

# FAO



## EMERGENCY CENTRE FOR LOCUST OPERATIONS

### DESERT LOCUST BULLETIN No. 186



#### GENERAL SITUATION DURING FEBRUARY 1994 FORECAST UNTIL MID-APRIL 1994

During February the current Desert Locust upsurge declined in Mauritania and Senegal due to control operations and small scale migrations to neighbouring countries. Low numbers of small-sized swarms moved southward from Senegal reaching Gambia on 9 February and Guinea Bissau on the 16th. Control operations were not carried out in either country. As a result of increasing temperatures, low numbers of small-sized swarms started moving north from southern Morocco and north-western Mauritania in mid February reaching Oued Draa on 22 February and western Algeria on the 23rd.

In West Africa, aerial and ground control operations have nearly come to an end in Mauritania and Senegal due to the improving situation, although small adult infestations are likely to persist in parts of northern Mauritania during the forecast period. There is a low to moderate risk that Gambia and Guinea Bissau will receive a few more small swarms early in the forecast period while those swarms already in Guinea Bissau will move further south into northern Guinea Conakry. The swarms that arrived in Gambia and Guinea Bissau are part of a migration pattern commonly referred to as the Southern Circuit in which swarms move southwards along the coast of West Africa until they reach the ITCZ where they then move in an easterly and north-easterly direction towards Mali around late April. In the past, these swarms which are considered to be at the end of their lifespan are not known to reproduce nor cause significant crop damage. Therefore, they seem to be more of a nuisance than a real threat to the extension of the upsurge.

In North-West Africa, low numbers of small-sized swarms are expected to continue to arrive and move north-east during the forecast period along Oued Draa and the southern side of the Atlas Mountains in Morocco and Algeria. Due to the small scale of the current migration, only Morocco and Algeria are likely to be affected during the forecast period. Both countries have mobilized control teams. Any adults that escape control are expected to lay in those areas that receive rainfall.

No significant breeding has been reported along both sides of the Red Sea coast so far this season and unless unusual rainfall occurs no significant developments are expected.

Low numbers of solitary adults are probably present along the coastal plains of Baluchistan in south-eastern Iran and western Pakistan where they will lay if rainfall occurs during the forecast period.

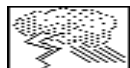
The FAO Desert Locust Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, telex, e-mail, FAO pouch and airmail by the Emergency Centre for Locust Operations, AGP Division, FAO, 00100 Rome, Italy.

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## WEATHER & ECOLOGICAL CONDITIONS IN FEBRUARY 1994

Based on field reports, METEOSAT and ARTEMIS 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 February several atmospheric disturbances originating over the Atlantic moved eastwards through the Mediterranean basin. Ahead of these low pressure systems, warm southerly winds occurred becoming south-westerly while behind winds were cooler and from the north and north-west. As most of these depressions were moving rapidly, the change in wind direction did not last for more than a day or two. Nevertheless, some of these winds as well as the rise in temperature in the Sahara from 10 February onwards influenced the migration of locust swarms. For example, swarms moved further north in Morocco on the 15th on south-westerly winds on the southern side of a depression located over the Straits of Gibraltar. A day later, swarms invaded Guinea Bissau on strong northerly and north-easterly winds behind the same depression which had moved further east.

A high pressure system developed over north-western Algeria on 21 February and subsequently moved east in the following days. This produced southerly winds behind the system which gradually became south-westerly during the next few days. During this same period, swarms moved further north and north-east into the Oued Draa area along the border of Algeria and Morocco.

In West Africa, a slight and brief shift in prevailing winds over Senegal from the north-east to north probably resulted in a southern movement of swarms into Gambia on the 10th. Along the West African coast from Mauritania southwards, northerly winds associated with the eastward extension of the Azores high prevailed throughout most of the month to about 8°N where they encountered the ITCZ.

