited control operations continued against a few immature swarms that have persisted throughout the winter in southern **Senegal** and in **Guinea**. These swarms will eventually move towards central Mali as part of the Southern Circuit migration. Although no locusts were reported elsewhere in the Sahel, small infestations are probably present in northern **Mali** and **Niger**.

**Central Region.** Hopper bands continued forming on both sides of the border in northeast **Sudan** and southeast **Egypt** during March. By mid-month, several swarms formed and were seen moving towards the south. Ground control operations were underway in both countries. Although most of the swarms are expected to move further inland in both countries, there is a risk that a few swarms could cross the Red Sea to the coastal plains of **Saudi Arabia**. Mechanical control operations were carried out against a very small hopper band infestation on the coast in northwest **Somalia**. In **Yemen**, heavy rains caused flooding on the southern coast and in the interior but, so far, no locusts were seen.

**Eastern Region.** Scattered adults were reported in the spring breeding areas in Baluchistan, western **Pakistan** during March. Unusually heavy rains fell throughout the area for the second consecutive month, causing ecological conditions to be extremely favourable for breeding. The situation requires careful monitoring during the spring. A Iran/Pakistan joint-border survey in April will help to clarify the situation.

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:** [eclo@fao.org](mailto:eclo@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 March 2005

**Breeding conditions improved in Northwest Africa during March because of increasing temperatures and good rain including unusually heavy rains in the Algerian Sahara. Ecological conditions were improving along the Red Sea coast in Yemen and southwest Saudi Arabia as well as along the Gulf of Aden coast and interior in southern Yemen where good rains fell. Unusually heavy rains fell for the second consecutive month in the spring breeding areas in western Pakistan where conditions are favourable for breeding.**

In the **Western Region**, good rains fell in parts of the region during the first week of March and generally dry conditions prevailed during the remainder of the month. Light rain fell in parts of central, southern and eastern Mauritania in early March where ecological conditions remained unfavourable for breeding. During the first week, rains fell over the Sahara in southern and eastern Algerian where unusually heavy rain, up to 28 times the long-term annual average, was reported at Djanet 28 mm, In Amenas 23 mm, Tamanrasset 18 mm. Rainfall extended to western Libya, where floods were reported near Ghat, and to northern Mali. In Morocco, moderate to heavy showers also fell in the Souss Valley, the Atlantic coast and in the northeast. Light rains occurred during a few days in the third week in the northeastern Algerian Sahara where locusts are breeding and along the Algerian/ Libyan border. Thereafter, dry weather prevailed in the Region. There was a significant increase in temperature from mid-month onwards in Morocco and Algeria (24°C-36°C maximum, 10°C-20°C minimum). Consequently, breeding conditions improved in Morocco (the Souss Valley, along the southern side of the Atlas Mountains, in the southeast), in the northern part of Western Sahara and in Algeria (north of Tindouf, in the northern Sahara, and in the central Sahara on the Tademaït Plateau and northwest of Tamanrasset). Green vegetation was present in the extreme southwest and southeast of Algeria. Ecological conditions remained unfavourable for breeding in most parts of the Sahel.

In the **Central Region**, light to moderate rain fell at times during March along the Red Sea coast in southeast Egypt and in southern Eritrea. Nevertheless, vegetation was drying out and conditions were becoming unfavourable for breeding in currently infested areas in Egypt and Sudan. Heavier rain fell along the coast between Jizan, Saudi Arabia and Hodeidah, Yemen. Although rain was not reported, ecological conditions were favourable for breeding on the Red Sea coastal plains north of Jeddah. During the first week of March, moderate to heavy rains and floods occurred in southern Yemen along the coast east of Aden and in the interior near Wadi Bayhan. Good rains fell again at mid-month in the interior. Vegetation was becoming green in some of these areas. In northern Somalia, light to moderate rains fell during the first week on the escarpment near Berbera.

