

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No.316

(4 February 2005)



## General Situation during January 2005 Forecast until mid-March 2005

The Desert Locust situation improved in the Western Region during January. Control operations have ended in Mauritania and declined against immature swarms in Morocco and Algeria where the weather was unusually cold. In West Africa, immature swarms were present in southern Senegal and Guinea Bissau, and appeared in Guinea. Small-scale breeding occurred on the Red Sea coast on both sides of the Egyptian and Sudanese border causing hopper bands to form. Although the situation is expected to continue to improve in the Western Region, survey and control operations must be maintained and Sahelian countries should prepare themselves for any swarms that could arrive from Northwest Africa at the beginning of the summer. The situation along the Red Sea coasts requires intensive monitoring in the coming weeks.

**Western Region.** Although numerous immature swarms were present in and near the Atlas Mountains in Morocco and Algeria during January, the number of swarms declined because of control operations and unusually low temperatures. By the end of the month, relatively small infestations were struggling to survive in both countries. Only scattered locusts were present in Mauritania and Mali, and probably in Niger and Libya. The situation is less clear in Tunisia. So far this winter, breeding has not occurred in northern Mauritania due to a lack of rainfall. Consequently,

the situation is very different compared to one year ago and a swarm invasion of Northwest Africa is not expected this spring. Despite the improvement in the situation, control operations must be maintained to reduce the scale of spring breeding in Northwest Africa and the eventual swarm threat to Sahelian countries at the beginning of the summer. In West Africa, immature swarms associated with the southern circuit migration moved from Senegal and Guinea Bissau into Guinea. These swarms are likely to move eventually to southwest Mali from March or April onwards.

**Central Region.** Several small swarms reached the winter breeding areas along the Red Sea coastal plains near the border of Egypt and Sudan and laid eggs that subsequently hatched, causing small hopper bands to form. Control operations were carried out in both countries. Elsewhere in the Red Sea Trench, insignificant numbers of solitary adults were present on the southern coast of Sudan, on the central coast of Saudi Arabia where local breeding was in progress, along the border with Saudi Arabia and Yemen, and on the northwest coast in northern Somalia. As there is a possibility that some swarms could form by the end of the forecast period in northeast Sudan and southeast Egypt, the situation requires intensive monitoring and appropriate control measures should be taken.

**Eastern Region.** Although rains fell during January in the spring breeding areas in western Pakistan, no locusts were reported there or 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.

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### Weather & Ecological Conditions in January 2005

**Unusually low temperatures and snowfall occurred in Northwest Africa during January. No significant rainfall was reported in the Region and breeding conditions were favourable in only a few places in northwest Mauritania. Conditions were favourable in the winter breeding areas along the Red Sea coast near the Egyptian/Sudanese border. Light rains fell in the spring breeding areas in western Pakistan where the habitat was slowly improving.**

In the **Western Region**, the weather was unusually cold in the spring breeding areas of Northwest Africa where maximum temperatures were generally between 8-24°C and minimum temperatures fell to below zero in places. Snow was reported in the Atlas Mountains from Morocco to Tunisia, in the mountains of northwest Libya, along parts of the Mediterranean coast and in some areas of the northern Sahara. The low temperatures and the cold northerly winds that prevailed during January not only limited the movement of locust swarms within the region but also did not allow them to mature and may have caused some to die. Light rain fell at times in some places along the Atlantic coast in Morocco and near Laayoune, Western Sahara. Nevertheless, ecological conditions remained generally unfavourable in the spring breeding areas of Northwest Africa. In Mauritania, the south was dry. In the winter breeding areas, a few places were favourable in the northwest but unfavourable in the north due to a lack of rainfall. In northern Mali and Niger, mainly dry conditions persisted in most areas because of a lack of rainfall.

In the **Central Region**, light rainfall was reported in southern Egypt near Lake Nasser and on the Red Sea coastal plains and adjacent interior areas during the third week of January. Consequently, conditions were favourable for breeding, and extended into neighbouring areas of northeast Sudan, mainly along Wadi Diib. Conditions were also favourable in some places along the coastal plains south of Port Sudan and in the Tokar Delta but were generally unfavourable further south to Massawa, Eritrea. Green vegetation was present along the Red Sea coastal

plains in Saudi Arabia between Yenbo and Qunfidah and breeding conditions were favourable between Rabigh and Qunfidah. They were less favourable for breeding along the Red Sea coast in Yemen. In northern Somalia, light to moderate rainfall occurred at times during January on the northwest coast where breeding conditions were favourable. In northern Oman, good rains fell at times during January.

