

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 252
(8 Oct 1999)



General Situation during September 1999 Forecast until mid-November 1999

The Desert Locust situation continued to remain calm during September. A small outbreak developed in northern Mali where several small swarms and hopper groups formed as a result of exceptionally good breeding conditions. Although conditions are favourable for breeding over a widespread area of the Sahel in West Africa and Sudan, only limited breeding has been reported in Mauritania. Locust numbers remain low but current conditions favour an increase, especially in northern Mali and Mauritania. During the forecast period, vegetation will start to dry up and locusts could become concentrated, forming a few small groups. Adults will start to shift from summer to winter breeding areas but this movement is expected to be on a relatively small scale this year.

Western Region. Late reports indicated that a localized outbreak has been developing since July in northern Mali as a result of unusually heavy rains and favourable conditions followed by breeding which produced several small scattered swarms and groups of hoppers. Breeding should continue to at least the end of November and additional swarms are likely to form but remain in the area until then. Small scale breeding is in progress in southern and central Mauritania

where locust numbers will further increase as breeding continues during October. Once vegetation starts to dry out, a few small groups may form and limited control may be required. Some adults could start to appear further north in northern Mauritania and southern Algeria after mid November. There is possibility that low numbers of adults are present and breeding in Tamesna, Niger and in north-eastern Chad based on the good conditions there. Numbers will decline as conditions become unfavourable.

Central Region. Although no locusts were seen during surveys in the summer breeding areas of Sudan, conditions are favourable and there is a possibility that low numbers are present and breeding in a few places. Adults are likely to start moving east towards the winter breeding areas along the Red Sea coastal plains but the scale of this movement is estimated to be very low. Limited control operations were carried out in south-western Egypt. No locusts were reported from eastern Ethiopia. Low numbers of adults may be present in north-western Somalia. Good rains fell along the southern Red Sea coastal plains of Saudi Arabia and Yemen where low numbers of locusts may be present or could appear in the coming weeks and start to breed on a small scale.

Eastern Region. Only low numbers of solitary adults were reported in the summer breeding areas of India and Pakistan along their common border. Numbers declined by the end of September as a result of drying conditions. Very few locusts are expected to move towards the spring breeding areas of western Pakistan this year. No locusts were reported in Iran.

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.

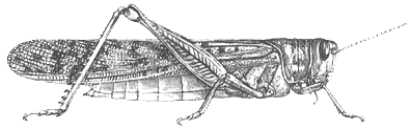
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Weather & Ecological Conditions in September 1999

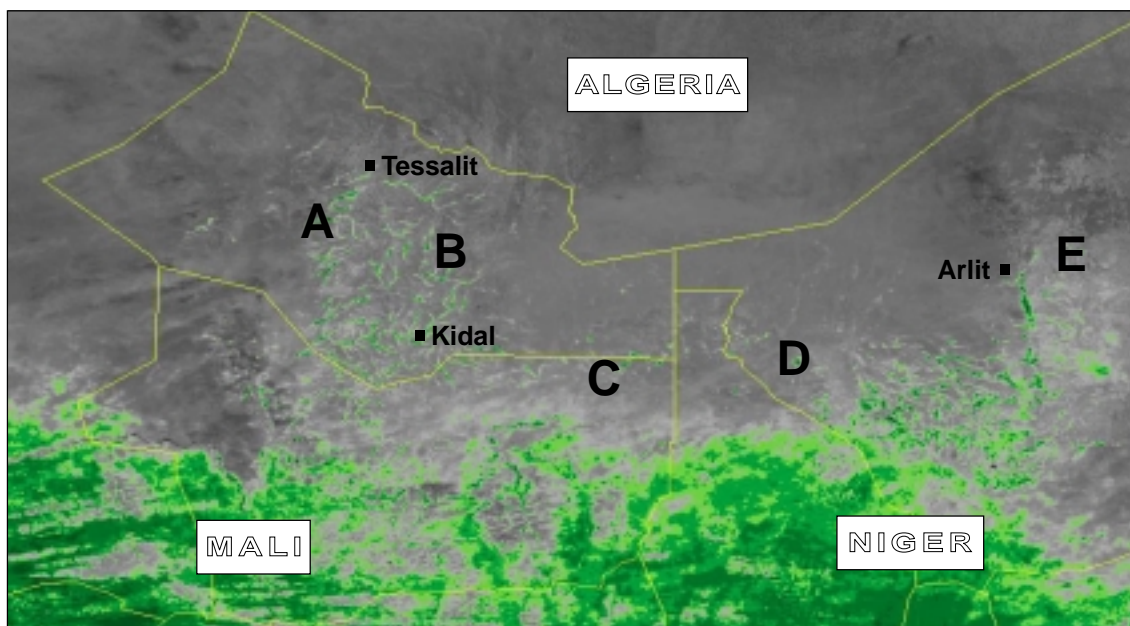
Breeding conditions remain favourable in many parts of the Sahel in West Africa and Sudan as a result of good rainfall during the month. Conditions are improving on the eastern coastal plains of the southern Red Sea where moderate rains have fallen. Conditions are drying out in the desert on both sides of the Indo-Pakistan border.

