



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 207



GENERAL SITUATION DURING NOVEMBER 1995 FORECAST UNTIL MID-JANUARY 1995

Low numbers of Desert Locust swarms were reported during November along the Red Sea coastal plains of Saudi Arabia and to a lesser extent in Sudan, Yemen and Eritrea. Many of these swarms laid eggs and hatching was reported in Saudi Arabia and Sudan. During the forecast period, hatching will continue and hopper bands could form on a limited scale with new adults starting to appear by mid-January. Small swarms formed in western Mauritania and gradually moved towards the north of the country where hopper bands were already present and maturing. By the end of the month, new adults started to appear in the north. However, declining temperatures during the forecast period are expected to slow down maturation and limit migration in northern Mauritania. Control operations covered more than 46,000 ha in Saudi Arabia and more than 9,000 ha both in Sudan and Mauritania during the month.

Elsewhere in the Red Sea Trench, isolated and scattered adults were present on the coastal plains of south-eastern Egypt, Djibouti and north-western Somalia. Some of these areas received rainfall and conditions are expected to be favourable for breeding during the forecast period.

In North-West Africa, no significant locust infestations or rainfall was reported. However, adults and perhaps some groups and a few swarms could reach the southern side of the Atlas Mountains of Morocco and Algeria during periods of warm southerly winds associated with eastward-moving depressions from the Atlantic.

In West Africa, small scale control operations were carried out against a few adult groups in north-western Senegal in late October. A few isolated adults were reported in northern Mali and Niger where conditions are mostly dry and not favourable for breeding.

In South-West Asia, isolated adults appeared in eastern Iran probably from the Indo-Pakistan summer breeding areas and a few adults persisted in Rajasthan of India. However, no significant developments are expected during the forecast period.

The FAO Desert Locust 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 Locust, Other Migratory Pests and Emergency Operations Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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WEATHER & ECOLOGICAL CONDITIONS DURING NOVEMBER 1995

Based on field reports, METEOSAT and NOAA satellite imagery, and Météo-France synoptic and rain data. Rainfall terms: light = less than 20 mm of rain; moderate = 20 - 50 mm; heavy = more than 50 mm.

During November, dry weather prevailed and little rainfall was reported over most of the winter/spring breeding areas. However, favourable ecological conditions persisted in parts of the currently infested areas in Mauritania and on the Red Sea coasts. At this time of the year, temperatures are expected to continue to decrease in northern Mauritania, which may allow some green vegetation and wet soil to persist, but will slow down locust breeding and developments and limit migration.

Northward adult migration from Mauritania may have occurred during the first half of November on warm southerly winds associated with a high pressure system off the coast of North-West Africa. Very few rains were received during the month in Mauritania. Annual vegetation was drying out south of 18N in Mauritania while patches of green vegetation persisted in the Tijirit area and south of Atar. Some green vegetation may be present locally between Atar and Chinguetti, as well as north-east of Chinguetti, east of Ouadane and perhaps in parts of El Hank. However, some rains associated with substantial cloud masses fell at the end of November in northern Mauritania and, as a result, conditions may remain favourable for breeding. In northern Mali, a few wadis were drying out west of Adrar des Iforas in the Tilemsi Valley. No green vegetation was present in the Tamesna of Niger where soil conditions were dry and rains have not fallen since August. However, there is a slight possibility that a few localized showers fell at the end of the month from clouds extending from northern Mali to northern Chad.

As a result of heavy rains received during the first two dekads of the month, ecological conditions are expected to improve on the Red Sea coast of Sudan between the Eritrean border and the Suakin area, as well as on the southern coastal plains in Egypt. Dry conditions were reported to persist along the Eritrean coast, although clouds were present over the northern part throughout the month. No significant rains are expected to have fallen in northern Somalia where there were only a few patches of green vegetation persisting on the north-western coastal plains. Conditions may improve locally in Djibouti where 20 mm were recorded on the 19th.

Moderate to heavy rains were received on the southern Tihama of Saudi Arabia during the first dekad of November and in Jizan on the 25th. Some cloud activity was visible at times over the Tihama of Yemen which may have produced light rains. As a result of rains that fell during October and November, favourable ecological conditions are expected to persist in several areas.

