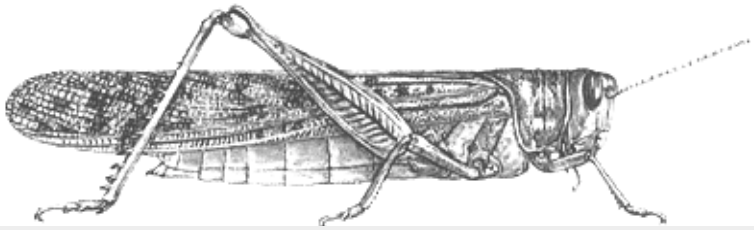

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations

No. 278
(7 Dec 2001)

General Situation during November 2001
Forecast until mid-January 2002

The Desert Locust situation continued to remain calm during November. Ecological conditions are improving in the winter breeding areas of Mauritania and Sudan where low numbers of locusts are present. A late report stated control was carried out against gregarizing locusts in northern Mali during October. There is a possibility that a few small groups or swarmlets could form in the treated areas and perhaps move to southern Algeria and northern Mauritania during the forecast period.

Western Region. Although small-scale breeding continued in western **Mauritania** during November, locust numbers remained low and insignificant. Breeding conditions are likely to improve in the north where unusually widespread rainfall occurred. In northern **Mali**, a late report indicated that nearly 19,000 ha of gregarizing hoppers and adults were treated during October. In November, there were unconfirmed reports of important residual populations that could form small groups or swarmlets. Some of these may move to northern Mauritania and southern Algeria while others remain in northern Mali. The extent of the infestations in northern Mali is not entirely clear but satellite imagery suggests that favourable habitats are limited to just a few areas. Scattered hoppers and adults were present in northern **Niger** where drying vegetation is expected to concentrate locusts into a few small groups.

Central Region. Very little rain fell during November in the winter breeding areas along either side of the Red Sea where conditions remain quite dry except for **Sudan** where good rains fell along the southern coastal plains and isolated adults appeared in a few places. A single locust was reported from **Eritrea**. Although no locusts were reported elsewhere in the Region, isolated adults may be present or could appear during the forecast period along the coasts of Eritrea, Saudi Arabia, Yemen and northern Somalia.

Eastern Region. Mainly dry conditions prevailed in the region and no locusts were reported during November. 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

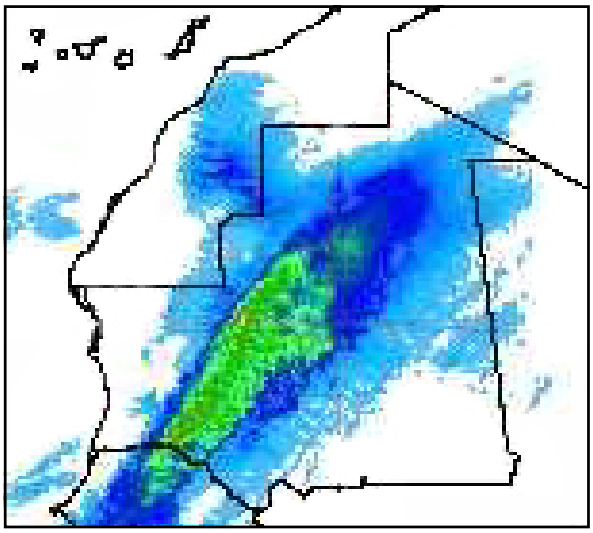
No. 278

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in November 2001

Conditions are improving in parts of the winter breeding areas of northern Mauritania and along the Red Sea coastal plains of Sudan because of good rainfall during November. Elsewhere, dry conditions prevailed.

In **West Africa**, no significant rain fell during November in the Sahel except for unusually widespread rain in northern Mauritania on the 26-28th. Light to moderate rainfall probably occurred over a large area extending from southwestern Mauritania to the northeast near Oued El Ma, roughly 300 km wide by 700 km in length. Moudjeria reported 4 mm, Ouadane and Chinguitti 7 mm each, Akjoujt and Benichab 12 mm each, Tmeimichatt 22 mm and Atar 30 mm. Additional rain may have fallen in remote areas east of Zouerate towards the southern edge of El Hank in the northwest of the country. In some places in Inchiri and Adrar, breeding conditions are already favourable while in others, including Tiris Zemmour, conditions are expected to improve because of these rains. In northern Mali, breeding conditions remain favourable in parts of Timetrine, the Tilemsi Valley and the Adrar des Iforas. In Niger, conditions are drying out in Tamesna where only small patches of green vegetation remain in a few places.



