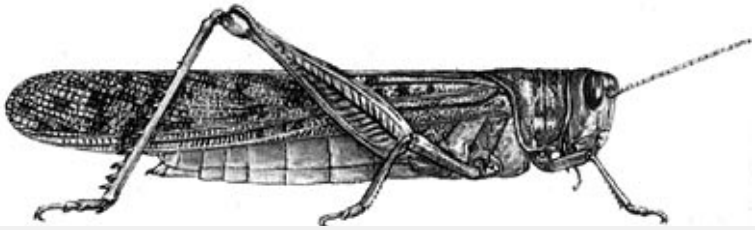

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations **No. 303**

(7 January 2004)

General Situation during December 2003 Forecast until mid-February 2004

The Desert Locust situation deteriorated further during December in West Africa and Saudi Arabia. Breeding continued and hopper bands were present in Mauritania, Mali, Niger, Morocco, Algeria, Sudan and Saudi Arabia. Swarms were reported in some of these countries. Although control operations are in progress, more swarms are likely to form in northern Mauritania, Mali, Niger and Saudi Arabia. Many of these will remain *in situ* but there is a risk that some may invade neighbouring countries.

Western Region. The locust situation is worrisome in **Mauritania**, **Mali** and **Niger** where breeding continued during December, giving rise to hopper bands and swarms. In all countries, there are large unsurveyed areas where conditions are favourable for breeding. More swarms are expected to form during the forecast period in these countries. Some of the swarms may move into **Morocco** and **Algeria** where breeding is already in progress and hopper bands are present. Control was underway in all countries but survey and control operations need to be strengthened in order to reduce locust numbers and prevent a further deterioration of the situation.

Central Region. There was a significant increase in locust populations along the Red Sea coast of **Saudi Arabia** where hatching commenced and hopper bands formed during December. These will continue to develop in the coming weeks and swarms are expected to form. Although most of the swarms will remain on the coast, some may reach spring breeding areas in the interior and could threaten parts of **Jordan**, **Iraq** and **Kuwait**. Conditions are less favourable for breeding on the western side of the Red Sea where a few swarms laid and hoppers were present on the northern coast of **Sudan**, and hopper and adult groups were seen in the Tokar Delta. High numbers of adults persisted along the Atbara River. In **Egypt**, limited laying occurred near Lake Nasser. Control operations were in progress in the three countries. Elsewhere, scattered adults were reported in northern **Somalia** and on the Red Sea coast in **Eritrea** and **Yemen**.

Eastern Region. No locusts were reported in the region. There is a risk that some swarms may reach western **Iran** from the Red Sea coast and interior of Saudi Arabia.

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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DLIS: www.fao.org/news/global/locusts/locuhome.htm

No. 303

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in December 2003

Unusually good rains fell in central and northern Mauritania where heavy rains occurred six weeks earlier. Green vegetation persisted in Mauritania, Niger, and Algeria but was drying out in Mali. Very little rain fell along the Red Sea coast where favourable conditions are limited to just a few places.

In the **Western Region**, good rains fell in Mauritania and Tunisia during December. Light to moderate rainfall occurred on 6-7 December over a large area of central and northern Mauritania between Brakna and the Algerian border and extended into adjacent areas of the extreme south of Morocco. Some of these areas had received heavy rain six weeks earlier (21-22 October). As a result, conditions remain unusually favourable for breeding and locust survival in the centre (Tagant and Brakna) where vegetation is still green, and in the northwestern (Inchiri, Dakhlet Nouadhibou) and northern (Adrar and Tiris Zemmour) regions where vegetation is becoming green after the earlier rains. Similar sequences of rain have led to a large and rapid increase in locust populations in the past. In Morocco, only a few isolate light showers fell along the Atlantic coast near Tan-Tan. Green vegetation persisted south of the Draa Valley, in parts of the extreme south and along the border with Mauritania. In Algeria, favourable conditions persisted in the southeast and the southwest as well as north and northwest of the Hoggar Mountains. Widespread light to moderate rains fell in southern Tunisia and northwest Libya during the second week of December. In Mali, conditions were becoming unfavourable as vegetation continued to dry out in the north. Nevertheless, small patches of green vegetation persisted in parts of Tamesna and the eastern Adrar des Iforas. In Niger, green vegetation persisted in northwestern Tamesna and in the Air. Low temperatures (minimum: 2-12°C, maximum: 14-26°C) in many of the above areas will delay hatching and locust maturation as well as the drying out of vegetation.

