

# FAO



## EMERGENCY CENTRE FOR LOCUST OPERATIONS

### DESERT LOCUST BULLETIN No. 182



During October, the Desert Locust upsurge in West Africa extended into north-western Senegal and north-western Mauritania, where numerous small mature swarms laid in both areas immediately upon arrival. There was also a report of three swarms in adjacent areas of south-western Morocco. Although the situation is serious, it is not considered to be out of control nor unmanageable. In South-West Asia, a second generation of breeding occurred and new swarms were forming by the end of October; however, earlier control operations have considerably reduced the size of this generation.

The forecast period is typically characterised by movement from summer to winter/spring breeding areas early in the period and, by the end of the period, the onset of winter breeding in areas that have received rainfall.

In central Mauritania, new generation swarms will continue to form early in the forecast period and, before temperatures become too cold, move on a small scale towards northern Mauritania, southern Morocco and western Algeria. In northern Senegal, new swarms will form on a small scale and may either augment those moving further north or move slowly southward with the retreating ITCZ.

Although there have been no reports of swarms moving out of the Indo-Pakistan summer breeding area towards the west, it is almost certain that there have been some escapes from control operations and that such a movement has indeed started on a small scale. Consequently, small swarms are expected to appear during the forecast period in coastal and interior areas of Baluchistan in Pakistan and perhaps in adjacent areas of south-eastern Iran. A few small swarms or swarmlets may also cross the Gulf of Oman and appear on north-eastern coast of Arabia from northern Oman and UAE and may even reach Qatar.

Similarly, any swarms or swarmlets that escaped control operations in the summer breeding areas of Sudan are expected to appear along the coastal plains of Sudan, Eritrea, south-eastern Egypt, and perhaps Saudi Arabia and Yemen and start to breed if rainfall occurs. However, current information indicates that such a movement and subsequent breeding will be limited and on a small scale.

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

**Telephone:** (39-6) 522-52420 or -54578

**Telefax:** (39-6) 522-55271

**Telex:** 610181 FAO I



## WEATHER AND ECOLOGICAL CONDITIONS

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.

In West Africa, the ITCZ continued its seasonal movement toward the south during October, generally remaining below about 15°N. However, important fluctuations occurred in early October when the ITCZ surged northward over Mali and moved south over Senegal and again on 27 October when there was a northward surge over Mauritania to 23°N. North of the ITCZ, surface winds were generally from the north, while mid-level winds were from the south. No significant rain was reported in the Sahel and consequently, annual vegetation was drying out in many places of northern Senegal, in Tagant, northern Brakna, and Assaba in Mauritania, in most places of the Adrar des Iforas in Mali and northwest of Faya in Tibesti, Chad. However, widespread green vegetation was present in interdunal areas of Trarza and Inchiri in western and north-western Mauritania, and patches of green vegetation and some standing water were present in northern Biltine of Chad.

In Eastern Africa, dry conditions prevailed during October in western Eritrea, along the Red Sea coasts of Sudan and Eritrea except in a few wadis, and in Djibouti. Unusually heavy rains fell in the interior and on the north-eastern coast of Somalia and in adjacent areas of northern and eastern Ogaden in Ethiopia in mid October. Vegetation conditions were reported to be improving in all of these areas.

In the Near East, unusually heavy rains fell along the Red Sea coast of Egypt during the second decade of October and may have extended to the northern Red Sea coast of Sudan. Satellite imagery suggest that widespread light rains fell along the Tihama of Saudi Arabia and Yemen and along the Aden coastal plains during the second decade of October; rains may also have occurred on the coastal plains east of Aden during the last decade of October. Breeding conditions are expected to be improving in most of these areas.

In North-West Africa, conditions were reported to be dry during October and unfavourable for breeding in southern Morocco.

In South-West Asia, south-western winds associated with the summer monsoon weakened in early October and were replaced by mid level north-easterlies over the Indo-Pakistan summer breeding areas. No significant rainfall was reported during the month.



## AREA TREATED IN OCTOBER 1993

India	45,004 ha (16 Sep - 15 Oct)
Mauritania	151,911 ha (21 Sep - 25 Oct)
Pakistan	ca. 24,000 ha (16 Sep -15 Oct)
Senegal	58,211 ha (6-31 Oct)
Sudan	139,235 ha (8 Jun - 21 Sep)



## WEST AFRICA

### MAURITANIA

During the first decade of the month, small to medium size mature swarms continued to move further west into Trarza and Inchiri and southwest into the Senegal River Valley where laying occurred. From mid October onwards, newly emerging hoppers starting forming small to medium size bands in the Lac Rkiz area and near Boutilimit of Trarza, along the coast about 100 km south of Nouakchott and in the Akjoujt area of Inchiri. By the end of the month, hatching continued to be reported in Trarza as well as third instar hoppers, and a few hopper bands and laying swarms were reported in Inchiri.