Although most of these disturbances did not produce significant rainfall in the Desert Locust areas of West and North-West Africa, some places did receive rainfall and conditions were reported to be green. In Algeria, light to moderate rains fell during the first two decades of February in the western regions of Tindouf and Bechar and on the upper plateau near El Bayadh. As a result of rainfall in January and February, ecological conditions are improving in these areas as well as in central Algeria in the regions of Ahnet, Mouydir and the Tinghert Plateau.

Along the Red Sea coastal plains, localized showers were reported in Massawa and the surrounding areas in Eritrea during the first week of February. By the end of the month, green vegetation was present over a large area on the Agbanazuf plains as well as in some low-lying places along a 135 km stretch of coastline from Mersa Gulbub to Foro south of Massawa which were dry one month ago. South of Foro to Thio was dry. In Sudan, vegetation was reported to be green in places along the coast between Suakin and the southern edge of the Tokar Delta. In Yemen, no rain had fallen along the Tihama from October to early February; hence, conditions were unfavourable for breeding.

Along the coastal plains of the Gulf of Aden, green vegetation was reported in northern Somalia in low-lying areas from Mait west to Karin; elsewhere it was dry. Low clouds were reported to be increasing along the coast and near Hargeisa by the end of the month. Conditions were reported to be dry in early February along the coastal plains of Aden in Yemen except for a few small areas near Ahwar.

In South-West Asia, ecological conditions are reported to be favourable for breeding in some coastal areas of Makran and Lasbela in Baluchistan, Pakistan. Dry and cold weather persisted in Rajasthan and in adjacent desert areas of Pakistan.



## AREA TREATED IN FEBRUARY 1994

Mauritania	79,770 ha (1-20 February)
Senegal	40,394 ha (28 January - 21 February)
Morocco	80 ha
Cape Verde	30 ha (January)



## WEST AFRICA

### MAURITANIA

During the first half of February, immature swarms often fragmented into immobile dense groups of variable size were dispersed from Keur Macène area (1633N/1614W) to south of Nouadhibou. These infestations were present along the beach and on the coastal plains up to 20-30 km towards the interior, and in the south-western part of Tijirit about 50-100 km from Nouamgâr (1920N/1632W) on the coast. The total infested area was estimated to be about 20-40,000 ha. In the Zouérate (2240N/1245W) area, only low numbers of young immature adults forming a few groups and swarmlets persisted on the southern side of the Kediet ej Jil mountain and were mixed with some patches of late instar hoppers and fledglings. As a result of extensive control operations and of increasing migration northwards, the number of sprayable targets started to decline by mid-February. A total of 79,770 ha were sprayed between 1-20 February.

### SENEGAL

Aerial and ground control operations continued during the first half of February against several waves of immature swarms moving southwards in the western part of the country. During the second half of February, infestations and subsequently control operations first started to decline substantially in the north-west and then was followed by a decline further south near the Gambian border. On 14 February, swarms were first reported in the southern region near Sédhiou (1241N/1533W). A total of 40,394 ha were sprayed between 28 January and 21 February. By the end of the month, control operations were reduced in most areas.

### GAMBIA

On 9 February, a low density small immature swarm invaded a small area north of Banjul and several swarms continued to be reported until the 16th in the same area. A few other small swarms were seen east of Banjul up to the 23rd. Localized damage was reported primarily on trees; however, no control operations were possible as the swarms were moving rapidly.

### GUINEA BISSAU

On 17 February, a few low density small immature swarms was reported north of Bissau between Ingore (1225N/1546W) and Mansaba (1217N/1511W), and as far south as Tite (1146N/1524W). Localized damage was reported on trees and on vegetable crops. No control operations were undertaken.

### CAPE VERDE

A late report indicated that small numbers of late instar hoppers and fledglings were found over a maximum area of 30 ha in Boa Island (ca. 1602N/2305W) on 21 January and control operations were immediately undertaken. These infestations were probably the result of a small scale migration that occurred from West Africa in October or November 1993, followed by breeding. No significant infestations were reported in the same area by mid-February.