Extent of rainfall over Mauritania on 27 November 2001.

In **North-West Africa**, generally dry and unfavourable conditions persisted throughout the Region during November. Light showers fell on and near the Atlantic coast in Morocco between Agadir and Dakhla. Moderate rainfall was reported at Taidalt (20 mm) and Boujdour (40 mm) on the 19-20th. Breeding conditions are unfavourable except in one location in the extreme southwest at Aarech Amer (2137N/ 1534W). Dry conditions were reported throughout most of the Sahara in Algeria except for some small green patches southwest of the Hoggar Mountains and in the extreme south near the Malian border.

In **Eastern Africa**, light to heavy rains fell at times during November along the Red Sea coastal plains of Sudan between Port Sudan and Tokar. Consequently, conditions are favourable for breeding or are improving in most areas. No rain was reported along the Eritrean coastal plains where breeding conditions remain generally unfavourable. The rains in northern Somalia are late and inconsistent. Light showers were reported on the escarpment and green vegetation was present on the coast near Berbera and in adjacent interior areas between Sheikh and El Anod.

In the **Near East**, dry conditions prevailed throughout most of the Region and very little rainfall was reported during November. Although light showers fell at a few places along the foothills of the southern Red Sea coast of Saudi Arabia east of Qunfidah and in the northern interior, conditions are not favourable for breeding on the coastal plains. In Yemen, no rainfall was reported along the coastal plains of the Red Sea and Gulf of Aden. Vegetation is green in some of the main wadis on the Red Sea coast between Hodeidah and Suq Abs. In Oman, light showers fell in the north along the Batinah coast and in the interior at Fahud.

In **South-West Asia**, no rainfall was reported and dry conditions prevailed in the summer breeding areas along the Indo-Pakistan border except for patches of green vegetation northwest of Jaisalmer, India and northeast of Chhor, Pakistan. In western Pakistan, moderate showers fell on 20 November at Panjgur where 37 mm was reported.

Area Treated

Mali	18,780 ha (October)

Desert Locust Situation and Forecast

(see also the summary on the first page)

WEST AFRICA

Mauritania

• **SITUATION**

During the first two dekads of November, small-scale breeding continued near Moudjeria (1751N/1228W) and a new area of breeding was detected south of Akjoujt (1945N/1421W) where individual solitarious hoppers of all instars were present. Isolated immature and mature solitarious adults were also seen in these places as well as west of Tidjikja (1829N1131W). During the last dekad of the month, only low numbers of adults were reported near Moudjeria and Akjoujt.

• **FORECAST**

Low numbers of solitarious adults are likely to persist in currently infested areas where another generation of breeding could occur because of recent rainfall. Breeding could extend into other areas of Inchiri, Adrar and Tiris Zemmour between Akjoujt and Oued El Ma where good rains are thought to have fallen at the end of last month. There is a slight possibility that several small adult groups could move into Tiris Zemmour from northern Mali.

Mali

• **SITUATION**

A late report indicated that immature and mature solitarious adults and hoppers of all instars were present during October in the Adrar des Iforas north of Kidal (1827N/0125E), in the Tilemsi Valley west of Aguelhoc (1927N/0052E) and in the Timetrine region. Locust densities were highest in Timetrine where up to 10,000 adults per ha and up to four hoppers per sq. m. were reported. Some *transiens* adults and hoppers were seen in the Tilemsi Valley and Timetrine. Control teams are reported to have treated 18,780 ha of gregarizing hoppers and adults.

During November, there were unconfirmed reports from nomads of important adult and hopper populations, including hopper bands, present in the north in the Timetrine region near Tin Kar (1926N/0022W) and in the Tilemsi Valley west of Aguelhoc. Further details are awaited.

• **FORECAST**

Small-scale breeding may continue in limited areas of Timetrine, the Tilemsi Valley and the Adrar des Iforas where conditions remain favourable. Adults and hoppers are likely to concentrate in these places and form several small groups and perhaps a few small swarmlets as vegetation dries out elsewhere. Although most of these locusts are likely to remain in areas that stay green, some adults may move towards the north and northwest if periods of warm southerly and southeasterly winds occur.