Dry weather was reported in India and Pakistan during the first half of the month.

Light to moderate rainfall occurred on the south-western coast of Morocco between Essaouira and Tan Tan at the end of the month. Light rains were received in western and central Algeria as well as in south-western Tunisia during the last dekad; however, these are probably not enough to have improved ecological conditions.



AREA TREATED

Eritrea	no details	(October)
Mauritania	9,992 ha	(1-20 November)
Saudi Arabia	46,862 ha	(31 October - 21 November)
Senegal	1,000 ha	(28 October)
Sudan	9,147 ha	(7-23 November)



DESERT LOCUST SITUATION

Please see the last section of this Bulletin for a definition of terms used in reporting the current locust situation.

WEST AFRICA

MAURITANIA

During November, control operations were concentrated on three main areas: about 300 km east of Nouakchott near Tamassoumit (ca. 1825N/1305W and 1835N/1235W) covering 3,000 ha; about 30 km south and 30 km north-east of Nouakchott covering about 6,500 ha; and south-west of Atar in the Amatlich area (ca. 1950N/1335W) covering 500 ha. Numerous small hopper bands continued to develop in all of these areas. Those in the Tamassoumit area were generally the largest in size (up to 5 ha). They also were at a more advanced stage and young adults continued to form swarms from early November onwards; there were about ten reports of small to medium swarms during the first two dekads of the month, ranging in size between 100-600 ha. Some of them were moving north, and by the end of the second dekad only small infestations persisted. Hopper infestations near Nouakchott were smaller and extremely dispersed; the first swarm was reported on the 10th and there were about 40 additional reports of small to medium swarms (30-540 ha) during the remainder of the month, extending up to 60 km north of Nouakchott. Small to medium sized hopper bands were localized at a few places of the foothills in the Amatlich area and the first new adults appeared on the 18th. Localized damage was reported on crops in the latter area.

A few fourth and fifth instar hopper bands were reported in the Tijirit area west of Akjoujt (1945N/1424W) during helicopter surveys during the last two dekads, and hoppers were seen by nomads at 2043N/1541W. By the end of the month, scattered pink adults were reported even further north in Tijirit and near Chinguetti (2033N/1233W). This suggests that adults moved northwards from summer breeding areas during September-October. In the extreme north, there were unconfirmed reports by nomads of hopper bands and swarms near Bir Mogrein (2513N/1133W) and in the El Hank area in early November.

SENEGAL

Ground control operations treated 1,000 ha of low density adult groups in the north-west at Bendiouga (1532N/1632W) on 28 October. Only scattered adults were present in this area on 10 November. No locusts were reported on the 17th-24th.

MALI

Late reports stated that low numbers of adults were present west of the Adrar des Iforas at seven locations near Aguelhoc (1929N/0052E) during the first dekad of October. Laying was observed at three places. Higher densities of adults, up to 20,000 per ha, were reported in the Central Delta within 200 ha near the Mare Takadji (1601N/0409W) during the same period.

NIGER

Isolated immature adults were reported from a few areas north of Niamey between Sumett (1456N/0242E) and Ayorou (1441N/0056E) on 18-24 October.

On 2-8 November, a few isolated adults, most of them immature, were present at 12 out of 31 places surveyed in Tamesna near In Abangharit (1754N/0602E) and west of the Air mountains near Arlit (1853N/0723E).

CHAD

No locusts were reported up to 31 October.

No locust activity was reported from other countries in the Region up to 30 November.

NORTH-WEST AFRICA

MOROCCO

A late report stated that small groups of mature adults were seen in the extreme south-west near Tichla (2146N/1450W) on 15 and 27 October.

ALGERIA

A few isolated adults were present at three locations west of the Hoggar Mountains on 20-21 October. No other locusts were reported up to 10 November.

No locust activity was reported from other countries in the Region up to 30 November.