**No locust information had been received from other countries in the region up to 28 February.**

## NORTH-WEST AFRICA

### MOROCCO

Several groups of adults and small swarms continued to be reported in the south-western regions from 27 January onwards. As a result of increasing temperatures, these infestations started moving north in mid-February, reaching 2425N/1300W in the Guelta Zemmour region on 15 February and south of Oued Draa at Touizgui (2754N/0850W) on the 22nd. However, the overall scale of migration so far appears to be limited. The first control operations in Morocco began on the 22nd near Guelmine (2859N/1004W) where 80 ha of mixed solitary and gregarious infestations were sprayed.

**ALGERIA**

No locusts were found during surveys carried out by 25 teams in the south-western regions up to 22 February. On the 23rd, an immature swarm was first reported north of Tindouf at Merkala (2817N/0832W).

**No locust information had been received from other countries in the region up to 28 February.**

**EASTERN AFRICA****SUDAN**

A late report stated that scattered immature and mature adults were present in the Tokar Delta (1821N/3743E) and near Suakin (1906N/3720E) during the second half of January.

**ERITREA**

During a survey on the coastal plains near Massawa on 6-11 February, scattered mature adults were seen only at a few places north of Massawa where some laying was also observed within millet in Mersa Gulbub (1624N/3851E). However, a survey was conducted in the same areas by the end of the month and only one 4th instar hopper was found.

**SOMALIA**

During the first half of February, low numbers of adults, up to 1100 per ha mixed with scattered 3rd-5th instar hoppers, were reported within a 3 sq. km area on the northern coastal plains east of Mait at Reban (1108N/4733E), and scattered immature adults were reported within 4 sq. km nearby at 1105N/4743E.

**ETHIOPIA**

A late report indicated that no locusts were found during surveys in the Ogaden and the northern Hararghe regions during the second half of January.

No locust activity was reported during the first half of February.

**DJIBOUTI**

A late report stated that no locusts were found during a survey carried out in the south and the east on 24-27 January.

**KENYA, TANZANIA, UGANDA**

No locust activity was reported up to 15 February.

**NEAR EAST****SAUDI ARABIA**

No locust activity was reported during January.

**YEMEN**

No locusts were seen nor reported during a survey carried along the Tihama from the Saudi border at Harad (1625N/4304E) to Al Husayniriyah (1422N/4319E) on 29-31 January. There was an unconfirmed report of scattered adults on the coastal plains east of Aden near Ahwar (1331N/4643E) in late January.

**KUWAIT**

No locust activity was reported during January.

**No locust information had been received from other countries in the region up to 28 February.**

## SOUTH-WEST ASIA

**PAKISTAN**

During January, isolated adults were reported on the coastal plains of Lasbela and Makran of Baluchistan.

No locust information was received during February.

**INDIA**

No locusts activity was reported from 1 January to 15 February.

**No locust information had been received from other countries in the region up to 28 February.**



## WEST AFRICA

**MAURITANIA**

Swarm infestations along the coast and the Senegal River Valley will continue to decline as a result of control operations and northward and southward migrations. These migrations are expected to subside early in the forecast period. However, a substantial proportion of adults will tend to disperse in the northern regions where they will persist in areas of green vegetation, primarily in Inchiri, Adrar and southern Tiris Zemmour. No breeding is expected during the forecast period unless rainfall occurs. Regular surveys should continue to monitor the situation.

**SENEGAL**

Adults infestations will continue to decline as a result of control operations and southward migration. The overall situation will improve and no further developments are expected.

**GAMBIA**

A few small immature swarms will continue to migrate southwards through the country early in the forecast period and some localized damage may occur; however, these adults will not persist and the overall situation will improve.

**GUINEA BISSAU**

Low numbers of small immature swarms may continue to appear and move to the south and south-east where they may persist during the forecast period. Although some localized damage may occur, these swarms are not expected to breed or be a significant threat to the country.

**GUINEA CONAKRY**

A few small swarms are expected to appear in the north early in the forecast period. Swarms are likely to slowly move east towards the Malian border on winds associated with the ITCZ. Although some localized damage may occur, no breeding nor significant developments are likely.