In **West Africa**, the ITCZ fluctuated between 15-20N and reached 25N over central Algeria a few times during the month. Good rains fell over most of southern and central Mauritania throughout the month, becoming heavier in the second half. Vegetation was estimated to be green but spotty and conditions favourable for breeding in south-western Trarza (south of Nouakchott and Boutilimit), in Brakna (north and west of Moudjeria), in south-western Tagant (south of Tamassoumit and Tidjikja), in northern Assaba (north of Boumdeid), in Hodh El Gharbi (north of Tamchekket), and in Hodh Ech Chargui (north of Oualata). Moderate rains fell in parts of the north near F'Derik, Akjoujt and Benichab but vegetation remained

dry. In Mali, good rains fell in the Adrar des Iforas and near Tombouctou. Vegetation was green and conditions were exceptionally favourable for breeding in the main wadis of the Adrar des Iforas from Gao to Tessalit including the Tilemsi Valley, in southern Tamesna, and in Gourma to just north of Tombouctou. Vegetation was spotty but breeding conditions still favourable in central Tamesna near the Niger border and in the Timetrine near Tin-Kar. In Niger, conditions were favourable for breeding in central Tamesna and in the main wadis along the western side of the Air as far north as Arlit. In Chad, favourable conditions were present in northern Biltine and Batha, and in eastern BET (north to Fada and in eastern Ennedi).

In **North-West Africa**, good rains fell in parts of the Algerian Sahara near Bechar in the north and Tamanrasset in the south. Breeding conditions were improving in these areas. In Morocco, mainly hot and dry conditions prevailed except for some localized showers along the coast. Annual vegetation was reported to be dry in the south and conditions unfavourable for breeding.

In **Eastern Africa**, the ITCZ was consistently located near 17N throughout the month with occasional movements further north and south. Although the presence of cold clouds over the region decreased in comparison to the previous month, good rains continued to fall throughout the summer breeding areas in Sudan for a second month in a row. Rainfall was above average near El Obeid and Kassala. Vegetation was estimated to be green and conditions favourable



Satellite imagery suggests that vegetation is green in north-eastern Mali: (A) the Tilemsi Valley, (B) the main wadis of the Adrar des Iforas, and (C) the southern half of the Tamesna. Vegetation is less green in adjacent areas of Niger: (D) parts of Tamesna and (E) western Air. [source: SPOT VEG, 21-30 Sept]

for breeding in Northern Darfur (to 16N), in Northern Kordofan (to Wadi Milk and Abu Uruq), in Khartoum Province (Wadi Mugaddam), in parts of the Northern Region (the Hassaniya area in the Bayed Desert, Wadi Hamad near Shendi), and in the Eastern Region (Derudeb area, the wadis near Musmar, in the Gash north of Kassala). Elsewhere, conditions were dry except for some localized green vegetation in the western lowlands of Eritrea and on the plateau and adjacent escarpment of Northern Somalia from Hargeisa to Borama where good rains fell.

In the **Near East**, moderate rains fell on several different days during the month on the southern Red Sea coastal plains from Jizan, Saudi Arabia to Zabid, Yemen. Vegetation is green in the Jizan area and in most of the major wadis along the Yemeni plains. Dry conditions prevailed on the coastal plains of the Gulf of Aden and in the adjacent interior due to a lack of rainfall for the past three months. Rain was reported in parts of the interior of northern Oman.