In the **Central Region**, only isolated showers were reported in a few places during December. In Sudan, vegetation and soil conditions were dry along the Red Sea coastal plains because of a lack of recent rainfall but breeding conditions are favourable in cropping areas in the Tokar Delta. Vegetation was reported to be dry in the summer breeding areas in Northern Kordofan, Khartoum and Atbara. In Egypt, breeding conditions remained favourable along the shores of Lake Nasser and near Wadi Allaqi. Conditions were improving on the southern Red Sea coastal plains and in the interior wadis between Shalatyn and Abu Ramad from recent rains. In Eritrea, conditions were slowly improving on the northern coastal plains. In Saudi Arabia, light to moderate rains fell in the central, northern and eastern interior during the first week. Although rain was not reported on the Red Sea coastal plains, vegetation was green in some places as far north as Yenbo. In Yemen, light to heavy rains fell on 7-8 December on the central Red Sea coast between Zabid and Al-Zuhrah where breeding conditions are favourable. These rains and clouds continued to the Aden coast and across the sea to coastal and interior areas in northern Somalia, the coastal plains from Tio, Eritrea to Djibouti and into eastern Ethiopia near Dire Dawa. More rain fell again at mid-month in northern Somalia where breeding conditions were improving. Light rains fell at times in northern Oman.

In the **Eastern Region**, dry weather prevailed along the Indo-Pakistan border where vegetation continued to dry out and conditions were not favourable for breeding.

Area Treated

Since October, nearly 175,000 ha have been treated. Of this, control teams treated 112,344 ha during December as follows:

Algeria	532 ha	(24-30 November)
	1,315 ha	(1-23 December)
Egypt	13 ha	(18 December)
Mali	9,212 ha	(21-30 November)
	17,437 ha	(1-25 December)
Mauritania *	50,209 ha	(1-31 December)
Morocco	13,736 ha	(1-31 December)
Niger	2,777 ha	(1-27 December)
Saudi Arabia	26,336 ha	(1-31 December)
Sudan	1,836 ha	(3-21 December)

* includes barrier treatments protecting 48,594 ha

Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• **Situation**

During December, the situation deteriorated further as swarms started to form during the first decade in northern Trarza (Aguilal Faye area). Three swarms flew over Nouakchott on 4-6 December. More laying and hatching occurred in northern Trarza and swarms were seen laying in Tiris-Zemmour north of Zouerate at Tenyemoumat (2318N/1231W) on the 15-19th. Consequently, additional hopper bands formed in Trarza and Tenyemoumat as well as in southern Inchiri and southwestern Adrar, northeast of Ouadane (2056N/1137W) and in Tiris-Zemmour near Ghallaman (2410N/0952W). In Dakhlet Nouadhibou, small bands and swarms were dispersed throughout the Tijirat (1929N/1557W) area. Solitarious and transiens hoppers (up to 300/m^2) and adults (up to 4/m^2) were also present in most all of these areas where they were forming groups. Crop damage was reported in some areas.

By the end of the month, most of the bands in Trarza, Inchiri, Adrar and north of Zouerate had reached the fifth instar and densities were 7-1,500 hoppers/m^2. Breeding continued near Zouerate, Ghallaman and east of Bir Moghrein at Tamreiket (2518N/1102W). A few new swarms were also seen in this area. The latest information suggests that the situation is extremely critical because large areas are currently infested, many of the control targets are in remote areas and other potential areas where conditions are favourable for breeding and swarm formation have not been surveyed. During December, ground control teams treated 6,955 ha (full coverage) and 48,594 ha (barrier).

• **Forecast**

An increased number of swarms can be expected as current hopper bands continue to fledge and adults form swarms in the north (Tiris Zemmour), northwest (Inchiri, Dakhlet Nouadhibou) and west (Adrar, Trarza). Although low temperatures are expected to delay locust maturation, more laying is likely to occur in those areas that remain favourable, and hatching and band formation could start by the end of the forecast period. Undetected breeding may be in progress in El Hank and northeastern Mauritania where bands and swarms may be forming. There is a risk that a few small swarms may arrive in Tiris Zemmour from northern Mali.