In the **Eastern Region**, unusually heavy rains fell during the first half of March in Baluchistan, western Pakistan for the second consecutive month. Rainfall occurred throughout the spring breeding areas from the coast to the Afghanistan border, including coastal areas (Jiwani 128 mm, Gwadar 93 mm, Pasni 25 mm), central (Panjgur 74 mm, Khuzdar 65 mm, Turbat 61 mm,) and northern (Dalbandin 64 mm, Nokkundi 29 mm, Kharan 19 mm, Nushki 10 mm) areas. Light rain fell in the Lasbela valley west of Karachi. Consequently, ecological conditions were unusually favourable for breeding.



### Area Treated

About 58,000 ha were treated in March, bringing the total area treated since the beginning of the upsurge (October 2003) to 12.8 million ha.

	<b>Current Month</b>	<b>Winter campaign cumulative</b>
Algeria	36,175 ha (1-27 Mar)	1,751,354 ha
Egypt	2,053 ha (1-28 Mar)	
Guinea	17,950 ha (11 Feb – 10 Mar)	
Morocco	570 ha (Mar)	1,997,086 ha
Senegal	210 ha (1-10 Mar)	
Sudan	4,872 ha (Mar)	
Tunisia	10 ha (Mar)	

*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

No locusts were seen during surveys carried out in the northwest and south during March.

##### • FORECAST

*Scattered adults may be present in the northwest in Inchiri and near Zouerate where small-scale breeding could occur in areas of recent rainfall but may be difficult to detect.*

#### **Senegal**

##### • SITUATION

During the first decade of March, limited aerial control operations continued against small immature swarms in the southwest near Sedihou (1251N/1535W) and treated 210 ha.

##### • FORECAST

*A few small immature groups and swarms may persist in the south and move towards western Mali.*

#### **Mali**

##### • SITUATION

No reports were received during March.

##### • FORECAST

*Low numbers of adults are likely to be present and maturing in parts of the Adrar des Iforas, the Tilemsi Valley and in the Timetrine. Small-scale breeding could occur if rains fall. A few immature swarms from Guinea and Senegal are likely to arrive in the southwest and move towards the centre of the country as the ITCZ moves northward.*

#### **Niger**

##### • SITUATION

No reports were received during March.

##### • FORECAST

*Low numbers of adults are likely to be present and maturing in parts of the Air Mountains. Small-scale breeding could occur if rains fall.*

#### **Chad**

##### • SITUATION

No locusts were reported between 15 February and 15 March.

##### • FORECAST

*No significant developments are likely.*

#### **Guinea Bissau**

##### • SITUATION

No reports were received during March.

##### • FORECAST

*A limited number of small immature swarms may be present in the eastern part of the country.*

#### **Guinea**

##### • SITUATION

During the second half of February, several immature swarms persisted in the central highlands between Labe (1119N/1217W) and Mamou (1024N/1205W). Additional swarms, reportedly coming from adjacent areas of Guinea Bissau, appeared in the northwest near Boké (1056N/1418W) on the 18th and in the north between Koundadra (1228N/1315W) and Gaoual (1144N/1314W) during the last week of the month. Swarms were also seen in the southwest near Kindia (1004N/1251W) and close to the Sierra Leone border. Damage occurred on vegetable crops in some areas. The situation remained unchanged during the first decade of March. Ground control operations treated nearly 18,000 ha from 11 February to 10 March.

