



# FAO



## EMERGENCY CENTRE FOR LOCUST OPERATIONS

### DESERT LOCUST BULLETIN No. 190



The Desert Locust situation continues to be of concern in West Africa and North-West Africa. During June, numerous small swarms formed in areas of previous breeding in northern Mauritania and along the Algerian and Moroccan border south of the Atlas Mountains. Control operations were in progress in all areas; however reports of adult groups and immature swarms in southern Mauritania and northern Mali indicate that adults have migrated from the above breeding areas and are in the process of moving towards the traditional summer breeding areas of Mauritania, Mali and Niger. A few small swarms also appeared in southern Niger in late June. During the forecast period, additional groups of adults and some small swarms are expected to arrive in southern Mauritania, northern Mali and Niger and lay with the onset of the seasonal rains. There is a low probability of swarms moving further east along the ITCZ into Chad and perhaps western Sudan. The scale of the migration into summer breeding areas of the Sahel is difficult to assess at present; the scale of subsequent breeding will depend on the scale of this migration and the timeliness and amount of rainfall during the summer.

A few immature swarms continued to persist in Guinea Conakry in late May and in early June they moved into south-western Mali south of the Inter-Tropical Convergence Zone. These swarms are expected to continue to move in an easterly direction during the forecast period. However as these southern circuit swarms are at the end of their life and rarely mature to lay, they do not constitute a significant threat at this time.

There was an unconfirmed report of a small immature swarm in northern Sudan in late May and scattered adults are probably present in parts of western and central Sudan. During the forecast period, small scale breeding is expected to occur in these areas with the onset of the seasonal rains. Surveys are advised to monitor the situation as it develops.

Scattered adults are present in coastal and interior areas of Baluchistan in Pakistan and in Rajasthan of India. The populations in Baluchistan will decline as adults move towards the summer breeding areas along the Indo-Pakistan border areas where breeding on a small scale is expected with the onset of the monsoon rains in July. There is no indication that these rains have commenced yet in Rajasthan.

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 DURING JUNE 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 June, the Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement northwards reaching as far as 19°N at times over West Africa but generally remaining around 16-18°N. However, this was still too far south for any significant rainfall to occur in the traditional summer breeding areas of West Africa and Sudan. Only a few isolated light to moderate showers such as 48 mm at Amorj in southern Mauritania on 5 June and 16 mm at Menaka in the southern Tamesna of Mali on 7-8 June have been reported. Satellite imagery indicated that cold clouds had reached as far north as about 15°N but mostly remain further south. Prevailing winds north of the ITCZ were from the north and north-east over West Africa, except for brief periods of eastward-moving Mediterranean depressions in which case winds were from the south and south-west; prevailing winds south of the ITCZ were from the south-west. Hence, any locust swarms north of the ITCZ are expected to move in a southerly direction while those south of the ITCZ will probably move towards the north-east.

In Mauritania, annual vegetation continued to dry out in the north near Zouerate and Atar and no rainfall was reported. In the south, helicopter surveys did not find any significant areas of green vegetation between Kiffa and Tidjikja from 5-10 June. Satellite imagery for the first decade of June suggested that patches of green vegetation were present near Kiffa, Tamchekket, Aioun El Atrouss and south-west of Tintane in mid June. On 23-24 June, widespread light rains occurred along the Mali border from Kaedi in Mauritania to west of Tombouctou in Mali; for example, Nema reported 27 mm. Satellite imagery of the second decade of June indicated that conditions were very dry in from the Adrar des Iforas of northern Mali to Air of Niger.

In North-West Africa, conditions south of the Atlas Mountains in Algeria and Morocco are reported to be drying out as a result of no recent rainfall and few areas of green vegetation remain.

In Eastern Africa, breeding conditions are expected to be improving in the summer breeding areas of central and western Sudan due to light rains that fell during the second half of May. Ecological conditions are expected to be improving in several parts of Hararghe region of Ethiopia where light to moderate rains fell in May and along the coastal escarpment of Eritrea as a result of heavy rains during the last week of May. Breeding conditions are reported to be favourable in the Hargeisa area of northern Somalia where wadis were reported to be flooded in May. Conditions along the coastal plains were reported favourable from Erigavo to south of Meit, drying from Meit to Las Koreh and dry east of Las Koreh to Bosaso.

Cold clouds extended over the southern Red Sea from the southern coast of Eritrea to the Tihama of Yemen and Saudi Arabia as far north as Jizan during the first decade of June. As a result, light to moderate rains may have occurred especially along the Tihama of Yemen. Additional cold clouds were present during the last decade of the month over the Yemen Tihama.

On 8 June, an unusual tropical cyclone was off the central coast of Oman; however, the following day the cyclone decayed to a low pressure system as it crossed the coast between Masirah and Dhofar. No significant rain was reported from Oman and conditions are not favourable for breeding in the northern interior or along the Batinah coast. This system moved south-west towards the Hadhramaut area of eastern Yemen on 9-10 June reaching Mukalla and Seiyun.

In South-West Asia, the monsoon has reached southern Gujarat by mid June but there is no indication that it has reached the summer breeding areas further north in Rajasthan and adjacent areas of Pakistan. However, breeding conditions are expected to be improving in some areas that have received earlier rains such as Jaisalmer, Bikaner and Barmer of Rajasthan.



