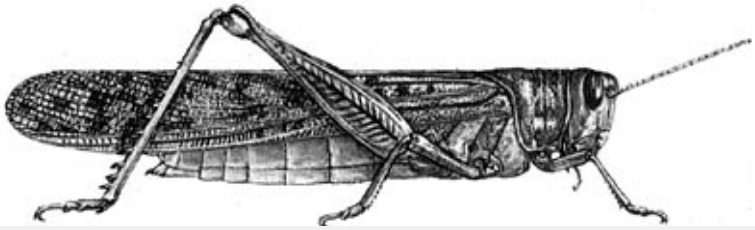

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations **No. 301**

(6 November 2003)

General Situation during October 2003
Forecast until mid-December 2003

The Desert Locust situation deteriorated further during October as outbreaks developed in Mauritania, Mali, Niger and Sudan. Hoppers and adults were concentrating in vegetation and starting to become gregarious and form small groups in these countries. Ground control operations are in progress against these concentrations as well as against scattered adults in Algeria, Libya and Egypt. Unusually heavy and widespread rains that fell in North West Africa could cause the situation to worsen as locusts move into newly favourable areas in the Region and breed again. Locusts may also cross the Red Sea from northeastern Sudan to Saudi Arabia. Once the winter rains begin, breeding will occur along the coastal plains of the Red Sea. There were reports of adults appearing in Morocco, Algeria, Libya, Egypt and perhaps Saudi Arabia. Consequently, a potentially dangerous situation could develop in the coming months.

Western Region. Locust outbreaks developed in northwestern **Mauritania**, northern **Mali** and northern **Niger** during October. Infestations consisted of a mixture of solitarious and transiens adults and hoppers of all stages. As conditions dried out in many of these areas, the locusts concentrated at high densities in the remaining green vegetation, started to become gregarious and formed groups. Unusually heavy rain fell for two days over a widespread area in the western part of the region. Most of the rain occurred in northwestern Mauritania and southwestern **Morocco** where breeding is likely to occur in the coming months. Low numbers of adults have moved into southern Morocco and northern Mauritania on winds associated with the storm. Other adults were reported in central, southern and southeastern **Algeria** and in southwestern and southeastern **Libya**. Breeding may occur in some of these areas and will be supplemented by adult groups moving out of Mali and Niger. Control operations were in progress in Mauritania, Mali, Niger, Algeria and Libya.

Central Region. A locust outbreak developed during October in northeastern **Sudan** where several small swarms were reported. Breeding continued in this area and locusts formed small groups and bands throughout the month between the Nile River and the Red Sea Hills. Adults appeared in the Western Desert in **Egypt** and along the shores of Lake Nasser. Although control operations are in progress in both countries, it is probable that some populations will not be detected or controlled. These are expected to move to the Red Sea coasts of Sudan and southeastern Egypt and some may cross to **Saudi Arabia**. Breeding will commence on the coastal plains once the winter rains start. If the rains are good this year, numbers will increase rapidly and bands and swarms will form. Scattered adults were reported on the Red Sea coastal plains in Sudan, **Eritrea** and **Yemen**.

Eastern Region. Isolated adults persisted in the summer breeding areas in **Pakistan** and are almost certainly present in adjacent areas in Rajasthan, **India**. Although vegetation remains unusually green, locust numbers will decline as the monsoon ends and vegetation dries out. No significant developments are expected.