In the **Eastern Region**, light rainfall occurred in the spring breeding areas along the coast and in the interior of Baluchistan, western Pakistan during the first half of January. Consequently, breeding conditions were slowly improving.



### Area Treated

About 300,000 ha were treated in January, bringing the total area treated since the beginning of the upsurge (October 2003) to 12.4 million ha.

	Current month	Winter Campaign cumulative
Algeria	287,716 ha (1-31 Jan)	1,479,973 ha
Cape Verde	80 ha (1-31 Jan)	3,417 ha
Egypt	1,941 ha (Jan)	
Guinea	3,900 ha (3-31 Jan)	
Libya	220 ha (1 Jan)	65,514 ha
Morocco	68,412 ha (1-31 Jan)	1,990,406 ha
Senegal	5,921 ha (1-31 Jan)	
Sudan	1,320 ha (Jan)	

*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

The situation improved throughout the country during January. Scattered immature adults were present at the end of the first week on the coast south of Nouakchott. On the 10th, a very small high-density immature swarm was seen further north on the coast near the Banc d'Arguin National Park. During the remainder of the month, only scattered gregarious immature adults were present in the southwest near Kaedi (1612N/1332W). No locusts were seen during surveys in the northwest (Inchiri and Adrar) or north (Tiris-Zemmour).

• **FORECAST**

*Small residual populations are likely to remain in a few places in the southwest. Scattered adults may be present in the northwest in Inchiri and near Zouerate where small-scale breeding could occur but may be difficult to detect.*

**Senegal**

• **SITUATION**

During January, several immature swarms were present in the southwest between Kolda (1256N/1455W) and Sedihou (1251N/1535W). At mid-month, a swarm was seen in the Kaolack region near the Gambian border. Some crop damage was reported. Aerial control operations treated 5,921 ha during the month.

• **FORECAST**

*Low numbers of immature swarms are likely to persist in the south.*

**Mali**

• **SITUATION**

During January, low numbers of immature adults persisted in parts of the Adrar des Iforas, the Tilemsi Valley and in the Timetrine.

• **FORECAST**

*Low numbers of adults will continue to persist in parts of the Adrar des Iforas, the Tilemsi Valley and in the Timetrine and start to mature once temperatures increase. Small-scale breeding could occur if rains fall. There is a low risk that a few immature swarms could arrive in the southwest from Guinea at the end of the forecast period.*

**Niger**

• **SITUATION**

No reports were received during January.

• **FORECAST**

*Low numbers of adults are likely to be present in parts of the Air Mountains. As temperatures increase, the adults will mature and, if conditions are favourable, eventually lay eggs. Hatching could occur by the end of the forecast period and hoppers may form a few groups.*

**Chad**

• **SITUATION**

A few scattered adults were thought to be present in previously infested areas during the second half of December or first half of January.

• **FORECAST**

*Low numbers of adults may be present in parts of the northeast.*

**Cape Verde Islands**

• **SITUATION**

During January, limited hatching and numerous small second to fourth instar hopper bands at densities of about 300 hoppers/m<sup>2</sup> were reported on Santo Antao island. No locusts were reported from the other islands. Control operations treated 80 ha during January.

• **FORECAST**

*Any hopper bands that escape detection and control could form a few small swarms.*

**Gambia**

• **SITUATION**

No reports were received during January.

• **FORECAST**

*There is a low risk that a few small immature swarms may be present and will persist in parts of the country.*

**Guinea Bissau**

• **SITUATION**

On 7 January, immature swarms were reported in the capital. By mid month, swarms were also reported off the coast in the Bijagos archipelago (ca. 1115N/1605W).

• **FORECAST**

*Low numbers of immature swarms are likely to slowly drift towards the eastern part of the country and eventually continue into Guinea.*

**Guinea**

• **SITUATION**

On 3 January, several immature swarms arrived in the north from Senegal and Guinea Bissau, and dispersed between Koundara (1229N/1317W) and Gaoual (1145N/1311W) during the first week. A second invasion occurred on the 11th when swarms appeared in the north near Mali (1205N/1218W) and moved south to Lelouma (1129N/1241W). During the last week of the month, immature swarms were reported in the centre of the country near Labe (1119N/1217W) and Telimele (1054N/1302W), in the west near Boke (1056N/1418W) and in the east near Dinguiraye (1118N/1043W). Some damage was reported to vegetables and fruit trees. Ground control operations treated 3,900 ha during January.