**SIERRA LEONE**

There is a low risk of a few small groups or swarmlets appearing in the extreme north during the forecast period. However, no significant developments are likely.

**CAPE VERDE**

There is a low possibility of a few adults reaching some islands from West Africa during periods of easterly winds. However, no significant developments are likely.

**MALI**

Isolated adults are likely to be present and persist in the Adrar des Iforas and perhaps in Tamesna. By the end of the forecast period, there is a possibility that a few groups or swarmlets surviving from the Southern Circuit migration will appear in the south-western regions; however, no significant developments are likely.

**NIGER**

Isolated adults are likely to be present and persist in the Aïr and perhaps in Tamesna.

**CHAD**

A few isolated adults are likely to be present and persist in the Tibesti.

**BURKINA FASO and CAMEROON**

No significant developments are likely.

**NORTH-WEST AFRICA****MOROCCO**

Low to moderate numbers of mostly small-sized swarms will continue to arrive into the extreme south during the first half of the forecast period. These swarms as well as those already present will move north towards the southern side of the Atlas mountains where they will breed if rainfall occurs. The scale of the migration is expected to be small.

**ALGERIA**

Low numbers of mostly small-sized swarms will continue to arrive into the south-west between Tindouf and Béchar and may move further north-east along the southern side of the Atlas mountains. They are expected to breed in areas that receive rainfall. The scale of the migration is expected to be small.

**TUNISIA and LIBYA**

No significant developments are likely.

**EASTERN AFRICA****SUDAN**

Scattered adults present on the Red Sea coastal plains in the Tokar Delta and near Suakin are expected to decline by the end of the forecast period and no significant developments are likely. Surveys are recommended to continue to monitor the situation in these areas.

**ERITREA**

Scattered adults are likely to persist and breed in areas of recent rains on the coastal plains north of Massawa. By the end of the forecast period, infestations are expected to decline as ecological conditions become unfavourable.

**SOMALIA**

Scattered adults are likely to persist on the northern coastal plains in the Mait region and breed if rainfall occurs. However, no significant developments are expected.

**DJIBOUTI, ETHIOPIA, KENYA, TANZANIA and UGANDA**

No significant developments are likely.

**NEAR EAST****SAUDI ARABIA**

Isolated adults may be present on the Tihama. However, breeding is not expected unless rainfall occurs.

**YEMEN**

A few isolated adults may be present on the Tihama but these are not expected to breed. Isolated adults may also be present at a few locations on the coastal plains west and east of Aden.

**EGYPT**

Isolated adults may be present on the Red Sea coast in the extreme south-eastern desert.

**OMAN**

Scattered adults may be present on the Batinah and breed if rainfall occurs.

**UAE**

Scattered adults may be present on the Fujayrah coast and breed if rainfall occurs.

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

No significant developments are likely.

**SOUTH-WEST ASIA****IRAN**

Isolated adults are likely to be present on the south-eastern coastal plains of Baluchistan and breed if rainfall occurs.

**PAKISTAN**

Scattered adults are likely to be present and persist on the Makran and Lasbela coasts of Baluchistan and breed if rainfall occurs.

**INDIA**

A few isolated adults may be present in the Rajasthan.

**AFGHANISTAN**

No significant developments are likely.

**Improving Communications**

As a part of ECLO's continuing efforts to improve communications with locust-affected countries and the international donor community, the following have been established, in addition to fax and telex, at ECLO:

**(1) e-mail**

Electronic mail can be sent via the Internet directly to FAO/ECLO at the following addresses:

Abderrahmane.Hafraoui@fao.org	(general correspondence)
Keith.Cressman@fao.org	(locust reports - English)
Max.deMontaigne@fao.org	(locust reports - French)

ECLO would like to encourage the use of e-mail and urges those organizations and individuals that have e-mail facilities to advise ECLO of their e-mail address.