EASTERN AFRICA

SUDAN

During November, most infestations were concentrated within a relatively restricted area along the Red Sea coast in the Tokar Delta. Ground and aerial control operations were undertaken over a total of 6,200 ha. During the first half of the month, low numbers of mature adults, some of them mixed with *Locusta*, and a few small swarms continued to appear and lay in the Tokar Delta. As a result of earlier laying, hatching started on 15 November but was limited to a total of 25 ha within crops. There were about half a dozen additional reports of immature swarms in the same area on 17th-23rd. Elsewhere on the coast, small numbers of mature solitary adults, up to 2,700 per ha, some of them copulating, were reported near Adobana (1810N/3817E) and Khor Balatat (1748N/3823E) on the 11th. No locusts were found during surveys undertaken on the northern coast between Suakin (1906N/3722E) and Salala (2119N/3613E) and in the northern part of Wadi Diib on the 24th-25th.

Remaining hopper infestations in the summer breeding areas continued to mature and fledge north-west of Ed Damer (1735N/3358E), south of Ed Damer at Abaka (1718N/3426E) and near Shemsi (1555N/3429E) during the first half of November. A total of 2,947 ha were treated by ground teams in all of these areas where control operations were concluded by mid-month.

ERITREA

During October, there was a report of a swarm on the Red Sea coast on 1,800 ha near Zula (1514N/3940E) on the 15th and two small swarms were seen near Massawa on the 18th and 23rd. Control operations were undertaken against adults near Keren (1545N/3827E) on the 17th-18th.

On 7 November, two swarms were reported on the Red Sea coast south of Massawa at Ghinda (1526N/3907E) and Ramelo (1320N/4140E). However, no locusts were seen during surveys on the coastal plains near Massawa on 18 November.

SOMALIA

A few isolated mature adults were seen at Magab (1022N/4520E) and Hodmo (1040N/4614E) during a survey on the north-western coast on 13-18 November.

DJIBOUTI

Isolated adults were seen near Tadjourah (1148N/4243E) during the last week of October.

No locust activity was reported from other countries in the Region up to 30 November.

NEAR EAST

EGYPT

Scattered mature adults were reported at a few places on the south-eastern Red Sea coast near Jabal Shendieb (2200N/3610E) and in adjacent areas of the interior near Jabal Is (2200N/3535E) on 20 November.

SAUDI ARABIA

Several low density swarms of maturing adults were reported along the southern Tihama in late October and during November. Some of these were seen laying from 2 November onwards. Solitary adults and hoppers, up to 10 per sq. m., were present in the Jizan (1653N/4233E) area. Ground control operations were undertaken over a total of 46,862 ha during the period 31 October-21 November, of which 38,840 ha were treated near Jizan.

YEMEN

There were a few reports of swarms dispersing on the northern Tihama in early November. Laying occurred probably on a limited scale; however, hatching was not reported.

UAE

No locusts were reported in the Fujayrah area during October.

No locust activity was reported from other countries in the Region up to 30 November.

SOUTH-WEST ASIA**IRAN**

Isolated adults were reported near Saravan (2720N/6220E) on 22 October. No locusts were seen at 15 other locations surveyed in the interior of Sistan and Baluchistan Provinces.

PAKISTAN

During the second half of October, isolated adults were reported from six locations of Tharparkar desert, with a maximum of four adults seen at Kurai Wala (2819N/7159E) on the 25th.

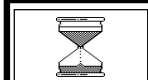
No locusts were reported during November.

INDIA

During the second half of October, isolated adults persisted at six locations of Bikaner district in Rajasthan, with a maximum of 13 adults seen at Sewra (2732N/7218E) on the 19th.

During the first half of November, similar infestations were reported in Rajasthan at a total of five locations in Bikaner, Barmer, Nagaur and Jodhpur districts, with a maximum of four adults seen at Bap (2720N/7220E) of Bikaner on the 7th.

No locust activity was reported from other countries in the Region up to 30 November.

**FORECAST UNTIL MID-JANUARY 1996**

Forecasting terms used in this section to indicate the chances of a particular event happening are indicated below; every term is arranged within each category from most to least probable:

high probability	will, probably, almost certain, likely, expected
medium probability	may, might
low probability	possibly, perhaps, unlikely

WEST AFRICA**MAURITANIA**

Small to moderate scale swarm formation will continue during the forecast period in the Inchiri and southern Adrar regions. Swarm maturation is expected to slow down as temperatures decline. Some swarms may move further north during periods of warm southerly winds associated with eastward-moving depressions from the Atlantic. Infestations further south and near Nouakchott should continue to decline.