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

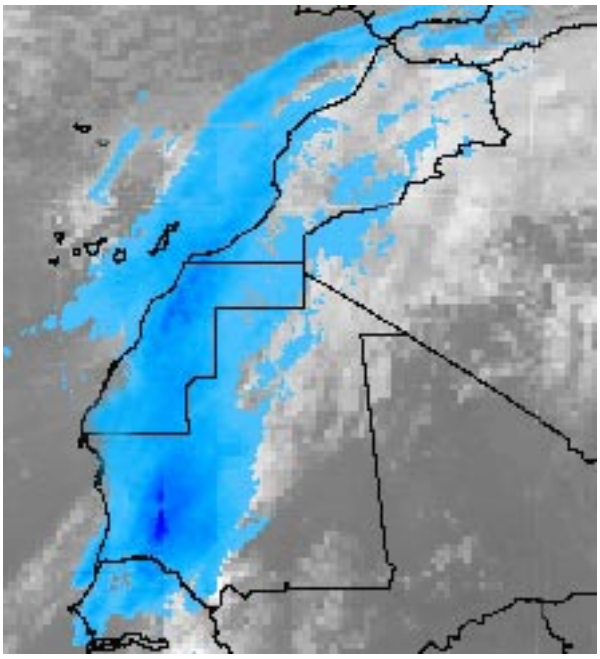
No. 301

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in October 2003

Vegetation was drying out in the summer breeding areas in the Sahel of West Africa and Sudan as well as along the Indo-Pakistan border during October. Unusually heavy rains fell over a large area of North West Africa from Senegal to Morocco where breeding conditions are expected to become favourable in the coming months.

In the **Western Region**, rainfall declined in the summer breeding areas in the Sahel during October as the Inter-Tropical Convergence Zone (ITCZ) retreated southwards below 15N. Nevertheless, light rains fell in southwestern and southern Mauritania where vegetation was drying out south of 17N. Unusually heavy rains fell over a large area from Senegal and western Mauritania to southwestern Morocco, western Algeria and the Atlas Mountains in Morocco on 21-22 October including Dakar (26 mm); in Mauritania, Boutilimit (67 mm), Akjoujt (41 mm), Atar (22 mm), Nouadhibou (58 mm), Zouerate (35 mm), and Bir Moghrein (10 mm); in Morocco, Awssard (98 mm), Dakhla (14 mm), Laayoune (26 mm), Smara (13 mm), Tan-Tan (103 mm) and Ouarzazate (124 mm); and Tindouf, Algeria (70 mm). Flooding was reported in many areas. Winds associated with this rainfall were from the south and southeast over Mauritania, Mali and Niger on 20-24 October. Vegetation was becoming green in northern Mauritania from earlier rains. Light rains also fell in southern and eastern Algeria. Conditions were reported to be favourable for breeding in the extreme south between Tamanrasset and the Malian border. Light to moderate rains fell in southwestern Libya near Ghat where breeding conditions are improving in some wadis. Light rains fell in the northern Adrar des Iforas near Tessalit, Mali. Vegetation was reported to be drying out in the Tilemsi Valley, Adrar des Iforas and Tamesna in Mali and in Tamesna and Air in Niger.



Unusually heavy rains fell on 21-22 October from Dakar, Senegal to the Atlas Mountains in Morocco, including western and northwestern Mauritania and adjacent areas in southern Morocco. *source: US Navy rainfall estimates*

In the **Central Region**, rainfall declined in the summer breeding areas in Sudan during October but light rains fell in the northeast near Atbara and Kassala. Consequently, vegetation was drying out in most areas except west of Khartoum and in the northeast between the Nile and Atbara Rivers and the Red Sea Hills. Conditions are generally dry on the Red Sea coastal plains from Egypt to Djibouti except for a few places near Port Sudan and perhaps in the Tokar Delta, and near Mehimet and Sheib in Eritrea. Light to moderate rains fell at times during October on the Red Sea coastal plains in Yemen where conditions are favourable for breeding. Dry conditions prevailed along the coastal plains in Djibouti and northern Somalia, along the Red Sea coast in Saudi Arabia and on the coastal plains in southern Yemen.

In the **Eastern Region**, dry weather prevailed along the Indo-Pakistan border where vegetation was drying out and conditions were becoming less favourable for breeding. Green vegetation was present in the Lasbela area west of Karachi, Pakistan.

Area Treated

Algeria	468 ha	(18-24 October)
Egypt	203 ha	(26-30 October)
Libya	awaiting details	
Mali	80 ha	(14-19 October)
Mauritania	1,607 ha	(9-31 October)
Niger	190 ha	(15-25 October)
Sudan	4,836 ha	(15-31 October)

Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• **Situation**

During the third decade of September, scattered solitarious hoppers and adults, at densities up to 2000 locusts per ha, continued to be present near Aioun El Atrous (1702N/0941W), Moudjeria (1751N/1228W), and in Aoukar between Boutilimit (1740N/1446E) and Akjoujt (1945N/1421W).