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### • FORECAST

*A few more swarms could eventually appear from Guinea Bissau. These and most of the swarms that are currently present are likely to slowly drift towards the eastern part of the country.*

**Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Liberia, Nigeria, Sierra Leone and Togo**

### • FORECAST

*No significant developments are likely.*

### Algeria

#### • SITUATION

During January, immature swarms persisted along the Moroccan border between Bechar (3135N/0217W) and Naama (3318N/0200W), in the central Sahara between Adrar (2753N/0017W) and In Salah (2712N/0229E), and in the northeastern Sahara near Laghouat (3349N/0243E), Ghardaia (3225N/0337E), Ouargla (3157N/0520E) and Touggourt (3308N/0604E). Swarm numbers decreased gradually during the month as a result of control operations and unusually cold temperatures. No locusts were seen in the wilayas of Tindouf, Tamanrasset and Illizi. Ground and aerial control operations treated 287,716 ha during January.

#### • FORECAST

*Moderate numbers of immature swarms will persist in the central and northern Sahara where they will remain immature until temperatures warm up. If temperatures increase and rainfall occurs by the end of the forecast period, adults will quickly mature and lay eggs.*

### Morocco

#### • SITUATION

During January, immature swarms persisted in the Souss-Massa plains between Sidi Ifni (2924N/1012W) and Agadir (3030N/0940W), along the southeastern side of the Atlas Mountains between Errachidia (3154N/0425W) and Bouarfa (3232N/0159W), and in the northeast between Taza (3416N/0401W) and Oujda (3441N/0145W). There was a significant decline in the number of swarms throughout the month due to control operations and unusually cold temperatures. By the end of the month, only a few small swarms remained in the above areas. Aerial and

ground control operations treated 68,412 ha during January.

#### • FORECAST

*Low numbers of immature swarms will persist along the southern side of the Atlas Mountains as well as in some of the valleys and plateaux where they will remain immature until temperatures warm up. If temperatures increase and rainfall occurs by the end of the forecast period, adults will quickly mature and lay eggs.*

### Libyan Arab Jamahiriya

#### • SITUATION

On 1 January, two immature swarms at densities of 20-50 adults/m<sup>2</sup> were seen in the southwest along the border with Algeria about 100 km northwest of Ghat (2459N/1011E). Control operations treated 220 ha. Thereafter, no locusts were reported elsewhere in the country.

#### • FORECAST

*A few immature swarms may be present in the southwest near Ghat. If so and as temperatures increase, the adults will mature and, if conditions are favourable, lay eggs. Low numbers of adults may be present and persist in the southeast in the agricultural project at Kufra.*

### Tunisia

#### • SITUATION

Although no reports were received during January, gregarious immature adults were present near the Algerian border.

#### • FORECAST

*Low to moderate numbers of immature swarms are almost certainly present in parts of the centre and south near the Algerian border. If temperatures increase and rainfall occurs by the end of the forecast period, adults will quickly mature and lay eggs.*

## CENTRAL REGION

### Sudan

#### • SITUATION

During the first half of January, small swarms were seen copulating at seven locations in Wadi Diib in the northern Red Sea Hills just south of the Egyptian border. Solitary adults were also present nearby. Although ground and aerial control operations were carried out, hatching occurred and first instar bands formed at densities up to 300 hoppers/m<sup>2</sup> during the second half of the month. Control operations treated 1,320 ha.

Throughout the month, solitary maturing adults were present at low densities in some places along the coast between Port Sudan and the Tokar Delta.

• **FORECAST**

*Hatching and small band formation will continue in Wadi Diib. By the end of the forecast period, small groups and perhaps a few small swarms could form. Scattered adults are likely to persist on the southern coastal plains and in the Tokar Delta where small-scale breeding could occur.*

**Eritrea**

• **SITUATION**

No locusts were seen on the Red Sea coastal plains between Massawa and the Sudanese border on 17-22 January.

