

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 336

(2 October 2006)



General Situation during September 2006 Forecast until mid-November 2006

The Desert Locust situation remained calm during September. Small-scale breeding occurred in Mauritania and Niger causing locust numbers to increase slightly but not to a point that threatened agriculture. Ground teams treated solitarious hoppers and adults on a farm in central Algeria. No significant infestations were reported from the Central Region where only isolated adults were present on the Red Sea coast in Saudi Arabia and Yemen. Local breeding occurred in one area of northwest Somalia. In the Eastern Region, solitarious adults were scattered in a few places along both sides of the Indo-Pakistan border. As vegetation dries out, adults will concentrate in those areas that remain green and there is a slight risk of a few small local outbreaks developing in Mauritania and Niger. Low numbers of adults from the summer breeding areas are expected to appear during the forecast period in northwest and northern Mauritania, in Western Sahara and along both sides of the Red Sea. Small-scale breeding will eventually occur in these areas in the coming months.

Western Region. Small-scale breeding occurred during September in southern and central Mauritania and on the Tamesna Plains in Niger where low numbers of solitarious hoppers and adults were present in both countries. The situation is probably similar in northern Mali but surveys could not be undertaken to confirm this. There are indications that breeding could be coming to an end in southern

Mauritania but it is likely to continue in Niger where unusually heavy rains fell in August. As vegetation dries out in southern Mauritania, adults are likely to appear in northwest Mauritania and in Western Sahara where good rains fell in September. Adults may also reach northern Mauritania as good rains also fell there. Upon arrival, adults are likely to mature and at least one generation of breeding could take place before temperatures become too cool. Elsewhere, ground teams treated 120 ha of solitarious hoppers and adults in an irrigated agricultural area near Adrar, Algeria. Scattered adults may be present in northwest Libya. No locusts were reported in Chad.

Central Region. No locusts were reported during September in the summer breeding areas in Sudan or Eritrea although only a portion of each was surveyed. A few solitarious adults were present on the Red Sea coastal plains in southwest Saudi Arabia and in Yemen. Low numbers of adults may appear somewhat earlier this year in the winter breeding areas along the western side of the Red Sea, first in northeast Sudan near Wadi Diib and also on the Eritrean coast as good rains have fallen recently in both places. All efforts should be made to monitor these areas closely and regularly throughout the forecast period. Elsewhere, local breeding occurred on the plateau in northwest Somalia.

Eastern Region. Although monsoon rains steadily declined during September along both sides of the Indo-Pakistan border, breeding conditions remained favourable in those areas that received unusually heavy rain in August. Nevertheless, only scattered solitarious adults were reported in a few places in Rajasthan, India and in the Tharparkar and Cholistan deserts in Pakistan.

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

Facsimile: +39 06 570 55271

E-mail: eclo@fao.org

Internet: www.fao.org

DLIS: www.fao.org/ag/locusts



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Weather & Ecological Conditions in September 2006

Seasonal rains started to decline by mid-September in the summer breeding areas in the Sahel of West Africa. Good rains continued in Sudan and along parts of the Red Sea coast. Monsoon rains came to an end along the Indo-Pakistan border but ecological conditions remained favourable.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated between 15N and 20N over the Sahel during September but as the month progressed, it began to retreat towards the south, suggesting an early end to rains in some areas. During the first decade of the month, good rains continued to fall in most of the summer breeding areas in southern Mauritania, southern Algeria and in the Tamesna and Air Mountains in Niger while only sporadic showers occurred in northern Mali and in eastern Chad. By mid month, rainfall declined in Niger, Chad and southern Algeria. This decline continued during the remainder of the month and extended to most all of the summer breeding areas where very little rain fell except in the central Adrar des Iforas in Mali and the southern part of the Tamesna Plains in both Mali and Niger. Although rains may have come to an early end in many places within the summer breeding area, ecological conditions continued to remain favourable, especially in those areas that received unusually heavy rains in August such as parts of Tamesna and central Niger. In northwest Mauritania and adjacent areas of Western Sahara, widespread showers fell during the first and third decades of September mainly between Akjoujt and Guelta Zemmur but also in the El Hank region of northeast Mauritania during the first decade. Consequently, ecological conditions are expected to be improving in these places.