##### • FORECAST

*A limited number of small immature swarms are expected to persist and move towards the eastern part of the country, and eventually continue into southwest Mali.*

#### **Burkina Faso**

##### • FORECAST

*There is a very low risk that a few Southern Circuit immature swarms from Guinea could appear in the northwest and continue to move further north with the ITCZ in April or May.*

#### **Sierra Leone**

##### • FORECAST

*There is a very low risk that a few Southern Circuit immature swarms from Guinea could appear in the north and continue to move towards the northeast with the ITCZ in April.*

#### **Benin, Cameroon, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Liberia, Nigeria and Togo**

##### • FORECAST

*No significant developments are likely.*

#### **Algeria**

##### • SITUATION

In late February and early March, the immature



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swarms that persisted in the northern Sahara province of El Oued and, to a lesser extent, Khenchela, matured as temperatures increased and egg laying commenced during the first week of March. Most of the infestations were concentrated between El Oued (3323N/0649E), Biskra (3448N/0549E) and the Tunisian border. Smaller infestations were present in Ghardaia and Ouargla provinces.

Further south, gregarious immature adults were reported at one location in the central Sahara near In Salah (2712N/0229E) on 1 March. Elsewhere, no locusts were seen in the northwestern, southern and eastern Sahara.

Aerial and ground control operations treated 36,175 ha on 1-27 March.

### • FORECAST

*Small to moderate scale breeding will occur in the northeast and in other areas of the northern Sahara and perhaps extend further south where recent rain fell near In Amenas, Djanet and Tamanrasset. Although the scale of the breeding will be much smaller than in 2004, hatching and band formation will occur during the forecast period.*

### Morocco

#### • SITUATION

During March, a few small groups of gregarious adults were present in the northeast near the Algerian border and south of Oujda between Touissit (3429N/0146W) and Guenfouda (3428N/0159W). By mid-month, many of the adults had become mature and a small swarm was seen copulating on the 24th. Ground and aerial control operations treated 570 ha during March.

#### • FORECAST

*Small-scale breeding will occur in the northeast and probably along the southern side of the Atlas Mountains. Although the scale of the breeding will be much smaller than in 2004, hatching and a small number of bands could occur during the forecast period.*

### Libyan Arab Jamahiriya

#### • SITUATION

No locusts were seen during surveys carried out in March in the northwest near Ghadames, Nalut, Mizda and in the Al-Hamada Al-Hamra.

#### • FORECAST

*Small-scale breeding is expected to occur in the northwest with limited hatching and hopper band formation during the forecast period.*

### Tunisia

#### • SITUATION

In early March, a few immature adults were seen in the southern province of Tozeur near the Algerian border at Hezoua (3350N/0734E). Control operations treated 10 ha. The situation was reported to be calm during the remainder of the month.

#### • FORECAST

*Small-scale breeding is expected to occur in the south, mainly between the Algerian border and Tozeur. Limited hatching and hopper band formation will occur during the forecast period.*

### CENTRAL REGION

#### Sudan

#### • SITUATION

During March, several hundred small late-instar hopper bands, at densities up to 20 hoppers/m<sup>2</sup> and 1,000 m<sup>2</sup> in size, were present in Wadi Diib between Tomala (2002N/3551E) and the Egyptian border. Fledging occurred from the 10th to the 18th and several small, medium-density immature groups and swarms formed. Several swarms were seen moving towards the south near the border up to 22 March. The number of immature swarms reports declined during the last week of the month and only a few small groups and swarmlets and scattered adults remained. Ground control operations treated 4,872 ha during March.

Elsewhere, scattered mature adults were present at a few places along the southern Red Sea coastal plains between Tokar (1827N/3741E) and Suakin (1908N/3717E). In the Tokar Delta, isolated fifth instar hoppers were seen at Seteirab (1837N/3729E). No locusts were seen in the northern interior on 22-24 March.

#### • FORECAST

*Although locust numbers are expected to decline in the northeast, adults and perhaps a few small groups or swarmlets may persist in Wadi Diib. Any locusts that leave the northeast may appear along the Nile River between Shendi and Wadi Halfa. Locusts will also decline in Tokar Delta and adjacent coastal areas.*

### Eritrea

#### • SITUATION

No reports were received during March.