• **FORECAST**

*Isolated adults could appear on the northern coastal plains of the Red Sea and breed on a small scale if rainfall occurs.*

**Somalia**

• **SITUATION**

Isolated adults were seen at three places along the northwest coastal plains between Berbera (1028N/4502E) and the Djibouti border on 12-18 January.

• **FORECAST**

*Small-scale breeding is likely to occur in those areas along the northwest coastal plains where conditions are favourable. Nevertheless, locust numbers will remain below threatening levels.*

**Ethiopia**

• **SITUATION**

No surveys were undertaken and no locusts were reported during January.

• **FORECAST**

*No significant developments are likely.*

**Djibouti**

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

*No significant developments are likely.*

**Egypt**

• **SITUATION**

During January, immature groups persisted in a few places in the northern Sinai Peninsula and groups of mature adults were seen in the Red Sea Hills southwest of Hurghada (2717N/3347E). In the winter breeding areas in the southeast, groups of gregarious mature adults at densities of 100-150/bush were present on the coast and in inland areas in Wadi Diib and other wadis near the Sudanese border. Small-scale breeding occurred and first instar hopper groups and bands formed at densities of 150-200 hoppers/bush from 11 January onwards near Abraq

(2324N/3447E), and near Abu Ramad (2224N/3624E) and Wadi Diib during the last week of the month. By the end of the month, hoppers had reached second and third instar. Control operations treated 1,941 ha during January.

• **FORECAST**

*Hatching and small band formation will continue on the southern coastal plains of the Red Sea and in adjacent interior areas. By the end of the forecast period, small groups and perhaps a few small swarms could form. As temperatures warm up in the Sinai Peninsula, any surviving locusts could mature and perhaps eventually breed or move south to the Red Sea coastal plains.*

**Saudi Arabia**

• **SITUATION**

During January, isolated solitary immature adults were present in a few places on the coastal plains between Jeddah and Qunfidah (1909N/4107E). Low numbers of second and third instar solitary hoppers were reported, indicating that small-scale and localized breeding had occurred. No locusts were seen during surveys carried out elsewhere along the coastal plains in the north and south.

• **FORECAST**

*Low numbers of adults are expected to persist along the coastal plains where small-scale breeding will occur in areas where conditions are favourable.*

**Yemen**

• **SITUATION**

Scattered immature and mature solitary adults were seen on the Red Sea coastal plains during a joint survey on both sides of the Yemen / Saudi Arabia border on 8-13 January.

• **FORECAST**

*Low numbers of adults are expected to persist on the Red Sea coastal plains and small-scale breeding could occur if additional rains fall.*

**Oman**

• **SITUATION**

No locusts were seen during surveys carried out in the Musandam Peninsula and in the Dhahira region in the north during January.

• **FORECAST**

*No significant developments are likely.*



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**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 on 18 January.

• **FORECAST**

*No significant developments are likely.*

#### **Pakistan**

• **SITUATION**

No locusts were reported during the first half of January.

• **FORECAST**

*Isolated adults are likely to appear in the spring breeding areas in Baluchistan, mainly in coastal areas and perhaps eventually further inland.*

#### **India**

• **SITUATION**

No locusts were seen during the first half of January.

• **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.

**During emergencies, RAMSES data should be transmitted twice/week and situation summaries should be sent every ten days.**

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

**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.

**Upsurge photos.** Pictures of the current upsurge in the Western Region are available on the Internet at: [www.fao.org/news/global/locusts/outbreakpix04.htm](http://www.fao.org/news/global/locusts/outbreakpix04.htm)

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

- 38th session of the Desert Locust Control Committee meeting report (English)
- Guidelines on minimum requirements for ground-based locust and grasshopper sprayers (English)
- Contingency planning spreadsheets and simulations for outbreaks, upsurges and plagues (English, French)
- FAO Desert Locust Standard Operating Procedures (SOP) for survey, control and aerial operations (English, Arabic)
- FAO Desert Locust Guidelines – Arabic version

**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).

**Vacancy announcement.** A three-year post in the Locust Group at FAO Headquarters for a Locust Control Officer has been announced. More details are available on the Internet at: [http://www.fao.org/VA/vac\\_en.htm](http://www.fao.org/VA/vac_en.htm).