As a result of previous swarm laying, numerous small to medium size second generation bands of second to fifth instar hoppers were reported during October between Kiffa, Tidjikja and Magta Lahjar in southern Tagant, near Tamcheppet in north-western Hodh El Gharbi, in northern Brakna and in northern and western Assaba. By the end of the month, some of these had started to form immature swarms.

Substantial ground and aerial operations are in progress and have treated a total of 176,000 ha up to 25 October.

### SENEGAL

On 5 October, three small mature swarms were reported west of Richard Toll (1628N/1541W). During the next two weeks, additional small to medium size swarms arrived from the north in the area between Richard Toll, Saint Louis (1601N/1630W) and Kébémér (1522N/1624W). Most of these swarms laid immediately and gregarious hoppers began emerging on the 18th, forming small dense bands of 200 sq. m to 1-2 ha in size with up to 1,000 hoppers per sq. m, first near Richard Toll and later further south to Kébémér. By the end of October, bands had reached third instar.

The infestations detected so far are confined to a relatively small area (about 150 x 100 km) in the north-west. During the last half of the month, isolated gregarious adults, at densities up to 30 per ha, were reported at a few locations in the north-central interior between Linguère (1524N/1508W) and Podor (1639N/1258W), and scattered late instar hoppers and immature adults were seen near Podor on the 30th.

Ground control operations commenced on 6 October and treated a total of 58,211 ha up to 31 October.

### MALI

Isolated adults were found during surveys carried out from 20 September to 10 October in the northern Adrar des Iforas north-east of Tessalit (2015N/0059E), in the Tilemsi Valley of the western Adrar des Iforas and in the eastern Adrar des Iforas near Kidal (1826N/0124E). Due to insecurity, no further surveys were possible during the month.

### NIGER

In early October, scattered adults mixed with grasshoppers were present and breeding near Diffa at Maine-Soroa (1313N/1201E). No surveys were reported to be undertaken in Tamesna and Aïr during the month.

### CHAD

In early October, isolated adults were reported to already have laid west of Kalait (1545N/2055E) in northern Batha; isolated adults of up to 15 per ha were seen north of Biltine and in Tibesti north-west of Faya near Kirdimi (1809N/1830E) and 80 km north-west of Yène (1810N/1828E). No locusts were seen during surveys undertaken near Abeche, Adre and Ati up to 22 October.

**No locust information had been received from other countries in the region up to 31 October.**

## NORTH-WEST AFRICA

### MOROCCO

No locust activity was reported during September.

On 28 October, a report indicated that three swarms were seen in the extreme south-west near Tichla (2136N/1457W). No further details are available.

**No locust information had been received from other countries in the region up to 31 October.**

## EASTERN AFRICA

### SUDAN

A late report indicated a mature swarm seen near Atbara (1743N/3359E) on 18 September and aerial surveys carried out west of Khartoum did not detect any locusts.

In late September and early October, small scale aerial and ground control operations continued against residual populations of late instar hopper bands and a few small immature swarms in Northern Kordofan. No locusts were found during surveys on the southern Red Sea coast up to mid October.

### ERITREA

No Desert Locusts were found during helicopter surveys on 28-30 September and 4-8 October over the western lowlands and escarpment, highlands and eastern escarpment.

### ETHIOPIA

No locusts were seen during helicopter surveys on 20-24 October over northern and eastern areas of the Ogaden.

### DJIBOUTI, KENYA, SOMALIA, TANZANIA and UGANDA

No locust activity was reported up to 15 October.

## NEAR EAST

### YEMEN

Isolated adults, probably residual populations from previous infestations during the summer, were seen on the eastern coastal plains at Am Rija (1301N/4435E) and Mayfaa (1416N/4735E) during surveys undertaken on 18-23 October.

### EGYPT

No locusts were seen during surveys along the Red Sea coast during October.

### RED SEA

According to a ship report, two locusts were seen off the southern Tihama coast of Saudi Arabia at 1727N/4130E on 7 October and at 1648N/4110E on 10 October; however, the species remains unconfirmed.

**No locust information had been received from other countries in the region up to 31 October.**

## SOUTH-WEST ASIA

### PAKISTAN

During the second half of September, there were new reports of maturing swarms from Tharparkar, Nara and Cholistan and ground and aerial control operations continued against swarms and late instar hopper bands primarily in Tharparkar. A total of about 17,800 ha were treated including 68 swarms and swarmlets, some of them newly formed, and 553 hopper bands and groups.

During the first half of October, control operations continued, treating a total of 23 maturing swarms and swarmlets in Cholistan, Nara and Tharparkar by air covering about 5,600 ha. Ground control

operations were also undertaken against late instar hopper bands in Cholistan at Karimdadwala Toba (2806N/7025E) on the 15th.