#### • FORECAST

*No significant developments are likely.*

## Somalia

### • SITUATION

During the first half of March, mechanical control operations were carried out on 0.3 ha on the coast east of Berbera (1028N/4502E) where very small fourth and fifth instar hopper patches and bands at densities of 150-200 hoppers/m<sup>2</sup> were present.

### • FORECAST

*Scattered adults are likely to be present and may persist on the coastal plains near Berbera.*

## Ethiopia

### • SITUATION

No locusts were seen during surveys carried out between Dire Dawa and the Somali border on 16-19 March.

### • FORECAST

*No significant developments are likely.*

## Djibouti

### • SITUATION

No reports were received during March.

### • FORECAST

*No significant developments are likely.*

## Egypt

### • SITUATION

During March, late instar hoppers continued to form groups and bands, at densities of up to 100 hoppers/bush, in a few places on the southern coastal plains of the Red Sea between Marsa Alam (2504N/3454E) and the Sudanese border as well as further inland in Wadi Diib and the Red Sea Hills. As the month progressed, an increasing number of the hoppers fledged and became adults that formed groups at densities of up to 300 adults/bush. Ground control operations treated 2,053 ha on 1-28 March.

### • FORECAST

*Several small adult groups and perhaps a few swarms will continue to form in the southeast. Unless additional rain falls, these are likely to move eventually to the Red Sea or towards the interior of Sudan.*

## Saudi Arabia

### • SITUATION

No locusts were seen during surveys carried out along the Red Sea coast and in the interior during March.

### • FORECAST

*The risk of low numbers of adult groups or swarms crossing the Red Sea and appearing on the coastal plains between Al Wajh and Qunfidah will decline by the end of the forecast period. Nevertheless, some groups or swarms could perhaps continue further inland.*

## Yemen

### • SITUATION

No locusts were seen during surveys carried out along the coastal plains west and east of Aden (1250N/4503E) on 12-14 March.

### • FORECAST

*Low numbers of adults may be present along the Red Sea coastal plains where they could breed in areas of recent rainfall.*

## Oman

### • SITUATION

No locusts were seen during surveys carried out on the Batinah coast in the north and in Sharqiya region in the northeast during March.

### • FORECAST

*No significant developments are likely.*

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

### • FORECAST

*No significant developments are likely.*

## EASTERN REGION

### Iran

#### • SITUATION

No locusts were seen on the southern coast near Bandar Abbas and Jask on 12 March.

#### • FORECAST

*Locusts are expected to appear and breed on the southeastern coastal plains and interior areas near Iranshahr and Jaz Murian.*

### Pakistan

#### • SITUATION

In the spring breeding areas of Baluchistan, isolated solitary adults were present in the Shooli Valley near Turbat (2600N/6303E) during the first half of March.

#### • FORECAST

*Locust numbers are expected to increase significantly in Baluchistan because of the unusually good rainfall in coastal and interior areas that should lead to breeding during the forecast period. Consequently, hoppers are likely to appear during April and May. The situation requires close monitoring in the coming months.*



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### India

#### • SITUATION

No locusts were seen during the second half of February and the first decade of March.

#### • FORECAST

*No significant developments are likely.*

### Afghanistan

#### • SITUATION

No reports received.

#### • FORECAST

*No significant developments are likely.*



## Announcements

**Locust reporting.** During locust emergencies, 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. 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.

**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/news/global/locusts/pubs1.htm](http://www.fao.org/news/global/locusts/pubs1.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):

- 24th session of the FAO Commission for Controlling the Desert Locust in South-West Asia (English)

**Assistance provided.** Details of assistance provided by donors to the current locust campaign are available on the Internet at: [www.fao.org/news/global/locusts/donor/donor.htm](http://www.fao.org/news/global/locusts/donor/donor.htm).