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

- **EMPRES/WR.** 3rd Liaison Officers meeting, Dakar (Senegal), 7-11 February

- **Contingency Planning.** 1st workshop sponsored by World Bank, Bamako (Mali), 7-11 March
- **EMPRES/CR.** 6th Consultative Committee, Cairo (Egypt), 14-16 March
- **Train-the-Trainers workshop.** Niamey (Niger), 14 March – 8 April
- **Contingency Planning.** 2nd workshop sponsored by World Bank, Niamey (Niger), 25-29 April
- **CLCPRO.** 3rd session, Tripoli (Libya), 12-16 June
- **CRC.** 27th session of the Executive Committee, Khartoum (Sudan), 24-28 July
- **EMPRES/CR.** 13th Liaison Officers meeting, Sana'a (Yemen), 12-16 November
- **DLCC.** 39th Session, Rome, 12-16 December

**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.



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### **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.

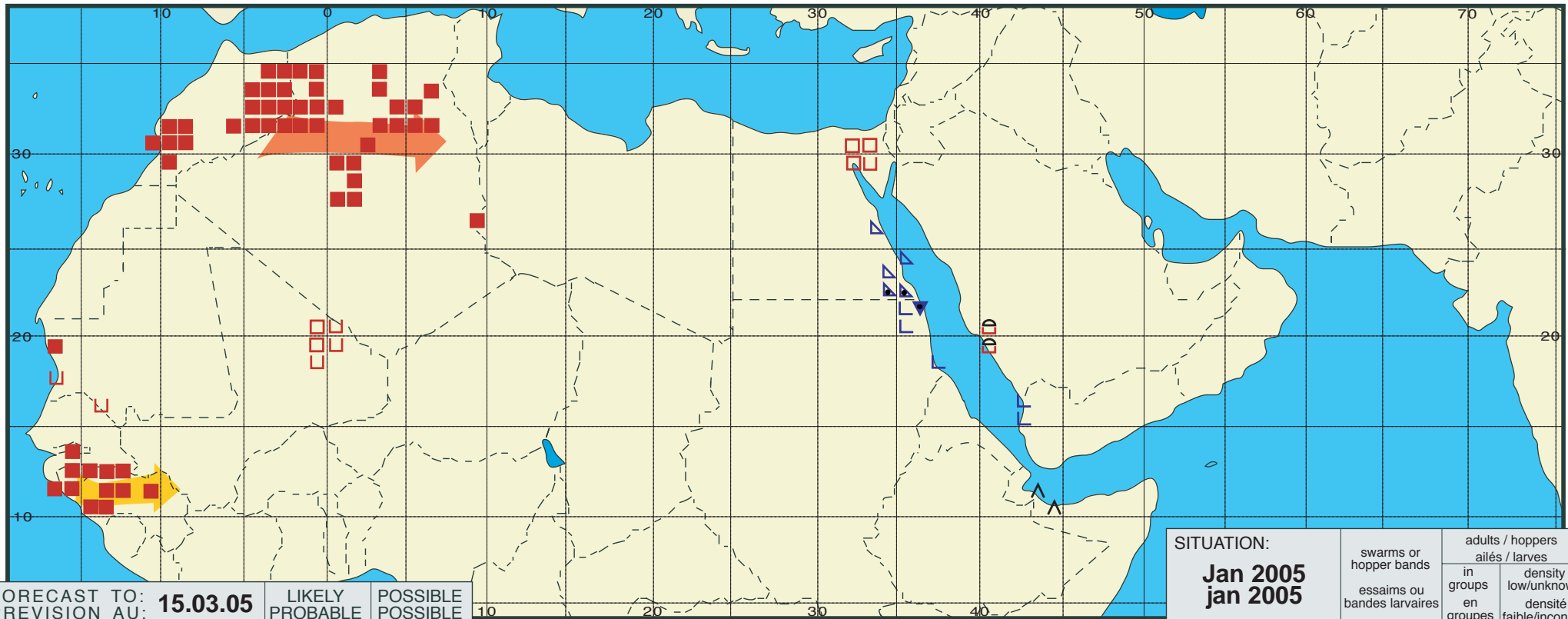




# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: <b>15.03.05</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 ailés non essaimants		

SITUATION: <b>Jan 2005 jan 2005</b>	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers ailés / larves	
		in groups en groupes	density low/unknown densité faible/inconnue
immature adults ailés immatures			
mature or partly mature adults ailés matures ou partiellement matures			
adults, maturity unknown ailés, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et ailés (ex. de symboles combinés)			