There was a dramatic increase in locusts during the first half of October in the above areas that developed into a local outbreak. Adults were forming dense groups (up to 40 per sq. m) and becoming transiens in the Erch El Guibli east of Akjoujt (1945N/1421W) where hatching started on the 12th. Small patches of early instar solitarious and transiens hoppers at densities up to three per bush and groups of mature adults at densities up to 6,500 per ha were present in numerous places in the Takhca region northwest of Moudjeria. Solitarious and transiens adults were copulating and grouping east of Nouakchott in the Faye and Aoukar Boutilimit depressions. Scattered adults persisted near Aioun El Atrous.

During the second half of October, several new areas were reported infested. Breeding was in progress in the northwest near Tmeimichat (2119N/1420W) where mature adult groups at densities of 6,000 per ha and early instar hoppers at densities of 75 per sq m were present. Adult groups were seen in northeastern Adrar near Ouadane (2056N/1137W) and early instar hoppers at densities up to 130 per sq. m were present near Chinguetti (2027N/1221W). Localized breeding was also reported near Tidjikja (1829N/1131W) where small hopper patches were forming. Hatching was reported in Aoukar and continued east of Akjoujt where early instar hoppers at densities of 20-25 per sq. m were present. In Takhca, late instar hoppers at densities of 6 per sq. m were reported and adults were concentrating, increasing in density and forming groups in areas that remained green. By the end of October, mature adult groups were seen in Tiris-Zemmour near Zouerate (2244N/1221W).

Ground control operations started on the 9th in most of these areas and treated 1,607 ha up to the end of the month.

• **Forecast**

Breeding will continue in Inchiri, Adrar and northern Trarza, causing locust numbers to increase further and become more gregarious. This will be supplemented by additional adults from late summer breeding in Tagant and the two Hodhs. Consequently, small hopper bands and swarms may form in the northwest. During periods of warm southerly winds, some of the latter are likely to move further north into Tiris-Zemmour and adjacent parts of Morocco and Algeria where scattered adults may already be present and breeding in areas that received rainfall in October.

Mali

• **Situation**

During the first decade of October, solitarious hoppers and adults at densities up to 900 per ha were scattered in the Tilemsi Valley near Tessalit (2011N0102E) and in the Adrar des Iforas between Kidal (1827N/0125E) and the Algerian border where laying was reported at one place. From mid-month onwards, hoppers and adults were starting to change phase and form groups in the central and northern Adrar des Iforas and in the Tilemsi Valley as vegetation dried out. Adults were also present in the Timetrine.

During the third decade, scattered hoppers of all instars mixed with adults, at densities of 1,000 per ha, were seen east of the Adrar des Iforas in northern Tamesna. Hoppers were concentrating in the few areas that remained green and were becoming transiens and forming small groups at densities of up to 25 per sq. m. Copulating adults were seen in three places and up to 200 first instar hoppers per sq. m were seen at one. A few small late instar hopper bands, at densities up to 80 hoppers per sq. m, were reported on the 26th.

• **Forecast**

Locusts will continue to concentrate, gregarize and form groups of hoppers and adults as vegetation becomes drier in the Timetrine, Tilemsi Valley, the Adrar des Iforas and in Tamesna. Only limited breeding will occur unless more rains fall. Consequently, adult groups are likely to move towards the northwest, north and northeast into adjacent areas of northern Mauritania and southern Algeria during periods of warm southeasterly and southerly winds.

Niger

• **Situation**

In late September and early October, a local outbreak developed in Tamesna between Agadez (1700N/0756E) and In Abangharit (1754N/0559E)

where hoppers and adults were seen forming groups in September. During the first week of October, adult densities increased to 50,000 per ha and hoppers of all instars were becoming transiens and forming small groups at densities up to 20 hoppers per sq m. By mid month, groups of late instar hoppers and immature adults were reported in western Tamesna near Tassara (1650N/0550E) and further north on the Tazerzait Plateau (1832N/0449E) near the Algerian and Malian border. A few groups of laying adults and first instar hoppers were also seen in the latter area. Small groups of immature adults and scattered late instar hoppers were reported in the Talak area near Arlit (1843N/0721E). At the end of the month, scattered solitarious adults were maturing in the southern Air Mountains, and they were copulating, becoming transiens and forming groups at densities up to 70 adults per sq. m at one location.

• **Forecast**

As vegetation continues to dry out, locusts will become more gregarious and form an increasing number of groups and perhaps a few small hopper bands and swarms. Some of the populations are expected to move as adult groups towards the north and northwest into adjacent areas of Mali and southern Algeria during periods of warm southeasterly and southerly winds. Other populations will persist in parts of Tamesna and Air if conditions remain favourable and continue to breed on a limited scale.