**2005-06 events.** The following meetings are tentatively scheduled:

- **Train-the-Trainers workshop.** Niamey (Niger), 14 March – 5 April
- **WMO/FAO Regional Workshop on Meteorological Information for locust forecasting, monitoring and control,** Niamey (Niger), 19-22 April
- **Contingency Planning.** 1st workshop jointly organized by FAO and the World Bank (25-29 April) followed by a donor meeting (2-4 May), Bamako (Mali)
- **CLCPRO.** 3rd session, Tripoli (Libya), 12-16 June
- **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

**Press release.** Several press releases on the current Desert Locust emergency have been recently issued by FAO. These are available at: <http://www.fao.org/newsroom/en/index.html>.



## 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, 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.



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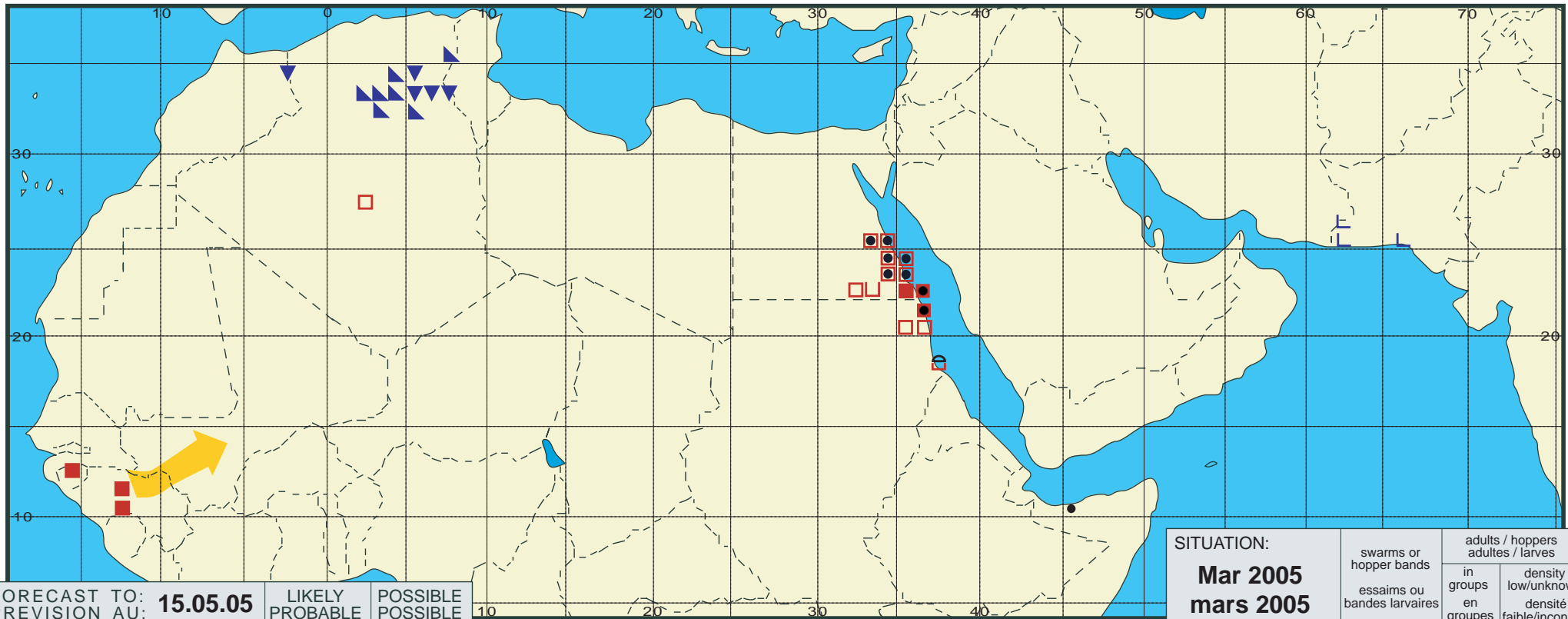
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: <b>15.05.05</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>Mar 2005</b> <b>mars 2005</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)			