Niger

• **SITUATION**

During November, solitarious hoppers, fledglings and immature adults were reported from 15 locations in Tamesna between Agadez (1700N/0756E) and In Abangharit (1754N/0559E) as a result of breeding that occurred in October. In most places, scattered hoppers of all instars and adults, at densities of less than one per ha, were present. There were a few locations where up to 500 adults per ha were seen. On 19 November, *transiens* hoppers were concentrating at one location (1805N/0519E) with densities of 1-3 hoppers per sq. m. in response to the drying vegetation.

• **FORECAST**

As vegetation dries out in Tamesna, low numbers of hoppers and adults will concentrate in those areas that remain green and perhaps form a few small groups. These will probably remain in the green areas although some could move slowly northwards if periods of warm southerly winds occur. Further breeding is unlikely unless additional rains fall.

Chad

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

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 November.

• **Forecast**

There is a good possibility that low to moderate numbers of locusts are present along the Malian border near Bordj Mokhtar and Timiaouine where breeding is thought to have occurred last month. Consequently, small adult groups and perhaps a few small swarmlets could form in these areas. These may be supplemented by additional adult groups or swarmlets arriving from northern Mali.

Morocco

• **Situation**

No locusts were seen during surveys conducted in November along the southern side of the Atlas Mountains between Guelmine (2859N/1003W) and Erfoud (3128N/0410W) as well as in the Adrar Souttouf region of the extreme southwest near Tichla (2135N/1458W).

• **Forecast**

No significant developments are likely.

Libyan Arab Jamahiriya

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Tunisia

• **Situation**

No locusts were reported during November.

• **Forecast**

No significant developments are likely.

EASTERN AFRICA

Sudan

• **Situation**

Isolated mature adults were reported on the Red Sea coast at two locations in the Tokar Delta on 3 November and in Khor Gowb (1858N/3723E) on the 17th. No locusts were seen elsewhere on the coastal plains between Tokar and Port Sudan up to the 25th. In the River Nile State, there was an unconfirmed report of first instar hoppers near Abu Sunoon (1716N/3405).

• **Forecast**

Locust numbers will gradually increase on the Red Sea coastal plains between Port Sudan and Karora where small-scale breeding is expected to occur. Hoppers are likely to appear by the end of December but initial numbers will be low and probably difficult to detect. There remains a slight possibility of late breeding in areas of previous rainfall in the River Nile State.

Eritrea

• **Situation**

A single solitarious adult was seen in Asmara (1520N/3858E) on 15 November.

• **Forecast**

Scattered adults may be present on the coastal plains of the Red Sea between Karora and Massawa where small-scale breeding is likely if rainfall occurs.

Somalia

• **Situation**

No locusts were seen during surveys carried out on the northwestern escarpment and coast between Djibouti and Berbera on 25-29 November.

• **Forecast**

Isolated adults may be present in a few areas along the coastal plains between Djibouti and Las Koreh. Small-scale breeding is likely if rainfall occurs. No significant developments are likely.

Ethiopia

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

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 November.

• **Forecast**

Scattered adults may be present and breeding on the Red Sea coastal plains near Jizan. No significant developments are likely.

Yemen

• **Situation**

No reports received.

• **Forecast**

Low numbers of adults are likely to be present and breeding in a few places along the Red Sea coastal plains and perhaps to a lesser extent along the Gulf of Aden coastal plains. Consequently, locust numbers will gradually increase but remain at non-threatening levels. Regular surveys are highly recommended in these areas.

Egypt

• **Situation**

No locusts were reported from the Red Sea coastal plains or in the Western Desert during November.

• **Forecast**

Low numbers of Desert Locust, mixed with other locust and grasshopper species, are likely to decline in agricultural areas at Sh. Oweinat and Tushka. A few adults may appear on the southeastern coastal plains of the Red Sea if rainfall occurs. No significant developments are likely.

Kuwait

• **Situation**

No reports received.

• **Forecast**

No significant developments are likely.

Oman

• **Situation**

No locusts were reported in the north along the coast or in the adjacent interior of Al-Dhahira region during November.

• **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 in Bushehr and Sistan Baluchistan on 6-7 October.

• **Forecast**

No significant developments are likely.

Pakistan

• **Situation**

No locusts were reported during the first half of November.

• **Forecast**

No significant developments are likely.

India

• **Situation**

During the second half of October, isolated adults were present at Gunjangarh (2631N/7020E) in Jaisalmer District on the 16th.

No locusts were reported during November.

• **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 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.

Reporting by email. Affected countries are encouraged to send completed *FAO Desert Locust Survey and Control Forms* with a brief interpretation of the results by email to eclo@fao.org.