Chad

• **Situation**

A late report indicated that scattered solitarious adults at densities up to 30 per ha were present at six places in Biltine near Guereda (1431N/2205E) on 12-30 September,

• **Forecast**

Locust numbers will decline in the northeast between Biltine and Ennedi as vegetation dries out. No significant developments are expected.

Senegal

• **Situation**

A few individual immature solitarious adults persisted in the north at Ndioum (1630N/1438W) up to 20 October.

• **Forecast**

There is a slight possibility that a few adults will appear in the north along the Senegal River during the forecast period. No significant developments are expected.

Algeria

• **Situation**

Scattered mature solitarious adults were present at eight places in the extreme south between the Malian border and Tamanrasset on 17-24 October. Ground control operations treated 10 ha of adults at densities of 350 per ha. Other operations treated 468 ha of immature and mature transiens adults near Adrar (2753N/0016W) in the central Sahara on 18-24 October. At the end of the month, there was an unconfirmed report of adult groups in the southeast near Illizi (2630N0825E).

• **Forecast**

Locust numbers are expected to increase in the south and southeast as adults and groups appear from the Sahel during periods of warm southerly winds. If rainfall occurs, these are likely to breed; otherwise, they may move further north towards the central Sahara. Locusts are likely to be present in the west near Tindouf where they will breed in areas of recent rainfall. Other populations are probably present in the southeast near Illizi from earlier undetected breeding. These may form a few small groups as vegetation dries out.

Morocco

• **Situation**

A late report indicated that no locusts were seen during the last week of September in Oued Draa and near Smara (2644N/1142W) in Saguia Hamra.

During the second half of October, isolated immature adults were seen south of the Atlas Mountains near Boumalne (3059N/0532W) on the 18th and at a few places further east towards the Algerian border on the 21st. Similar populations were reported in the southwest between Awssard (2240N/1410W) and Guelta Zemmur (2508N/1223W) on the 22nd. These are likely to have appeared from northwestern Mauritania on winds associated with heavy rain on 21-22 October. No locusts were seen along the coast between the Mauritanian border and Laayoune (2708N/1313W) during the same period.

• **Forecast**

Small-scale breeding is likely to occur over a widespread area of the southwest where recent rains fell between the Mauritanian border and Oued Draa. Consequently, locust numbers will increase during the forecast period. Additional adults could appear in these areas from the south during periods of warm southerly winds.

Libyan Arab Jamahiriya

• **Situation**

Ground control operations were in progress against scattered mature solitarious adults in 50 ha of crops near Ghat (2459N/1011E) on 15 October. There was an unconfirmed report of solitarious adults at densities of 1-2 per bush in the southeast at Jebel Uweinat (2154N/2458E) and J. Arkenu (2215N/2445E) on 23-30 October.

• **Forecast**

Low numbers of adults are likely to persist in the southwest near Ghat and in the southeast near J. Uweinat.

Tunisia

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

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

• **Forecast**

No significant developments are likely.

CENTRAL REGION

Sudan

• **Situation**

As a result of good rainfall in the summer breeding areas, a local outbreak developed in the northeast in early October. On the 9th, scattered hoppers, fledglings, and immature and mature adults were present near Shendi (1641N/3322E). Three maturing swarms were reported on 10-12th in an area of 2200 ha along the Atbara River southeast of Atbara (1742N/3400E). Late instar hoppers, fledglings and a few other small swarms were seen in the following days between Ed Damer (1734N/3358E) and Berber (1801N/3400E). Mature adults at densities up to 10,000 per ha were present at five places northwest of Kassala (1424N/3630E) at mid month.

During the last decade of October, hoppers of all instars were becoming gregarious and forming small groups and a few bands near Atbara. New infestations were found further east towards Haiya (1820N/3621E) where groups of adults were seen copulating and several small high-density hopper bands and a few swarms had formed. Scattered hoppers and adults were reported west and south of Khartoum. Low numbers of solitarious hoppers and adults were present in Northern Darfur near El Fasher (1337N/2522E). There were also unconfirmed reports of a swarm in Northern Kordofan and another one in the north at Dongola. On the Red Sea coast, solitary adults were reportedly seen at night near Suakin (1908N/3717E) at the end of October and there were unconfirmed reports of hoppers and adults at densities of 1,500 per ha.

