



# FAO



LOCUST, OTHER MIGRATORY PESTS, & EMERGENCY OPERATIONS GROUP

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## DESERT LOCUST BULLETIN No. 167

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**GENERAL SITUATION DURING JULY 1992  
FORECAST UNTIL MID SEPTEMBER 1992**

During July, adult numbers increased in the summer breeding areas of Rajasthan in India and adjacent desert areas of Pakistan where monsoon rains commenced by mid month. The rainfall will allow adults to start laying and hoppers will appear during the forecast period, although breeding is expected to be only on a small scale. Elsewhere, a swarm was seen at the end of June moving south from an area in Northern Mauritania where control operations had been carried out.

Rainfall has been sporadic in the summer breeding areas of the Sahel of West Africa and Sudan, yet enough has fallen in south-eastern Mauritania, north-central Mali, Tamesna and Aïr of Niger and parts of Western Sudan to provide favourable breeding conditions. In Tamesna of Niger and near El Obeid in Sudan, rainfall has been exceptionally good and continuous since early to mid June. Although no locusts have been reported in any of these areas as few surveys have been undertaken, it is likely that scattered adults are present in some places and starting to breed. Surveys are recommended to clarify the situation. Breeding will continue during the forecast period in all favourable areas.

Very little rainfall was reported in the Near East except on parts of the Tihama of Saudi Arabia and Yemen where a few adults may be present.

Late reports stated that a few scattered adults were present during June in Northern Darfur of Sudan, and on the northern Tihama of Saudi Arabia and perhaps in northern Chad.

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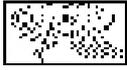
The FAO Desert Locust Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by telefax, telex, FAO pouch, or mail by the Locust, Other Migratory Pests, and Emergency Operations Group, AGP, FAO, 00100 Rome, Italy.

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## 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 was located at about 18°N over the Sahel in early July, and by the end of the month, it had reached as far north as 22°N. As a result, sporadic rain fell at a number of locations within the locust breeding areas of West Africa and Sudan. During the first decade, the only significant reports of rainfall came from Agadez in Niger (25 mm), and from Sudan at Geneina (66 mm) and El Obeid (115 mm). However, during the second decade, cold cloud activity increased throughout the Sahel and moderate to heavy rainfall occurred over a widespread area from southern Assaba and the two Hodhs of Mauritania to Tombouctou and Menaka in Mali to Agadez in Niger. In Chad, cold clouds remained south of BET during the second decade and no reports of significant rainfall were received from Sudan. During the third decade, rainfall decreased in most areas with only light to moderate rains reported in south-eastern Mauritania near Aioun El Atrous and Nema, in Mali near Gao and Menaka and perhaps further north in the Adrar des Iforas, and in Sudan from El Fasher to El Obeid. Consequently, the areas in which conditions are most likely to be favourable for breeding are Tamesna and Aïr in Niger and from El Fasher to El Obeid in Sudan where good rains have continued in both places for the second month in a row. Conditions are expected to be improving in the two Hodhs of Mauritania, and in Mali between Gao and Tombouctou and in the Adrar des Iforas as a result of rains this month.

In Eastern Africa, cold clouds were present during the last two decades of the month over northern Ethiopia where moderate to heavy rains were reported in the Asmara area of Eritrea late in the month.

In the Near East, cold clouds were present during the first two decades over the southern Tihama of Saudi Arabia and throughout the entire month over the Tihama of Yemen. Cold clouds were also seen over the Hadhramaut of Yemen during the last decade. As a result, breeding conditions are expected to be improving in most of these areas.

In South-West Asia, the monsoon reached south-eastern Rajasthan on 3 July, eastern and parts of western Rajasthan and adjacent areas of Tharparkar and Bahawalpur in Pakistan on the 12th, and over the entire area by the 14th. Subsequently, moderate to heavy widespread rains fell during the last two decades of the month in Tharparkar (105 mm), Karachi (96 mm), Bikaner (50 mm), and Jodhpur (24 mm). It is expected that enough rains have fallen to allow adults to lay at scattered places throughout the summer breeding area from Tharparkar in the west to Barmer and Bikaner in the east.