Mali

• **Situation**

During the last decade of November, breeding continued in Tamesna where there were 177 reports of hopper bands of all instars at densities up to 200 hoppers/m^2. Immature and mature adults and groups were also present at densities up to 15 adults/m^2. Adults and hoppers were scattered throughout the eastern Adrar des Iforas and in parts of Timetrine where they were grouping in patches of green vegetation. Ground control operations treated 9,212 ha.

During December, locust infestations persisted in the eastern Adrar des Iforas and Tamesna where hoppers of all instars, fledglings and immature and mature adults (at densities up to 8 adults/m^2) were present. Although no hatching was reported, laying was seen in both areas. In all, there were 113 reports of hopper bands, at densities of up to 450 hoppers/m^2, and two reports of immature swarms at densities of 50-100 adults/m^2 flying on 8 December at Tin-Afazo (1813N/0234E) and on the 13th at Akelo (1755N/0251E). During the month, 17,437 ha were treated.

• **Forecast**

Locust maturation will continue but will be delayed by low temperatures. Although locust numbers are expected to decline, more small bands and swarms are likely to form in Tamesna and the eastern Adrar des Iforas as vegetation continues to dry out. Some of the swarms may move towards the north and northwest during periods of warm southerly and southeasterly winds while others may persist in any remaining green vegetation. Limited hatching may occur during the forecast period in areas of previous laying.

Niger

• **Situation**

During the first half of December, groups of maturing transiens and gregarious adults were present in southeastern Air near Takolokouzet Massif (1830N/0930E) where laying and hatching continued in some places and many hopper groups and bands of all instars were reported. Adult densities were estimated to be as high as 10/m^2 while hopper densities were up to 500/m^2. During the second half of December, most of the hoppers had reached the fifth instar and were fledging, forming groups of immature adults at densities up to 30 adults/m^2 in some places.

Late instar hopper groups and bands continued to slowly mature.

The situation is more worrisome in Tamesna where there is no information about locust populations. It is believed that more breeding has occurred there during December and significant numbers of hopper bands may be present, particularly in the northwest where swarm formation could be in progress.

• **Forecast**

Another generation of breeding is likely to occur in the Air and Tamesna causing locust numbers to significantly increase. Although low temperatures will delay locust hatching and maturation, hopper bands and adult swarms are expected to form. Some of the swarms that form may move northwards during periods of warm southerly winds while others are likely to persist in areas of green vegetation.

Chad

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Senegal

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Algeria

• **Situation**

During the last decade of November, control operations continued against maturing adults and first instar hoppers in the Ahnet area west of Tamanrasset (2250N/0528E), and hopper groups near Illizi (2630N0825E). Isolated mature adults persisted in the west near Tindouf (2742N/0810W). Ground operations treated 532 ha.

During December, breeding continued in the southeast near Illizi and Djanet (2434N/0930E) where 1,170 ha of hopper groups and bands of all instars, at densities up to 2,000/bush, mixed with mature adults, at densities up to 3000/ha, were treated. Breeding on a smaller scale occurred in the Ahnet area where 145 ha of first to third instar hoppers at densities up to 300/bush were treated. In the west, 47 ha of mature adults were controlled south of Beni Abbes (3011N/014W) and along the Mauritanian border near Tindouf in early December. Elsewhere, scattered solitarious adults were present west of Tamanrasset, northeast of In Salah (2712N/0229E) and in the extreme south near the Niger border.

• **Forecast**

Locust numbers will increase near Tindouf where hatching is likely to occur. This may be supplemented by swarms from neighbouring areas of northern Mauritania. Hoppers will slowly mature near Illizi and Djanet where swarms may eventually form. Additional breeding may occur west of Tamanrasset and in other areas that remain green. Numerous adult groups and swarms are likely to appear in the south during periods of warm southerly winds from Mali and Niger.

Morocco

• **Situation**

In early December, mature groups of adults were present from the Mauritanian border to Bir Anzarane (2353N/1431W) and near Laayoune (2708N/1313W). At times during the month, more groups arrived from adjacent areas in Mauritania. Hatching started near Tichla (2135N/1458W) in late November and spread in other areas during December where small groups and bands formed with densities up to 1,000 hoppers/m^2. By 20 December, hoppers had reached the last instar stage and fledging was underway during the remainder of the month. Aerial and ground control operations treated 13,736 ha during December.

• **Forecast**

Locust numbers will increase further as breeding and hatching continues in southern areas that received rainfall during October. Although small hopper groups and bands will form, hopper development will be delayed if temperatures are low. Additional adults, small groups and perhaps a few swarms may arrive from Mauritania during periods of warm southerly winds.