In **South-West Asia**, conditions were dry in the summer breeding areas of Pakistan where no rain was reported and only small patches of green vegetation was present in the southern Khairpur Desert near the Indian border. Very little rainfall was reported in the adjacent desert areas of Rajasthan, India except for some light showers at Bikaner. Although vegetation was green in parts of Jaisalmer, Bikaner and Barmer districts, breeding conditions were reported to be unfavourable.



Area Treated

Egypt 4400 ha (24 Aug - 25 Sept)



Desert Locust Situation and Forecast

(see also the summary on the first page)

WEST AFRICA

Mauritania

• SITUATION

Low numbers of solitary adults were present and maturing during September in Brakna west of Moudjeria (1751N/1228W), in Tagant near Tidjikja (1829N/1131W), in the Akoukar region near Aioun El Atrous (1702N/0941W), and north of Nema (1632N/0712W). Limited breeding started in early September

as indicated by the presence of a few second and third instar hoppers near Moudjeria by the end of the month. Breeding is in progress near Aioun where adults were seen copulating after mid month.

• FORECAST

As a result of the widespread rainfall last month, small scale breeding will continue in Brakna and Aouker Aioun, and will almost certainly extend to Trarza, northern Assaba and the two Hodhs. As a result, locust numbers will increase with additional hatching expected during October and new adults appearing from mid month onwards. Once vegetation starts to dry out, locusts are likely to concentrate and form small groups. Some may also start to appear further north in Inchiri and Adrar.

Mali

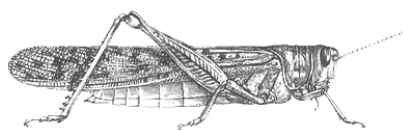
• SITUATION

Late reports suggest that a small outbreak has developed locally in the north during the past few months as a result of unusually favourable conditions and at least one generation of breeding. On 29 July, an immature swarm was seen south-east of Aguelhok (1929N/0052E). During August, nomads saw several immature groups and swarms in the Timetrine and the Adrar des Iforas, and hoppers on the 30th in the Timetrine.

During September, mature adults and swarms were first reported on the 3rd in W. Marat (1930N/0048E) and continued to be seen throughout the month in the Timetrine and in the Adrar des Iforas near Aguelhok and Tessalit (2011N/0105E). At the end of the month, groups of solitary and transiens adults at densities of up to 200 locusts per ha were seen near Aguelhok and in the Tilemsi Valley; some of these were copulating. Although conditions were extremely favourable during the month for another generation of breeding as a result of unusually heavy rains in the last half of August, no hoppers or bands have been reported so far.

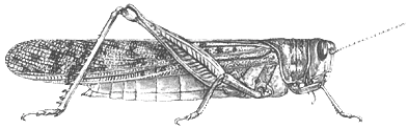
• FORECAST

Locust numbers are expected to continue to increase as a result of another generation of breeding in the Timetrine, Adrar des Iforas and the Tilemsi Valley which could extend to parts of Tamesna. This may lead to the formation of several small bands and swarms. Once vegetation starts to dry out, some concentration and grouping may occur.



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Niger

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults are likely to be present and breeding on a small scale in central Tamesna and on the western side of the Air. As vegetation starts to dry out, locust numbers will decline.

Chad

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults may be present and breeding in the north-east near Fada and in the Ennedi. If so, these should decline as conditions start to dry out.

Senegal

- **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.

NORTH-WEST AFRICA

Algeria

- **SITUATION**

No locusts were reported during September.

- **FORECAST**

Low numbers of adults may appear in areas of recent rainfall near Tamanrasset. No significant developments are likely.

Morocco

- **SITUATION**

No locusts were reported during September.

- **FORECAST**

No significant developments are likely.

Libyan Arab Jamahiriya

- **SITUATION**

No locusts were reported during September.

- **FORECAST**

No significant developments are likely.

Tunisia

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

EASTERN AFRICA

Sudan

- **SITUATION**

No locusts were seen in the north where surveys were carried out on 6-13 September near Shendi along Wadi Hamad and in the Hassaniya area (ca. 1730N/3300E) of the Baiyuda Desert west of Atbara.