**(2) 24 hour messages**

Messages for ECLO can be left outside of normal working hours (M-F 0730-1600 GMT) on the following numbers:

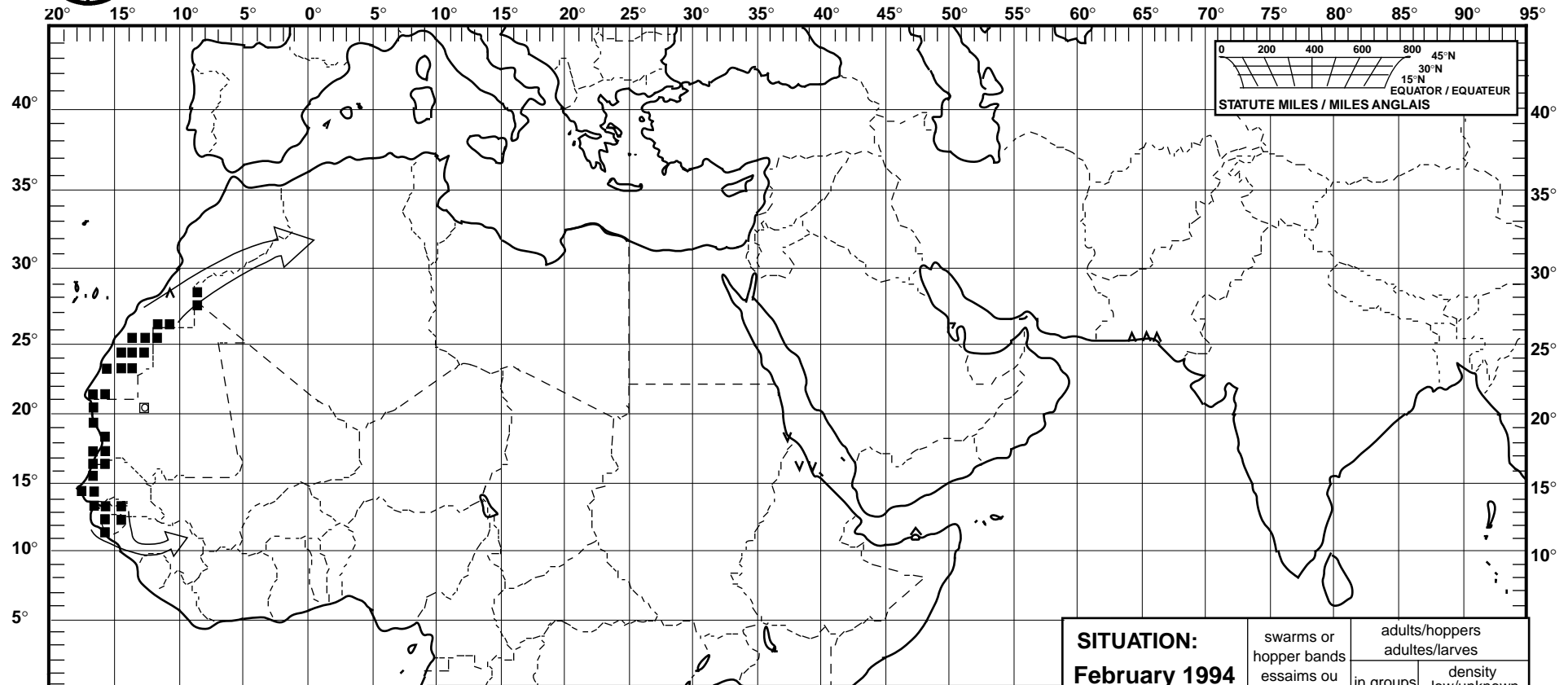
(0039) 6 - 522 - 52420 (English)

(0039) 6 - 522 - 54578 (French)



# Desert Locust: summary Criquet pèlerin: situation résumée

## No. 186



FORECAST TO: PREVISION AU: <b>15.4.94</b>	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: <b>February 1994</b> février 1994	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)			