## AREA TREATED IN JULY 1992

Mauritania	no details available
Saudi Arabia (June)	no details available



## DESERT LOCUST SITUATION

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

### WEST AFRICA

#### MAURITANIA

During a survey from 28 June to 3 July, several mature adult groups, at a densities up to 4 per sq. m, were seen on 75 ha in Inchiri near Akjoujt, and in Adrar east of Atar at Jreiff (2051N/1226W) at a density of 1-2 per sq. m on 20 ha. These populations probably resulted from late spring breeding and have been forced into high densities because of the drying vegetation. A few mature adults were seen during the same period at Houra (2113N/1118W) and traces of locusts were seen near Ouadane at Akreidrille (2103N/1131W) where nomads saw a swarm flying south and south-east three days earlier. This suggests that conditions are becoming unfavourable and adults are moving towards summer breeding areas. Only a few adults were found during a second survey in Adrar from 15-16 July. Control operations were undertaken near Akjoujt and Houra earlier in the month.

#### MALI

No locusts were reported as it is not possible to carry out surveys in northern areas due to security difficulties.

#### CHAD

There was an unconfirmed report of locusts in BET during the first half of June; however, no further details are available.

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

### NORTH-WEST AFRICA

#### MOROCCO and TUNISIA

Late reports stated that there was no locust activity during June.

#### LIBYA

No locusts were found during surveys in the Al-Hamada Al-Hamra region up to 29 June.

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

### EASTERN AFRICA

#### SUDAN

A late report stated that isolated immature adults, at densities of 1-2 per ha, were seen in areas of recent rain in Northern Darfur from 1-3 June. Infestations are expected to be confined to a total of about 1,550 ha located near El Fasher, Karnoi (1506N/2315E) and Umm Buru (1504N/2345E).

During July, surveys were reported to be in progress near El Obeid in Northern Kordofan and in adjacent provinces; however, no results have been received yet.

#### ETHIOPIA, DJIBOUTI, KENYA, TANZANIA, UGANDA

A late report stated that there was no locust activity during June.

#### SOMALIA

No locust reports have been received up to 31 July.

## NEAR EAST

### SAUDI ARABIA

A late report stated that during a survey along the Tihama north of Jeddah, groups of adults and hoppers, at a density of 5,000 per ha, were seen on 6 sq. km at Dhahban (2155N/3908E) on 17 June. Control operations were undertaken at the location. Elsewhere, no locusts were seen.

### YEMEN

A late report stated that isolated adults were present along the coastal plains west of Aden between Uzafah (1238N/4402E), Khor Umayrah (1242N/4408E) and Birkah (1242N/4422E) on 8 April. The following day, isolated mature adults were seen further inland near Al-Masdaiyah (1245N/4422E).

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

## SOUTH-WEST ASIA

### PAKISTAN

During the second half of June, the first report of locusts this year in the summer breeding area were received stating that isolated adults were present at two locations in Tharparkar Desert, with a maximum of 150 per sq. km at Viraweh (2431N/7045E) on the 17th, and at five locations in Bahawalpur Desert, with a maximum density of 225 per sq. km at Rinhal (2812N/7158NE) on the 28th.

During the first half of July, isolated adults were present at four locations in Lasbela District west of Karachi and at two locations in Tharparkar Desert with a maximum density of 300 per sq. km at Jassikapar (2525N/7033E) in Tharparkar on the 9th.

During the second half of July, adult numbers increased in Lasbela, Cholistan, and Tharparkar where a total of 14 locations were reported infested with a maximum density of 600 per sq. km at Goth Bari (2800N/7003E) in Cholistan on the 25th.

### INDIA

A late report stated that isolated adults were present at two locations in Bikaner District and one location in Jalore District, with a maximum density of 375 per sq. km at Dungari (2445N/7130E) of Jalore on 3 June.

During the second half of June and first half of July, no locusts were reported. However, previous reports from Pakistan and India suggest that there are probably low numbers of adults scattered about in Jaisalmer, Barmer, Jalore, Jodhpur and Bikaner districts as well as adjacent desert areas of Pakistan.