Ground control operations started on the 15th in the Atbara area and on the 20th near Khartoum. By the end of the month, 4,836 ha had been treated.

• **Forecast**

Locust numbers will increase in the northeast between the Nile and the western side of the Red Sea Hills where further breeding is expected and gregarization will continue leading to the formation of small bands and swarms. Numbers will also increase on the Red Sea coastal plains and perhaps in Wadi Oko/Diib as adults, groups and perhaps a few small swarms arrive from infested areas further west and lay near Port Sudan and Tokar Delta as well as in other areas that receive rainfall. Locust numbers will decline in the summer breeding areas in Kordofan and Darfur as vegetation dries out.

Eritrea

• **Situation**

A late report indicated that scattered solitarious adults were present in the foothills of the northern Red Sea coastal plains east of Nacfa (1640N/3832E) at the end of September.

• **Forecast**

If rains fall, small-scale breeding is likely to occur on the Red Sea coastal plains causing locust numbers to increase during the forecast period. This may be supplemented by adults and perhaps a few small groups appearing from northeastern Sudan.

Somalia

• **Situation**

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

• **Forecast**

No significant developments are likely.

Ethiopia

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Djibouti

• **Situation**

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

• **Forecast**

No significant developments are likely.

Egypt

• **Situation**

During the last week of October, immature and mature adults at densities of 1-25 per sq. m appeared along the western and eastern shores of Lake Nasser. Some of the adults were becoming transiens and were found in cropping areas. Lower densities of immature adults were reported in the Western Desert south of Kharga Oasis at Baris (2439N/3035E) on the 30th. Ground control operations treated 203 ha on 26-30 October. No locusts have been seen on the Red Sea coastal plains so far.

• **Forecast**

Small-scale breeding is expected to occur along the shores of Lake Nasser. Locusts are likely to appear on the southeastern coastal plains of the Red Sea between Shalatyn and Abu Ramad and start to lay if rainfall occurs.

Saudi Arabia

• **Situation**

No locusts were seen during surveys carried out on the central Red Sea coastal plains between Jeddah and Jizan on 9-24 September.

On 24 October, locals reported seeing a small yellow swarm on the northern Red Sea coast at Yenbo (2405N/3803E) and Bader (2345N/3845E) and individual adults at Thual (2217N/3906E). Survey teams were unable to locate these populations on the following day. No locusts were seen on 12-27 October elsewhere on the Red Sea coast or in the central and northern interior.

• **Forecast**

There is a risk that adults and perhaps a few small groups or swarms could appear on the Red Sea coastal plains from Sudan during the forecast period. If rains fall, breeding will occur, causing locust numbers to increase in these areas.

Yemen

• **Situation**

During October, isolated adults were maturing on the Red Sea coastal plains between Hodeidah (1450N/4258E) and Bayt Al Faqih (1430N4317E). No locusts were seen on the coastal plains near Aden.

• **Forecast**

Small-scale breeding is expected to occur on the Red Sea coastal plains, causing locust numbers to increase but remain below threatening levels. The risk of adults appearing from the western side of the Red Sea is low.

Oman

• **Situation**

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

• **Forecast**

No significant developments are likely.

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

• **Forecast**

No significant developments are likely.

EASTERN REGION

Iran

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Pakistan

• **Situation**

During the second half of September, isolated maturing adults were reported 22 places near the Indian border in Cholistan and Tharparkar deserts as well as west of Karachi in Lasbela. A few first to fourth instar hoppers were seen in four of these locations.

During the first half of October, isolated maturing adults persisted at 24 places in the above- mentioned areas and individual hoppers were seen at two.

• **Forecast**

Locust numbers will decline along the Indo-Pakistan border as vegetation dries out. A few adults may move west towards the spring breeding areas in Baluchistan while others could persist in Lasbela.

India

• **Situation**

No locusts were reported in Rajasthan during the second half of September.

During the first half of November, isolated adults were present at 17 places in Rajasthan near Jaisalmer (2652N/7055E) and Barmer (2543N/7125E).