There were new reports of late instar hopper bands and small groups of immature adults in the Nara desert along the Indian border on 18 October and again on the 24th. Control operations were immediately undertaken.

## **INDIA**

During the second half of September, second generation hatching commenced on a small scale in Bikaner, Churu, Sikar, Jodhpur and Nagaur districts of Rajasthan and additional swarms of mixed maturity were reported Jaisalmer, Bikaner and Barmer districts. Aerial and ground control operations treated more than 24,000 ha of swarms and 9,000 ha of bands during the period.

Although hatching continued during the first half of October, infestations appear to have substantially decreased. Control operations continued against maturing swarms and hopper bands, however, the total area treated was less than the previous fortnight. Operations sprayed nearly 10,000 ha of swarms and 1,500 ha of bands during the period.

**No locust information had been received from other countries in the region up to 31 October.**



## **WEST AFRICA**

### **MAURITANIA**

New generation swarms will continue to form early in the forecast period in Tagant, Brakna and As-saba. These are expected to move north towards Atar and beyond depending on the onset of cool temperatures. Breeding is likely to continue in Inchiri and northern Trarza, and current infestations may be augmented by new generation swarms from central Mauritania. Additional small scale swarm formation will occur late in the forecast period in Trarza and Inchiri.

### **MALI**

Isolated adults are expected to persist during the forecast period in a few locations of the Adrar des Iforas.

### **NIGER**

Isolated adults are expected to persist during the forecast period in a few locations of Tamesna and perhaps in the Aïr.

### **CHAD**

Isolated adults are expected to persist during the forecast period in a few locations of Tibesti, northern Batha and Ouaddai.

### **SENEGAL**

New generation swarms will start to form probably on a small scale early in the forecast period. These are likely to move southwards with the retreating ITCZ.

### **GAMBIA**

A few small swarms may appear as a result of movement from the north during the forecast period.

### **GUINEA BISSAU**

A few small swarms may appear in northern areas late in the forecast period as a result of "southern circuit" movement from the north.

**GUINEA CONAKRY**

A few small swarms may appear in northern areas late in the forecast period as a result of "southern circuit" movement from the north.

**BURKINA FASO, CAMEROON and CAPE VERDE**

No significant developments are likely.

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

Low numbers of small swarms are expected to appear in the extreme south-west and move towards the southern side of the Atlas Mountains early in the forecast period. Small scale breeding could occur during the second half of the forecast period in areas that receive rainfall and if temperatures are sufficiently high. Regular surveys are recommended to monitor the situation.

**ALGERIA**

A few swarms could appear in the western desert near Tindouf and slowly move towards the central northern interior south of the Atlas Mountains and start to breed by the end of the forecast period in areas that receive rainfall and if temperatures are sufficiently high. Regular surveys are recommended to monitor the situation.

**TUNISIA and LIBYA**

No significant developments are likely.

**EASTERN AFRICA****SUDAN**

A few small swarms from summer breeding areas are likely to appear on the southern Red Sea coast between Port Sudan and the Eritrean border or further north in Wadi Oko/Diib and start to lay at the end of the forecast period in areas that receive rainfall.

**ERITREA**

A few small swarms from summer breeding areas are likely to appear on the Red Sea coast and start to lay at the end of the forecast period in areas that receive rainfall.

**SOMALIA**

Scattered adults may be present and breeding in areas of recent rainfall along the northern coastal plains and escarpment.

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

No significant developments are likely.

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

Isolated adults may be present along the southern Tihama and breed in areas that receive rainfall. Infestations could be augmented by adults and perhaps a few small swarmlets crossing the Red Sea from North-Eastern Africa during the forecast period.

**YEMEN**

Isolated adults may be present along the Tihama and on the south-eastern coastal plains and breed in areas that receive rainfall. Infestations along the northern Tihama could be augmented by adults and perhaps a few small swarmlets crossing the Red Sea from North-Eastern Africa during the forecast period. Regular surveys are recommended in all areas.

**EGYPT**

A few small swarms may appear on the southern Red Sea coast from the south-west and start to lay at the end of the forecast period in areas that receive rainfall. Regular surveys are recommended in all areas.

**OMAN**

A few small swarms may appear during the forecast period on the Musandam Peninsula and the Batinah as a result of movement from the Indo-Pakistan summer monsoon breeding area. Regular surveys are recommended in all areas.

**UAE**

A few small swarms may appear during the forecast period on the Fujayrah coast as a result of movement from the Indo-Pakistan summer monsoon breeding area. Regular surveys are recommended in all areas.

**QATAR**

A few small swarms may appear late in the forecast period as a result of movement from the Indo-Pakistan summer monsoon breeding area.

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

No significant developments are likely during the forecast period.

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

A few small swarms may appear during the forecast period along the south-eastern coast and in the interior of Baluchistan. Regular surveys are recommended in all areas.