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



## FORECAST UNTIL MID SEPTEMBER 1992

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

Scattered adults, and perhaps a few groups, are almost certainly present and breeding in areas of recent rainfall in the two Hodhs. As a result, hoppers are expected to appear during the forecast period in these areas. Surveys are suggested in the two Hodhs and southern Tagant, and perhaps Trarza to monitor the situation.

## **MALI**

Scattered adults are likely to present and may be breeding in areas of recent rains between Gao and Tombouctou and perhaps further east towards Menaka. A few adults may be present in the Adrar des Iforas and will breed if rains occur during the forecast period.

## **NIGER**

Low numbers of adults are likely to be scattered throughout Tamesna and in Air as far north as Iferoûâne. Breeding may have commenced late last month in some of these areas as a result of the good rains from mid June onwards and will continue during the forecast period. Surveys are suggested in Tamesna and Air to monitor the situation.

## **CHAD**

Isolated locusts may be present in the eastern regions of Biltine and Ouaddaï and breed in areas of recent rains. A few adults may be present in BET; however, current breeding conditions are expected to be unfavourable and will only improve if rainfall occurs during the forecast period.

## **BURKINA FASO, CAMEROON, GAMBIA, GUINEA BISSAU, GUINEA CONAKRY and SENEGAL**

No significant developments are likely.

## **NORTH-WEST AFRICA**

### **ALGERIA**

Isolated adults may be present in the extreme south adjacent to Mali and Niger.

### **MOROCCO, TUNISIA and LIBYA**

No significant developments are likely.

## **EASTERN AFRICA**

### **SUDAN**

Adults will persist in Northern Darfur where small scale breeding is likely to be in progress and will continue throughout the forecast period. Elsewhere, scattered adults are almost certainly present and breeding in areas of recent rains, especially between El Fasher and El Obeid, and perhaps in adjacent areas of White Nile province. Hoppers are likely to appear during the forecast period in areas where breeding has occurred.

### **ETHIOPIA**

The locust situation remains unclear; however, isolated adults may be present and breeding in the Western Province and on the Red Sea coastal plains.

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

No significant developments are likely.

## **NEAR EAST**

### **SAUDI ARABIA**

Isolated adults may be present in some areas of the Tihama north of Jeddah and near Jizan; however, breeding is not expected during the forecast period.

### **YEMEN**

Isolated adults may be present in some areas of the Tihama and breed in areas of recent rainfall. Isolated adults may also be present in some places along the coastal plains west of Aden and interior areas of Shabwa and start to breed during the forecast period if rainfall occurs.

### **BAHRAIN, EGYPT, IRAQ, ISRAEL, JORDAN, KUWAIT, LEBANON, OMAN, QATAR, SYRIA, TURKEY and UAE**

No significant developments are likely.

## SOUTH-WEST ASIA

### PAKISTAN

Adults will start to lay early in the forecast period in areas of recent rains in Tharparkar and Bahawalpur Deserts and in Lasbela District. Low numbers of adults may also be present in Khairpur Desert and start to breed.

### INDIA

Small scale breeding may have already commenced in areas of recent rainfall in Barmer, Jalore, Jaisalmer, Jodhpur and Bikaner Districts and will continue during the forecast period.

### AFGHANISTAN and IRAN

No significant developments are likely.



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

#### Non-gregarious adults

- isolated very few adults 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 some adults present where mutual reaction could occur but no grouping; 1 - 20 adults per 400 m foot transect (or 25 - 500 per ha). other terms: some, low numbers.
- group showing aspects of gregarious behaviour and/or colouration; more than 20 adults per 400 m foot transect (or more than 500 per ha).

#### Non-gregarious hoppers

- isolated very few present, at low densities and no mutual reaction occurring; less than 10 at a survey site.
- scattered some present but no ground or basking groups; more than 10 at a survey site.
- group forming ground or basking groups.

#### 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
- outbreak a marked increase in locust numbers as a result of concentration, multiplication and gregarisation.