Libyan Arab Jamahiriya

• **Situation**

During December, a few individual gregarious mature adults were reported on the 11th at two places southwest of Jebel Uweinat (2154N/2458E) near the Sudanese border. Moderate densities of hatchlings and first to fourth instar gregarious hopper groups were seen at three locations northwest of Ghat (2459N/1011E) near the Algerian border on the 21-23rd.

• **Forecast**

Small-scale breeding will continue in the southwest near Ghat where fledging is expected to occur and a few small groups or swarms could form during the forecast period. Hopper and adult maturation are likely to be delayed because of low temperatures. Small-

scale breeding may occur in areas of recent rainfall near Ghadames and in the Al Hamada Al Hamra. These may be augmented by locusts arriving from nearby areas in eastern Algeria during periods of warm southwesterly winds. Isolated adults may in the southeast near Jebel Uweinat.

Tunisia

• **Situation**

No reports received.

• **Forecast**

A few adults may appear in the south during periods of warm southerly winds and breed in areas of recent rainfall. Low temperatures will delay locust maturity and limit migration.

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

• **Forecast**

No significant developments are likely.

CENTRAL REGION

Sudan

• **Situation**

During December, locust numbers continued to decline in the summer breeding areas. Ground control operations treated 100 ha in Northern Kordofan during the first week. No locusts were reported in Northern Kordofan or Khartoum States after mid month. Groups of transiens fledglings and immature adults, at densities up to 10 adults/m^2, were scattered within about 10,000 ha of sorghum crops along the Atbara River at mid month of which 1,300 ha were treated. No locusts were reported on the western side of the Red Sea Hills near Haiya (1820N/3621E).

On the Red Sea coastal plains, immature and mature solitary and transiens adult groups were present in millet and sorghum in the Tokar Delta. Densities progressively increased during the month from 1,000 adults/ha at the beginning to 30,000 adults/ha by the end. Second to fifth instar hoppers, at densities up to 10 hoppers/m^2, were reported from the first week onwards and fledging commenced at the end of the month. Ground control operations started on the 20th and treated 400 ha up to the 31st. On the northern coastal plains, three small mature swarms arrived on 10 December near Eit (2009N/3706E), dispersed and laid eggs. At the end of the month, first to third instar hoppers, at densities of 10-20 hoppers/m^2, were seen there as well as further north near Fodukwan (2145N/3644E). No locusts were seen elsewhere on the northern coast.

• **Forecast**

Locust numbers will continue to decline along the Atbara River due to control operations and migration towards the Red Sea coastal plains. Breeding will continue on the northern coastal plains and in the Tokar Delta where more laying is expected and small bands and swarms are likely to form. Although most of the adults are likely to remain on the plains, mature and lay if conditions remain favourable, some groups or swarms may move along the coast north towards Egypt, south towards Eritrea or across the Red Sea to Saudi Arabia.

Eritrea

• **Situation**

Isolated mature adults were seen at three places on the northern coastal plains between Embere (1628N/3856E) and Karora (1745N/3820E) during surveys carried out on 22-27 December.

• **Forecast**

Low to moderate numbers of locusts will persist and increase on the northern coastal plains near the Sudanese border as well as further south near Shieb/Shelshela. Small-scale breeding is likely to occur in those areas that receive rainfall. These may be supplemented by locusts arriving from the Sudanese coastal plains.

Somalia

• **Situation**

Isolated mature adults were seen at three places along the escarpment northwest of Hargeisa (0931N/4402E) during surveys carried out on 20-23 December.

• **Forecast**

Locust numbers are likely to increase along the escarpment and coastal plains west of Berbera where small-scale breeding will occur in areas of recent rainfall.

Ethiopia

• **Situation**

No locusts were seen during surveys in the southeast near Jijiga (0922N/4250E) on 6-9 December.

• **Forecast**

No significant developments are likely.

Djibouti

• **Situation**

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

• **Forecast**

A few locusts may appear in areas of recent rainfall along the northern and eastern coastal plains. No significant developments are likely.

Egypt

• **Situation**

During December, mature transiens adults, at densities up to 5 adults/10 m^2, were seen laying eggs along the shore of Lake Nasser, in Tushka (2247N/3126E) and near Wadi Allaqi east of Lake Nasser. Lower densities of copulating adults were seen in crops in the Western Desert at Sh. Oweinat (2219N/2845E) and near Baris (2439N/3035E). Control operations were undertaken in Tushka on 13 ha. No information was received about the situation on the Red Sea coast.