MALI

Low numbers of solitary adults are expected to persist in some wadis of the Adrar des Iforas. Some laying may have occurred and isolated hoppers could be present; if so, these would slowly mature.

NIGER

Low numbers of solitary adults are expected to persist in parts of Tamesna.

SENEGAL

A few adults may persist in the interior and slowly move southwards.

BURKINA FASO, CAMEROON, CAPE VERDE, CHAD, GAMBIA, GUINEA BISSAU and GUINEA CONAKRY

No significant developments are likely.

NORTH-WEST AFRICA

ALGERIA

Scattered adults are expected to persist in parts of the southern Sahara. Other adults and perhaps a few groups may spread into the central Sahara during periods of warm southerly winds associated with eastward-moving depressions from the Atlantic and lay if rainfall occurs.

MOROCCO

Adult groups are expected to persist and breed in the extreme south-west with hatching commencing late in the forecast period. Additional groups of adults may appear and move northwards during periods of warm southerly winds associated with eastward-moving depressions from the Atlantic. Some locusts may have already reached as far north as Smara and laid.

LIBYA and TUNISIA

No significant developments are likely.

EASTERN AFRICA

SUDAN

Additional adults and perhaps a few groups or small swarms may arrive on the southern coastal plains and in Wadi Oko/Diib and lay early in the forecast period. Hatching is expected to continue in Tokar Delta and small bands may form; new adults could appear by mid January. Breeding on a smaller scale is likely elsewhere along the coastal plains from Port Sudan to Karora, primarily in those places where recent rains have fallen.

ERITREA

Adults and a few small swarms may still appear on the coastal plains between Karora and Tio and lay; however, infestations and breeding are expected to be on a small scale and limited to areas of recent rainfall or runoff. Hoppers and perhaps a few bands may appear in some of these areas during the forecast period.

SOMALIA

Scattered adults are expected to persist along some places of the northern coast and lay in areas of recent rainfall.

DJIBOUTI

Isolated adults are likely to persist and may breed in a few areas along the coast.

ETHIOPIA, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

EGYPT

Low to moderate numbers of adults are expected to persist on the southern coastal plains and lay in areas of recent rains. These may be augmented by additional adults and perhaps a few groups or small swarms from the south-west. Hatching may start by the end of the forecast period.

SAUDI ARABIA

Breeding will continue on a small to moderate scale during the forecast period along the coastal plains from Jeddah to Jizan with hoppers hatching and, in some areas, forming bands. New swarms are likely to start forming by mid January and may gradually move north along the coast.

YEMEN

Small scale hatching is expected to occur early in the forecast period along the coastal plains from Zabid to the Saudi Arabian border with the possibility of small bands forming. Scattered adults may be present along parts of the Aden coastal plains and breed in areas that receive rainfall.

OMAN

Isolated adults may be present along parts of the Batinah coast and perhaps in Sharqiya.

UAE

Isolated adults may be present along parts of the Fujayrah coast.

BAHRAIN, IRAQ, ISRAEL, JORDAN, KUWAIT, LEBANON, QATAR, SYRIA, and TURKEY

No significant developments are likely.

SOUTH-WEST ASIA

IRAN

Scattered adults are expected to persist in the interior of Baluchistan. A few isolated adults may appear on the south-eastern coastal plains near Chabahar.

PAKISTAN

Scattered adults are likely to appear in coastal and perhaps interior areas of Baluchistan.

INDIA

Isolated adults are likely to persist at a few places of Rajasthan.

AFGHANISTAN

No significant developments are likely.



GLOSSARY OF TERMS

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

Non-gregarious adults and hoppers

isolated	very few present and no mutual reaction occurring; 0 - 1 adult per 400 m foot transect (or less than 25 per ha). Other terms: a few.	
scattered	enough present for mutual reaction to be possible but no ground or basking groups seen; 1 - 20 adults per 400 m foot transect (or 25 - 500 per ha). other terms: some, low numbers.	
group	forming ground or basking groups; more than 20 adults per 400 m foot transect (or more than 500 per ha).	