5 August 1992



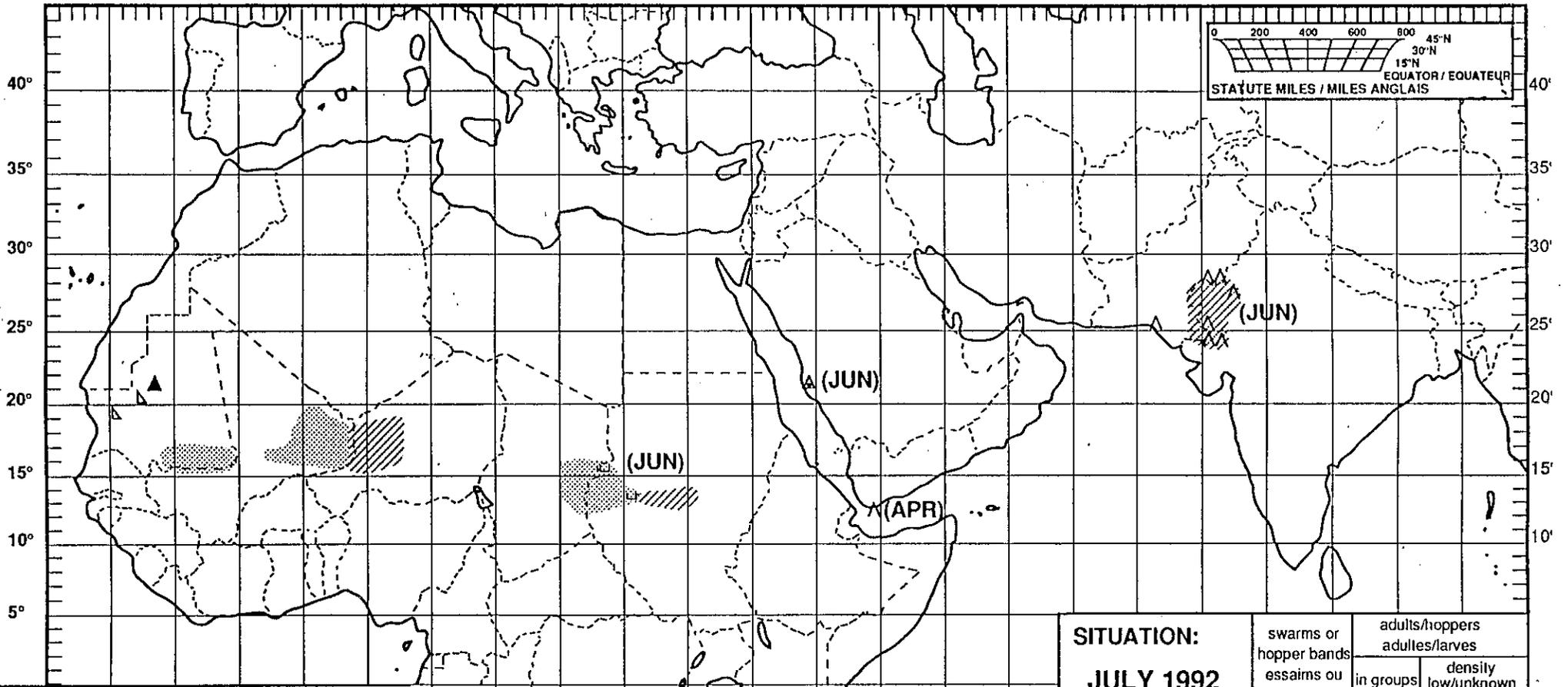
# Desert Locust: summary

## Criquet pèlerin: situation résumée

No.167



20° 15° 10° 5° 0° 5° 10° 15° 20° 25° 30° 35° 40° 45° 50° 55° 60° 65° 70° 75° 80° 85° 90° 95°



FORECAST TO: PREVISION AU: 15.9.92	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		

<b>SITUATION: JULY 1992</b>	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)	◼	◼	◼

15° 20° 25° 30° 35° 40° 45°