In the **Central Region**, good rains fell during the first decade of September in the summer breeding areas of Sudan as far north as 17N in North Darfur and North Kordofan, reaching the Baiyuda Desert south of Dongola and the Nubian Desert south of Egyptian border. These rains extended into central and eastern Sudan, reaching the western lowlands in

Eritrea. Rainfall continued in the above areas during the second decade except for parts of North Darfur and Northwest Kordofan. In the winter breeding areas, good rains fell during the first two decades in the Red Sea Hills in Sudan and in Wadi Diib/Oko. Good rains also fell on the Red Sea coastal plains from the Tokar Delta in Sudan to Djibouti and from Jeddah, Saudi Arabia to nearly Aden, Yemen during the first decade. Less rain occurred during the second decade, falling mainly along the Yemeni coast and near Qunfidah, Saudi Arabia, but improved slightly by the end of the month along the coast in Yemen and southern Eritrea. Nevertheless, ecological conditions remained favourable in the summer breeding areas as well as on the eastern side of the Red Sea while they were improving in Wadi Diib and along the Red Sea coast in Sudan and Eritrea. In northwest Somalia, good rains fell on the plateau between Hargeisa and Djibouti in early September.

In the **Eastern Region**, monsoon rains continued during the first decade of September in Tharparkar and Khipro Deserts in southeastern Pakistan and, to a lesser extent, south of Jaisalmer in Rajasthan, India. Very little rain fell during the remainder of the month in both countries. Nevertheless, ecological conditions were favourable for breeding in many areas and will probably remain so during the forecast period in Barmer and Jaisalmer districts in India and in Tharparkar, Pakistan where unusually heavy rains and flooding occurred in August.



Area Treated

Algeria 120 ha (14 September)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During September, small-scale breeding continued and expanded in the south and centre of the country between 16N and 19N, extending from Rkiz (1658N/1514W) and Aguilal Faye (1827N/1444W) in the west to Nema (1636N/0715W) and Oualata (1717N/0701W) in the east, and reaching as far north as Tidjikja (1833N/1126W). Solitary hoppers of all instars were present at relatively low densities of less than 85 hoppers/site, mainly during the first half of the month. The density of solitary immature and

mature adults, including fledglings and new adults, varied from 2,000 adults/ha during the second week of September to 200 adults/ha during the last week.

• **FORECAST**

As vegetation starts to dry out in the south, breeding is expected to decline and locusts will concentrate in those areas that remain green. Low numbers of adults are likely to appear in the northwest (Dakhlet Nouadhibou, Inchiri and Adrar) and north (Tiris Zemmour) and breed on a small scale in areas of recent rainfall.

Mali

• **SITUATION**

During the first decade of September, isolated solitary adults were present near Aguelhoc (1927N/0052E). No locusts were reported during the remainder of the month.

• **FORECAST**

Scattered adults are almost certainly present and breeding on a small scale in parts of Timetrine, Tilemsi Valley, Adrar des Iforas and Tamesna. Breeding is expected to continue during the forecast period, especially if additional rainfall occurs. Locusts may also be present in areas of green vegetation between Tombouctou and the Mauritanian border.

Niger

• **SITUATION**

During September, an increasing number of solitary immature and mature adults were reported on the Tamesna Plains. Initially, only isolated adults were seen but by the end of the month adults were seen at 71 locations, densities had reached 200 adults/ha in one place, and an increasing number of adults were copulating. Solitary first to third instar hoppers were present at three places between In Gall (1651N/0701E) and Agadez (1700N/0756E), suggesting that laying occurred at the end of August with hatching during the second week of September. Isolated immature and mature adults were seen during the last week of the month near Tanout (1505N/0850E) and the Termit Massif 1615N/1117E).