• **Forecast**

Locust numbers will decline as vegetation dries out. 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 can be found on the Internet at: www.fao.org/news/global/locusts/elocust.htm

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

- *Desert Locust Spray Monitoring Form* and instructions (French)
- *Desert Locust Guidelines* (English, French – details below)

Desert Locust Guidelines. The French version of the *Desert Locust Guidelines* is 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. The Arabic version will be released in the coming weeks. 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).

2003-2004 events. The following are provisionally scheduled:

- **FAO/CRC/EMPRES/DLCO-EA**. 3rd meeting on the Harmonization of activities, Addis Ababa (Ethiopia), 17-20 November
- **EMPRES/WR.** 2nd Liaison Officers meeting, Agadir (Morocco), 15-19 December
- **Pesticide Referee Group.** 8th meeting, Rome, 26-29 January
- **Desert Locust Technical Group Workshop.** 8th meeting, Nouakchott (Mauritania), March
- **CRC.** 24th session of the Commission and 26th session of the Executive Committee, Jeddah (Saudi Arabia), 17-22 April
- **CLCPRO.** 1st Executive, Niamey (Niger), May
- **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

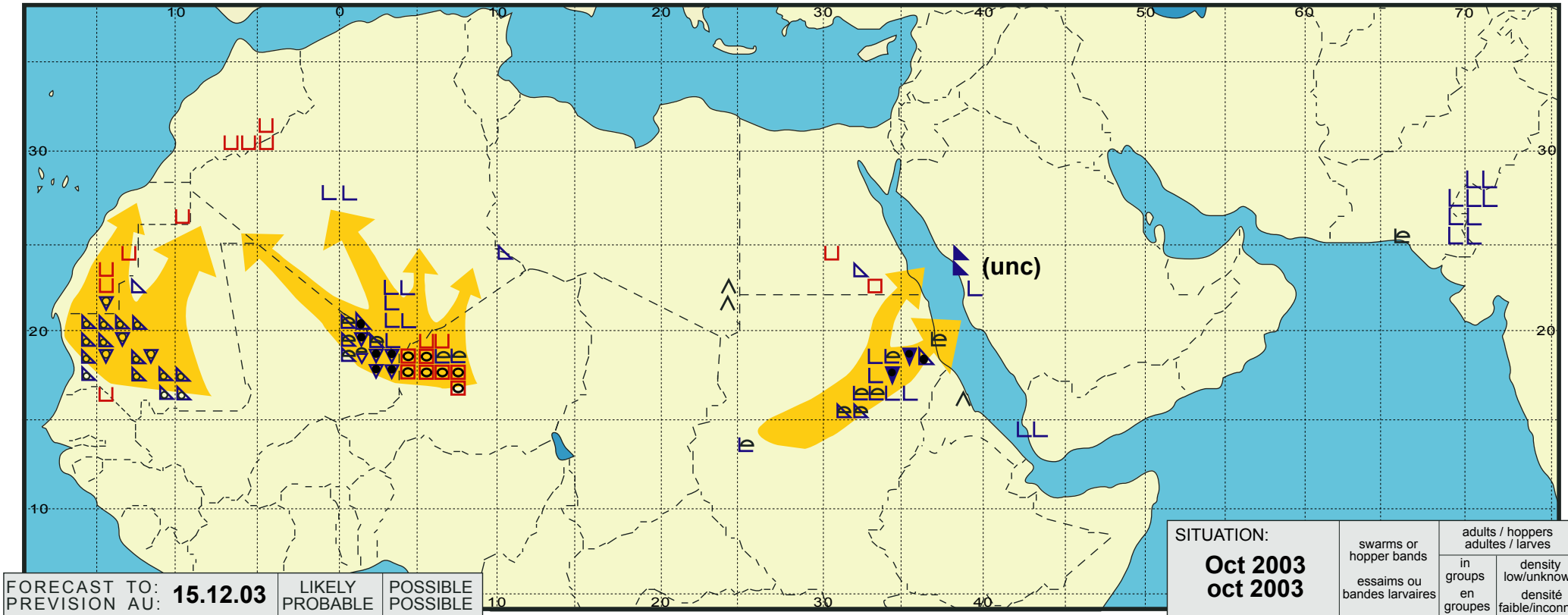
- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

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

Desert Locust Summary
Criquet pèlerin - Situation résumée

301



FORECAST TO: PREVISION AU: **15.12.03**	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: **Oct 2003** **oct 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)	◘	◙	⍥