- **FORECAST**

Low numbers of adults may be present and breeding in parts of the summer breeding areas of Northern Darfur, Northern Kordofan and Northern Provinces. As conditions start to dry up, numbers will decline. Low numbers of adults may appear in the Eastern Region west of the Red Sea Hills and breed in areas of recent rainfall. By the end of the forecast period, a few adults may start to appear in the winter breeding areas along the Red Sea coast.

Eritrea

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Somalia

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults may be present and breeding on the plateau between Hargeisa and Boroma in areas of recent rainfall.

Ethiopia

- **SITUATION**

No locusts were seen northwest of Dire Dawa in mid September.

- **FORECAST**

A few adults may appear in the Railway area where rains have fallen recently.

Djibouti

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Kenya, Tanzania and Uganda

- **FORECAST**

No significant developments are likely.

NEAR EAST

Saudi Arabia

- **SITUATION**

No locusts were reported during September.

- **FORECAST**

Isolated adults may be present near Jizan where numbers could gradually increase as a result of breeding in areas of recent rainfall.

Yemen

- **SITUATION**

No locusts were seen during surveys carried out on southern coastal plains west of Aden as well as to the east as far as Iqah (1340N/4721E) from 29 August to 3 September.

- **FORECAST**

Locust numbers may gradually increase on the Red Sea coastal plains from Zabid to the Saudi Arabian border and small scale breeding may occur in areas of recent rainfall.

Egypt

- **SITUATION**

The unconfirmed report of solitary hoppers of all instars mixed with grasshoppers in the Western Desert at Sh. Oweinat (2240N/2845E) mentioned in Bulletin 251 was confirmed. Ground control operations were in progress since 24 August and had treated 4400 ha by 25 September.

- **FORECAST**

A few isolated adults may be present or could persist in some of the oases near Lake Nasser. No significant developments are likely.

Kuwait

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Oman

- **SITUATION**

No locusts were reported during September.

- **FORECAST**

No significant developments are likely.

United Arab Emirates

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Bahrain, Iraq, Israel, Jordan, Qatar, Syria Arab Republic and Turkey

- **FORECAST**

No significant developments are likely.

SOUTH-WEST ASIA

Iran

- **SITUATION**

No locusts were seen during surveys carried out in Kerman Province near Shahr-e Babak (3008N/5504E) and Bam (2907N/5820E) on 7-26 July and on the southern coastal plains near Jask (2504N/5746E) and Bandar-e Lengeh (2634N/5452E) from 28 August to 8 September.

- **FORECAST**

No significant developments are likely.

Pakistan

- **SITUATION**

During the second fortnight of August, isolated adults at densities up to 12 locusts per ha were reported to be maturing at 29 places in the Tharparkar, Khairpur and Cholistan deserts near the border with India. Similar numbers were present in Uthal district west of Karachi.

During the first fortnight of September, the number of locations reporting locusts decreased to 19 in the desert areas near the Indian border and 4 in Uthal district. Densities decreased as well to a maximum of 8 per ha.

- **FORECAST**

Locust numbers will decline further in summer breeding areas and no significant developments are likely.

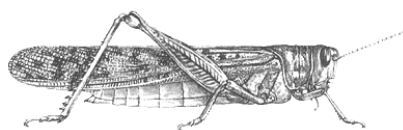
India

- **SITUATION**

Isolated adults, at densities up of 3-6 locusts per ha, were present at two locations in Rajasthan near Jaisalmer (2652N/7055E) on 8 September. During the second half of the month, similar numbers were reported from four locations in Jaisalmer and Bikaner districts. Small scale breeding may have occurred but on a scale that was difficult to detect.

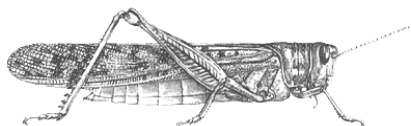
- **FORECAST**

Locust numbers will decrease as a result of drying conditions and no further breeding is expected. Any movement of solitary adults west towards spring breeding areas in Pakistan is likely to be limited and on a very small scale.



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The following special terms are used in the Desert Locust Bulletin when reporting locusts:

Afghanistan• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

**Announcements**

Locust reporting. Affected countries are kindly reminded to make sure that locust situation reports are sent to FAO HQ by the 25th 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.

EMPRES (Central Region) Liaison Officers Meeting. The 7th meeting will be held in Sana'a, Yemen on 6-10 October. A participatory workshop format will be followed to examine EMPRES progress and formulate a workplan for 2000.