• **FORECAST**

Small-scale breeding will continue in the Tamesna and may occur in those places in the Air Mountains as well as near Tanout and Termit where good rains fell in August. Fledglings and new immature adults will appear from the second week of October onwards in Tamesna. Consequently, locust numbers will increase during the forecast period and, as vegetation begins to dry out, locusts are likely to concentrate in remaining green areas and perhaps form a few small groups.

Chad

• **SITUATION**

Late reports indicated that no locusts were seen during surveys carried out in Kanem, Biltine and BET from 11 to 31 August.

• **FORECAST**

Isolated adults may be present in a few places in Kanem, Batha, Biltine and BET provinces, mainly north of 15N, and breed on a small scale in areas of recent rainfall.

Senegal

• **SITUATION**

No locusts were seen during surveys carried out in the north up to 20 September.

• **FORECAST**

No significant developments are likely.

Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea Bissau, Guinea, Liberia, Nigeria, Sierra Leone and Togo

• **FORECAST**

No significant developments are likely.

Algeria

• **SITUATION**

During September, scattered second to fifth instar solitary hoppers and mature adults were present in an irrigated agricultural area in the central Sahara near Adrar (2753N/0017W). Ground teams treated 120 ha on the 14th. No locusts were seen during surveys carried out in the southern Sahara between the Hoggar Mountains and the Mali/Niger borders, in the southeast near Djanet (2434N/0930E), and in the west near Tindouf (2741N/0811W).

• **FORECAST**

Scattered adults are likely to persist in irrigated areas near Adrar. Other adults may be present in areas of recent rainfall south of Tamanrasset where small-scale breeding could occur.

Morocco

• **SITUATION**

No reports were received during September.

• **FORECAST**

Low numbers of adults are likely to appear and breed on a small-scale in the Western Sahara between Tichla and Guelta Zemmur.



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Libyan Arab Jamahiriya**• SITUATION**

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

• FORECAST

Scattered adults may be present in parts of the Al Hamada Al Hamra where small-scale breeding could occur in areas of recent rainfall and cause locust numbers to increase slightly.

Tunisia**• SITUATION**

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

• FORECAST

No significant developments are likely.

CENTRAL REGION**Sudan****• SITUATION**

No locusts were seen during a survey on 1-3 September in North Kordofan near Umm Saiyala (1426N/3112E) and along the Nile south of Khartoum.

• FORECAST

Scattered adults are likely to be present and breeding on a small scale in North Darfur and North Kordofan and, to a lesser extent, in parts of the Baiyuda Desert, between Atbara and the Red Sea Hills, and between Kassala and Haiya. Consequently, locust numbers could gradually increase during the forecast period and concentrate in remaining areas of green vegetation. As early rains may have fallen in Wadi Oko/Diib and the Red Sea Hills, locusts could first appear and breed there as well as on the Red Sea coastal plains.

Eritrea**• SITUATION**

No locusts were seen during a survey carried out in part of the summer breeding areas in the western lowlands on 14-19 September.

• FORECAST

Scattered adults are likely to be present and breeding on a limited scale in the western lowlands between 16N and 17N, including Khor Baraka, and on the Red Sea coastal plains in areas of recent rainfall and runoff between Tio and the Sudanese border.

Ethiopia**• SITUATION**

No surveys were undertaken and no locusts were reported during the first three weeks of September.

• FORECAST

No significant developments are likely.

Djibouti**• SITUATION**

No reports were received during September.

• FORECAST

No significant developments are likely.

Somalia**• SITUATION**

A few isolated fifth instar hoppers and maturing solitary adults were seen on the plateau near Hargeisa (0931N/4402E) on 2-6 September.

• FORECAST

No significant developments are likely.