• **Forecast**

Small-scale breeding will continue along the shores of Lake Nasser and near W. Allaqi where hopper groups are likely to form during the forecast period. Adults and perhaps a few small groups are likely to appear on the southeastern coastal plains of the Red Sea between Shalatyn and Abu Ramad and breed in areas of recent rainfall.

Saudi Arabia

• **Situation**

During December, there was a substantial increase in locust numbers as hatching and band formation occurred on the Red Sea coastal plains between Jeddah and Yenbo (2407N/3804E). Laying continued to about mid month by mature adult groups and swarms at densities up to 200 adults/m^2. Most of the swarms were seen during the second week. Some of the adult groups penetrated the Hejaz Mountains and were seen laying southeast of Khayber (2548N/3912E) on the 2nd, east of Taif (2115N4021E) on the 3rd, and east of Medinah (2430N/3935E) on the 7th. Hopper groups and bands were subsequently reported from these places as well as further south in the hills near Al Baha (2001N/4129E) and on the coast east of Qunfidah (1909N/4107E). In all, there were some 200 reports of bands on the coastal plains from the second week onwards at densities of 80-250 hoppers/m^2. By 19 December, some hoppers had reached the fifth instar. Control operations treated 26,336 ha during December.

• **Forecast**

Hopper bands will continue to form on the central and northern Red Sea coastal plains. Swarms are expected to start forming from early in the forecast period onwards. Although most of these are likely to mature and lay eggs in areas along the coastal plains that remain favourable, some may move to the spring breeding areas in the interior and beyond. If so, these will slowly mature due to low temperatures and eventually lay.

Yemen

• **Situation**

During December, isolated immature adults were seen on the Red Sea coastal plains at Deer Al-Ahdel (1453N/4310E) on the 24th. No locusts were seen during surveys along the coastal plains near Aden on 23-25 December.

• **Forecast**

Small-scale breeding is expected to occur on the Red Sea coastal plains, causing locust numbers to increase but remain below threatening levels.

Oman

• **Situation**

No locusts were seen during surveys carried out on 18-24 December.

• **Forecast**

No significant developments are likely.

Jordan

• **Situation**

No reports received.

• **Forecast**

There is a low risk that a few swarms could appear in the south from the Red Sea coast and interior of northern Saudi Arabia. This will most likely occur during periods of warm southerly winds associated with depressions over northern Arabia.

Iraq

• **Situation**

No reports received.

• **Forecast**

There is a low risk that a few swarms could appear in the south from the Red Sea coast and interior of northern Saudi Arabia. This will most likely occur during periods of warm southwesterly and westerly winds associated with depressions over northern Arabia.

Kuwait

• **Situation**

No reports received.

• **Forecast**

There is a low risk that a few swarms could appear

from the Red Sea coast and interior of northern Saudi Arabia. This will most likely occur during periods of warm southwesterly and westerly winds associated with depressions over northern Arabia.

Bahrain, Israel, Kenya, Kuwait, 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 the coastal plains near Bander-e Lengheh (2634N/ 5452E) in December.

• **FORECAST**

There is a low risk that a few swarms could appear in coastal areas of Bushehr Province from the Red Sea coast and interior of northern Saudi Arabia. This will most likely occur during periods of warm southwesterly and westerly winds associated with depressions over northern Arabia.

Pakistan

• **SITUATION**

No locusts were during the second half of November and throughout December.

• **FORECAST**

A few adults may appear in the spring breeding areas in Baluchistan and start to breed by the end of the forecast period if rainfall occurs.

India

• **SITUATION**

During the second half of November, isolated mature adults persisted at five places along the Indo-Pakistan border near Barmer, Rajasthan.

No locusts were reported during December.

• **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.

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

Outbreak photos. Pictures of the recent outbreaks in the Western Region are available on the Internet at: www.fao.org/news/global/locusts/outbreakpix.htm

Publications on the Internet. New FAO publications are available for downloading at www.fao.org/news/global/locusts/pubslist.htm:

- *Technical Series No. 30: Population dynamics* (English)
- *Technical Series No. 31: Biogéographie du Criquet pèlerin en Mauritanie* (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. 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).