FAO Pesticide Referee Group. The 7th meeting of the Pesticide Referee Group will be held in Rome on 11-14 October.

FAO Commission for Controlling the Desert Locust in the Central Region. The 23rd session of the Executive Committee will be held on 18-20 October in Amman, Jordan.

EMPRES (Central Region) Consultative Committee. The second meeting has now been fixed for 24-26 November in Rome.

FAO Commission for Controlling the Desert Locust in the Eastern Region. The 22nd session has been postponed to 16-20 January 2000 in Tehran, I.R. Iran.

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

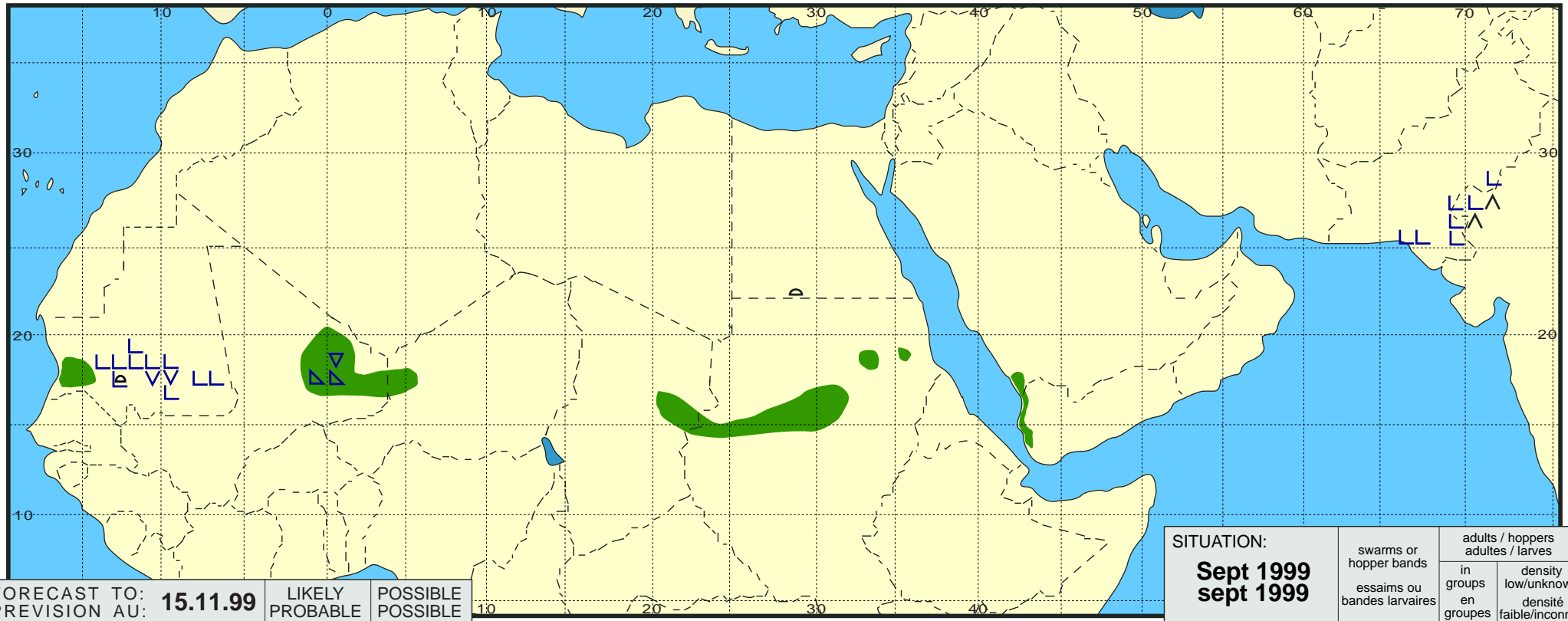
- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.



Desert Locust Summary

Criquet pèlerin situation résumée

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FORECAST TO: PREVISION AU:	15.11.99	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: Sept 1999 sept 1999	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			
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)			

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

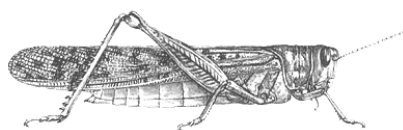
- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

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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