Egypt**• SITUATION**

No locusts were seen during surveys carried out near Abu Simbel and along the Mediterranean coast near Matruh (3121N/2714E) in September.

• FORECAST

Isolated adults could start to appear on the Red Sea coastal plains between Shalatin and the Sudanese border at the end of the forecast period.

Saudi Arabia**• SITUATION**

No locusts were seen during a joint survey with Yemen on the Red Sea coastal plains between Jizan (1656N/4233E) and the Yemeni border on 16-20 September except for an isolated immature adult south of Jizan. No locusts were seen elsewhere along the coast or in the interior during surveys undertaken in September.

• FORECAST

Scattered adults may be present on the Red Sea coastal plains between Qunfidah and the Yemeni border where they could breed on a small-scale in areas of recent rainfall. If so, locust numbers will increase slightly during the forecast period. All efforts should be made to monitor the situation closely.

Yemen**• SITUATION**

No locusts were seen during a joint survey with Saudi Arabia on the Red Sea coastal plains between Hodeidah (1450N/4258E) and the Saudi Arabian

border on 16-20 September except for an isolated mature adult near Al Qutai (1454N/4312E).

- **FORECAST**

Small-scale breeding is expected to occur in areas of recent rainfall on the Red Sea coastal plains. Consequently, locust numbers will increase slightly during the forecast period. All efforts should be made to monitor the situation closely.

Oman

- **SITUATION**

No locusts were seen during surveys carried out on the Musandam Peninsula and on the northern Batinah coast during September.

- **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 during surveys carried out on the southern coast of Hormozgan province between Bandar Abbas and Jask on 17-18 September.

- **FORECAST**

No significant developments are likely.

Pakistan

- **SITUATION**

During the first half of September, isolated mature adults were present in Lasbela Valley west of Karachi and at a few places near the Indian border in Tharparkar and Cholistan deserts.

- **FORECAST**

Locust numbers will decline in the summer breeding areas in Cholistan and Khipro deserts but there is a risk that small-scale breeding could continue in Tharparkar where unusually heavy rain fell in August.

India

- **SITUATION**

No locusts were reported during the second half of August.

During September, no locusts were seen during surveys in Rajasthan except for scattered mature adults at two locations west of Barmer (2543N/7125E) near the Pakistani border.

- **FORECAST**

Locust numbers will decline in Rajasthan with the possible exception of the area between Barmer and

Jaisalmer where unusually heavy rain fell in August that could allow breeding to continue into October.

Afghanistan

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.



Announcements

Locust reporting. During recession periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent twice/week and affected countries are encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@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.

eLocust2. FAO has developed a new version of eLocust in collaboration with affected countries and the French Space Agency (CNES/Novacom) that allows field officers to enter survey and control data directly in the field and transmit it in real time via satellite to their national locust centre. Data can also be downloaded to a PC and visualized on GoogleEarth. The software is in both English and French. FAO DLIS has distributed units to nearly all of the frontline countries. Photos and more information are available at: www.fao.org/ag/locusts/en/activ/DLIS/index.html

Desert Locust warning levels. A colour-coded scheme has been established to indicate the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels



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indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level. Your feedback on the usefulness of this scheme and any suggested improvements is welcome.

EMPRES/CRC website. Detailed information on EMPRES/CR and the FAO Central Region Commission as well as member country profiles can be found on the new EMPRES/CRC website at: www.crc-empres.org.

New information on Locust Watch. DLIS will launch a new initiative in October called *Desert Locust e-info news* as a means of keeping everyone informed on a weekly basis of new information on the Locust Group's web page, Locust Watch (www.fao.org/ag/locusts).