Adult swarm and hopper band sizes

very small	swarm: less than 1 sq. km	band: 1 - 25 sq. m.
small	swarm: 1 - 10 sq. km	band: 25 - 2,500 sq. m.
medium	swarm: 10 - 100 sq. km	band: 2,500 sq. m - 10 ha
large	swarm: 100 - 500 sq. km	band: 10 - 50 ha
very large	swarm: more than 500 sq. km	band: more than 50 ha

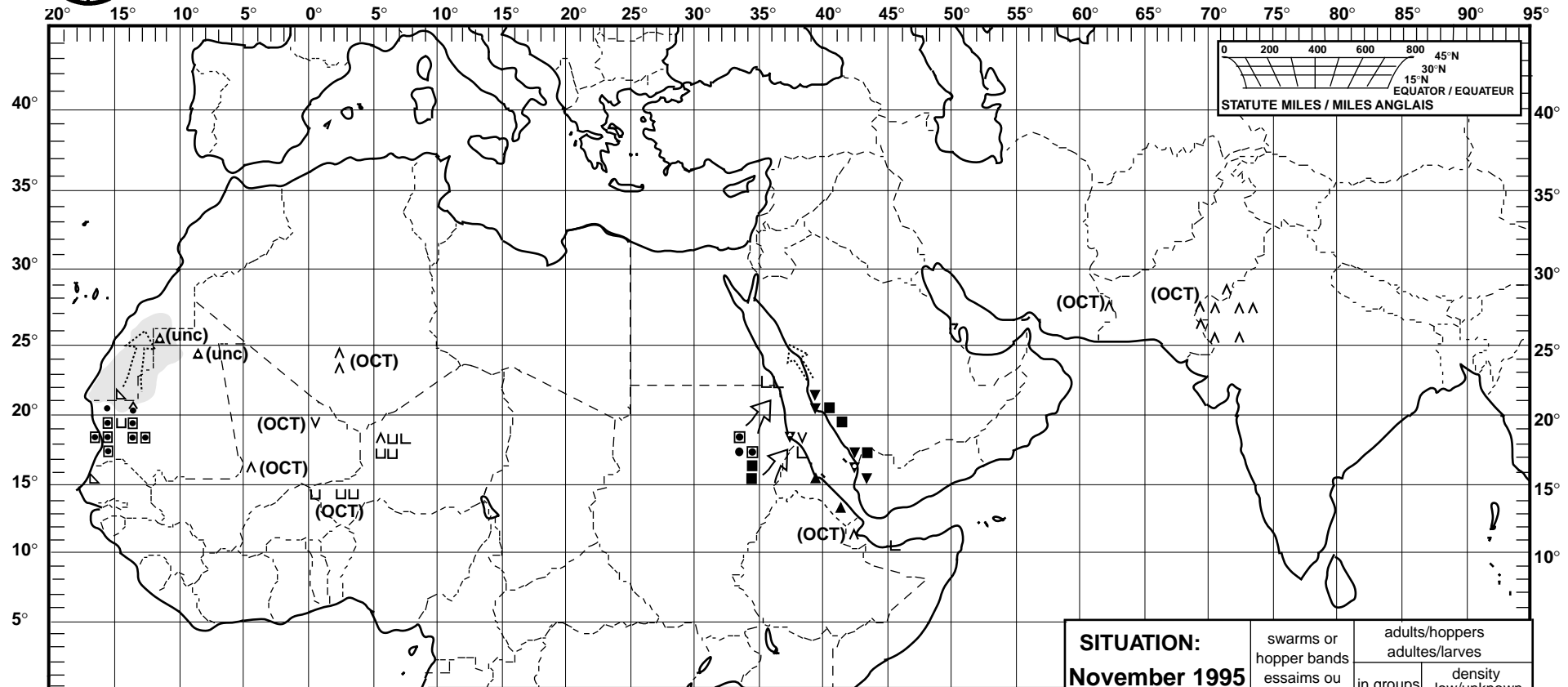
Other reporting terms

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.
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.
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.



Desert Locust: summary No. 207

Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.1.96	LIKELY PROBABLE	POSSIBLE POSSIBLE
current undetected breeding reproduction en cours et non détectée		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: November 1995 novembre 1995	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)	◼	◉	◑