Desert Locust Guidelines. The revised edition in English was issued on 24 September and is now available from FAO. Please contact the Locust Group for more information.

eLocust. Details of a new system under evaluation for recording and transmitting locust survey and control data collected in the field can be found on the Internet at:

http://www.fao.org/news/2001/010601-e.htm

Publications on the internet. A list of publications that can be downloaded from the FAO Locust webpages is now available (http://www.fao.org/news/global/locusts/pubslist.htm). New additions are:

- Report of the 36th session of the DLCC recently held in Rome (English and French; Arabic upon request)
- FAO Desert Locust Guidelines, revised edition, 2001 (English)
- FAO Spray Monitoring Form (English)

Upcoming meetings. The following meetings are scheduled:

- 4th EMPRES Consultative Committee Meeting, 15-17 January 2002 (Cairo)
- Contingency Planning Workshop (EMPRES), 13-21 February 2002 (Egypt)
- 23rd session of the FAO Commission for Desert Locust Control in the Central Region (CRC), 9-14 March 2002 (Damascus). Djibouti, Eritrea and Ethiopia will participate as observers.

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.

Desert Locust Summary
Criquet pèlerin - Situation résumée

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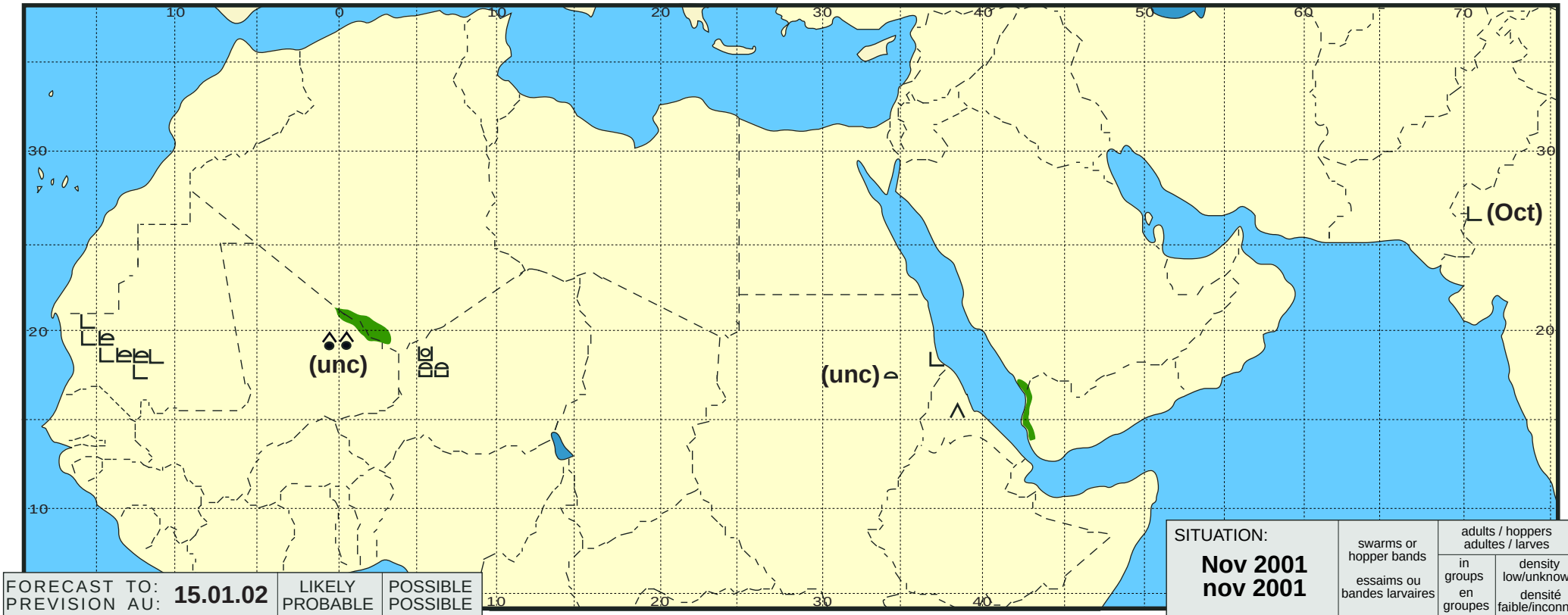

FORECAST TO: PREVISION AU: **15.01.02**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **Nov 2001** **nov 2001**	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)	◘	◙	⌾