2006-07 events. The following meetings are scheduled:

- **EMPRES/CR.** 14th Liaison Officer Meeting, Muscat (Oman), 11-14 November
- **SWAC.** 25th Session, Tehran (Iran), 20-23 November
- **EMPRES/WR.** 5th Liaison Officer Meeting, Nouakchott (Mauritania), 4-7 December
- **CLCPRO.** 3rd Executive Committee, Nouakchott (Mauritania), 8-9 December
- **EMPRES/WR.** 2nd Session of the Steering Committee, Bamako (Mali), 22-24 January



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 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • 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.

WARNING LEVELS

GREEN

- Calm. No threat to crops. Maintain regular surveys and monitoring.

YELLOW

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

RED

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

REGIONS

WESTERN

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during plagues only: Burkino Faso, Cape Verde, Gambia, Guinea and Guinea-Bissau.

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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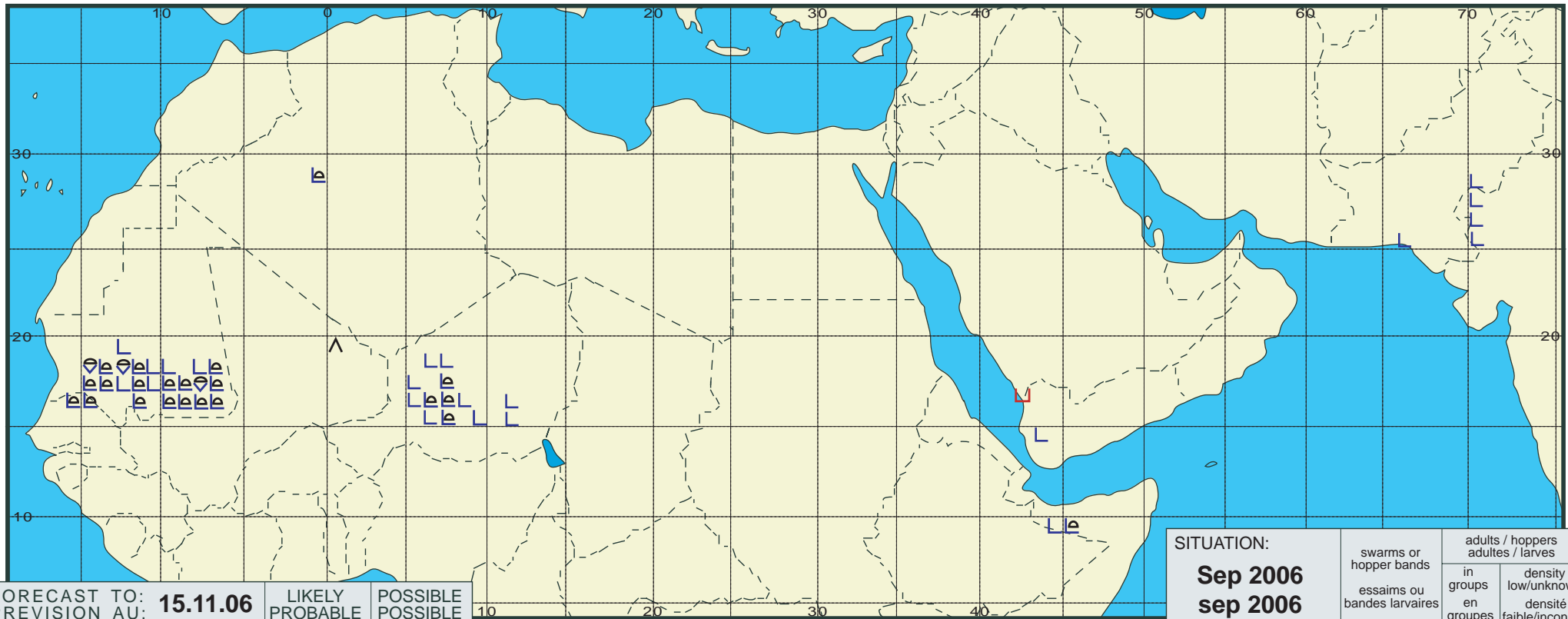
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.11.06	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: Sep 2006 sep 2006	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)			