2004 events. The following meetings are scheduled:

- **Pesticide Referee Group.** 8th meeting, Rome, postponed

- **Desert Locust Technical Group Workshop.** 8th meeting, Nouakchott (Mauritania), 7-11 March (provisional)
- **CRC.** 24th session of the Commission and 26th session of the Executive Committee, Jeddah (Saudi Arabia), 17-22 April
- **CLCPRO.** 1st Executive Committee, Niamey (Niger), May or June
- **SW Asia Commission.** 24th session, Kabul (Afghanistan), October

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^2 • band: 1 - 25 m^2

SMALL

- swarm: 1 - 10 km^2 • band: 25 - 2,500 m^2

MEDIUM

- swarm: 10 - 100 km^2 • band: 2,500 m^2 - 10 ha

LARGE

- swarm: 100 - 500 km^2 • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km^2 • 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

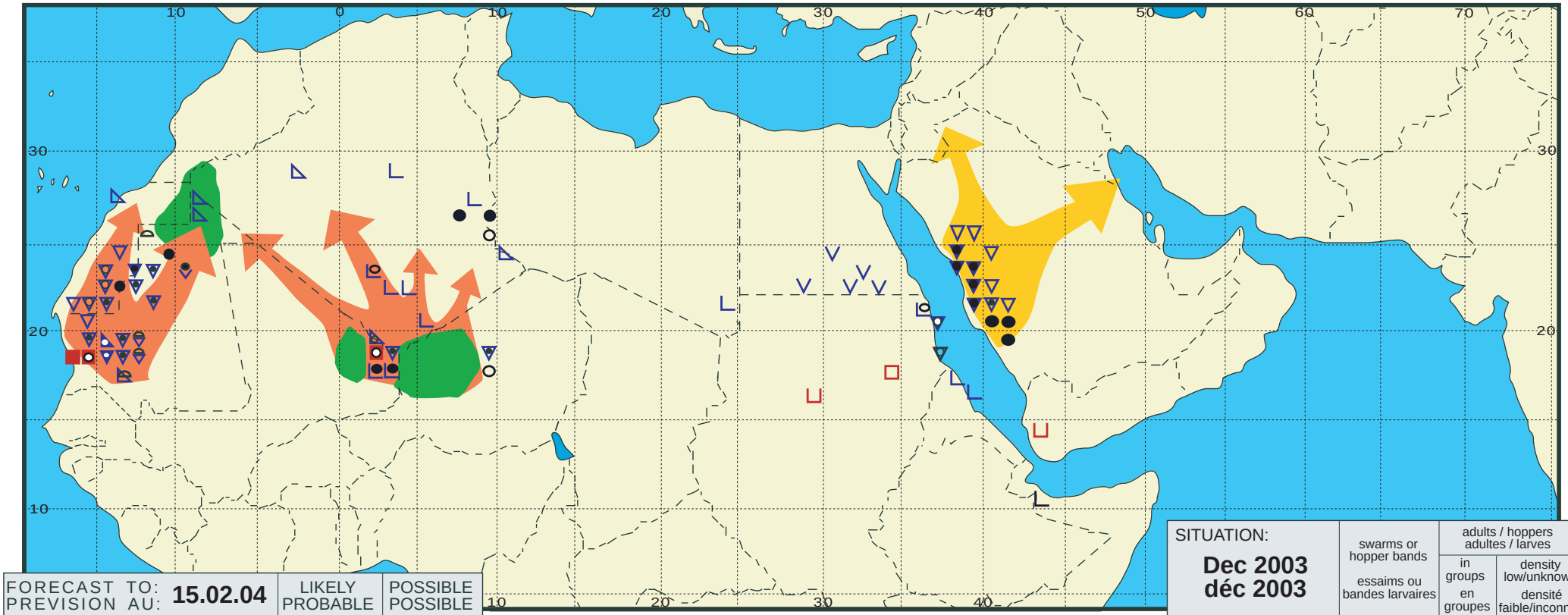
- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.

Desert Locust Summary
Criquet pèlerin - Situation résumée

303



FORECAST TO: PREVISION AU: **15.02.04**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **Dec 2003 déc 2003**	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves	
		in groups en groupes	density low/unknown densité faible/inconnue
immature adults adultes immatures	■	□	⊔
mature or partly mature adults adultes matures ou partiellement matures	◣	◺	L
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)	◘	◙	⊎