**PAKISTAN**

Escapes from the summer monsoon breeding area will move west towards the Makran and the interior of Baluchistan where a few small swarms are likely to appear during the forecast period. Scattered adults, some at moderate to high densities, are likely to persist in some localities of Tharparkar, Nara and Cholistan; however, no further breeding is expected during the forecast period. Regular surveys are recommended in all areas.

**INDIA**

Scattered adults, some at moderate to high densities, are likely to persist in some localities of Rajasthan and Gujarat; however, no further breeding is expected during the forecast period.

**AFGHANISTAN**

A few small swarms may appear in the southern region early in the forecast period; however, decreasing temperatures will prevent any significant immigration from mid November onwards.



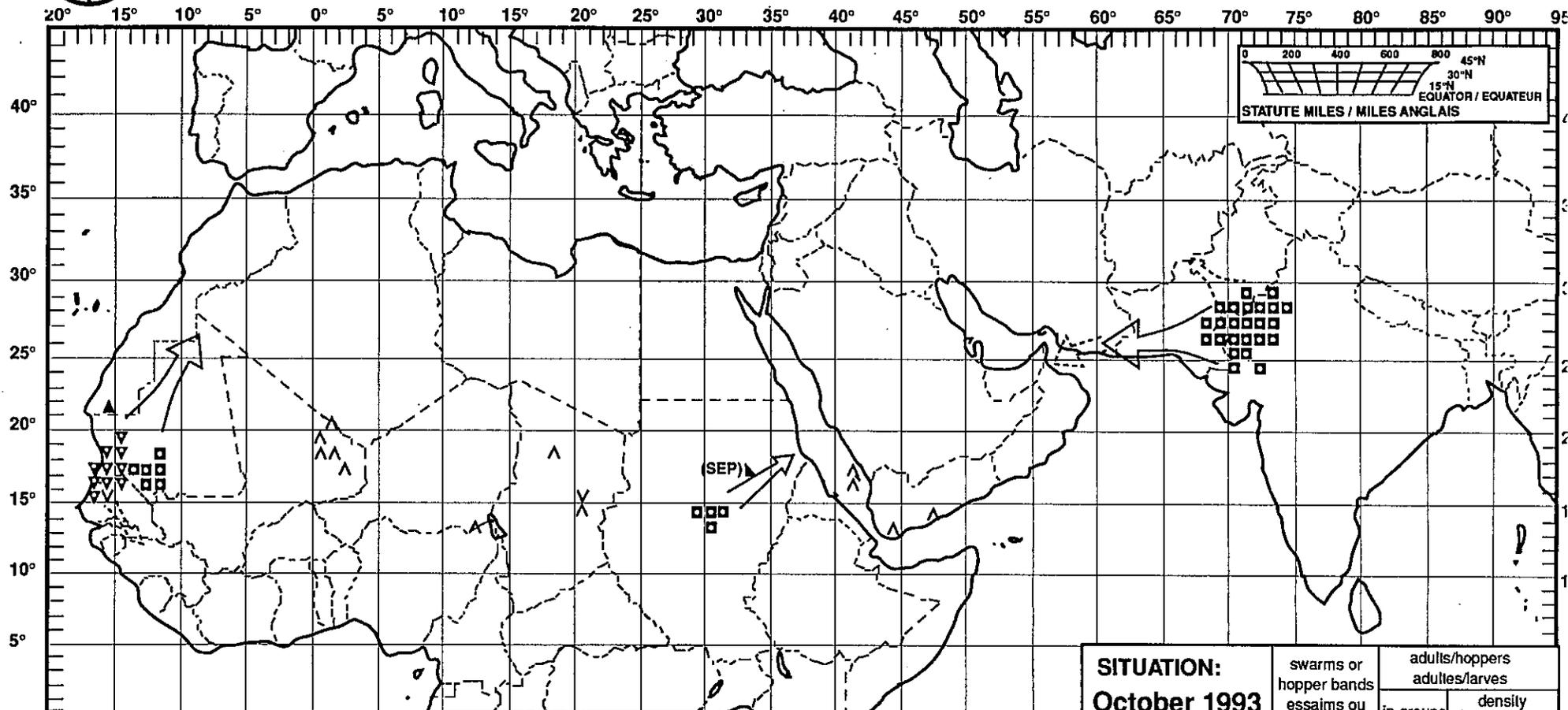
We regret to announce the deaths of five military personnel in early October who were escorting Desert Locust survey teams in northern Mali. We wish to express our condolences to their families and government.

2 November 1993



# Desert Locust: summary Criquet pèlerin: situation résumée

## No. 182



FORECAST TO: PREVISION AU: 15.12.93	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: October 1993 octobre 1993	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 ponces ou œufs	▼	▽	▽
hoppers larves	■	○	◐
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)	◼	◼	◼