## AREA TREATED IN JUNE 1994

Morocco	14,185 ha	25 May - 20 June	Mauritania	4,400 ha	16-31 May
Algeria	4,848 ha	28 May - 25 June	Guinea Conakry	232 ha	April



## DESERT LOCUST SITUATION

### WEST AFRICA

#### MAURITANIA

In northern Mauritania, numerous swarms continued to form during the second half of May in the Zouerate (2245N/1228W) area and started moving towards the south and south-east. Ground control operations were in progress mostly against the few remaining bands of late instar hoppers. On 20 May, a swarm was seen flying at 2110N/1240W and nomads reported seeing a swarm flying south-west of Atar at Tem Tadech (2011N/1313W).

In southern Mauritania, a swarm was seen west of Moudjeria (1752N/1220W) over Sangrafa (1735N/1250W) on 25 May and over Likhdeima (1740N/1214W) on 2 June. Solitary immature adults at a maximum density of 1,600 per hectare were reported from several locations east of Moudjeria during the first decade of June. Scattered adults and a few small groups at low densities were also reported in Tagant at Rachid (1847N/1141W) and Hodh El Gharbi at Kobeni (1600N/0930W) on the 27th.

#### GUINEA CONAKRY

A late report indicated that adults at unknown densities were present in the central area east of the highlands at Dabola (1045N/1107W) from 13-28 April, at Sissela (1047N/1038W) on 4 May and at Banaro (1135N/1016W) and Kalinko (1117N/1112W) on 18 May. Some crop damage was reported in these areas.

#### MALI

In northern Mali, nomads reported adult infestations in Wadi Djoudem (2040N/0128E) and Wadi Borrach (2043N/0110E) in mid May. An isolated adult was seen at Aguel Hoc (1928N/0052E) during the first half of June.

In south-western Mali, a 20 sq. km immature swarm was seen on 7 June at Sirakoro (1246N/0915W). The following day a swarm was reported at Faladie-N'tjiba (1309N/0820W). On the 11th, a swarm passed Tiourekabougou (1334N/0756W) and Goinzena (1332N/0759W). The next day a dense 2.5 sq. km swarm was seen at Gallo (1329N/0727W) and N'galamadibi (1329N/0728W). It is difficult to assess if some of these reports are sightings of the same swarm but it appears that these probably originated from the southern circuit swarms that were present south of the ITCZ in Guinea Conakry.

#### NIGER

On 26 June, two swarms were seen in the Tahoua area at Keita (1448N/0547E). On the 27th, a mature swarm was seen in Zinder district at Gougouzou (1306N/0852E) which moved further east to Kokori (1305N/0858E) on the 29th.

#### BURKINA FASO and CHAD

No locusts were reported up to 20 June.

**No locust information had been received from other countries in the region up to 30 June.**

### NORTH-WEST AFRICA

#### MOROCCO

The majority of infestations continued to be concentrated in a small area south of the Atlas Mountains south of Errachidia between 31-32N/4-5W. Late instar hopper bands were present in late May primarily in Wadi Rheris and Wadi Ziz and fledging commenced in early June with the formation of small immature swarms. Infested areas were up to 700 ha in size but most locations were about 50-100 ha with densities up to 60 locusts per sq. metre. Less numerous but larger infestations of late instar hopper bands, fledglings and gregarious immature adults, up to 1,400 ha in size, persisted in Oued Draa south of Tata (2945N/0758W). A few new small infestations of late instar hoppers and young

adults, up to 120 ha in size, were reported from the Figuig area, primarily in or near Wadi Guir (3150N/0155W) during the first week of June. These infestations remained few but increased in density by 20 June. No further infestations of hoppers were reported after 7 June.

Ground control operations treated a total of 14,185 ha from 25 May to 20 June.

## **ALGERIA**

Fledging continued during the second half of May up to mid June in previously infested areas south of Bechar (3133N/0214W) and groups and small swarmlets of immature adults were forming. Throughout June, the distribution of infestations became concentrated primarily in Wadi Saoura north of Beni Abbes (3008N/0209W) as vegetation dried out. The number of infested areas progressively decreased during the month from 33 to 6 (by 25 June) although densities had increased up to 50 adults per sq. metre. The size of the infested areas ranged between 2 and 204 ha. By 20 June, infestations were only reported a small area of Wadi Guir (3105N/0247W) where they were seen concentrated on trees at densities of up to 10,000 adults per tree. The scale of ground control operations declined during the month; a total of 4,848 ha was treated from 28 May to 25 June.

In southern Algeria, a dense immature swarm was seen in Wadi Tazomit (2345N/0529E) covering 450 ha on 29 May. No additional reports of locusts were received from the area up to 25 June.

**No locust information had been received from other countries in the region up to 30 June.**

## **EASTERN AFRICA**

### **SUDAN**

There was an unconfirmed report during the last week of May of a small low density Desert Locust swarm seen in the Northern Region near Shendi at Wadi Abu Harik (1658N/3415E) covering 5 ha. No locusts were reported along the Red Sea coastal plains.

### **SOMALIA**

Isolated locust adults were seen during surveys along the coast near Meit at Humbeis (1115N/4846E) and west of La Surut (1105N/4846E) on 5-11 June. No locusts were seen during surveys undertaken in Hargeisa district on 29 May to 2 June and in the Borama area on 2-4 June.

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

No locust activity was reported up to 7 June.

## **NEAR EAST**

### **OMAN**

No locusts were seen during surveys undertaken in the northern interior of Sharqiya, Jaalan, Wahiba and Dhahira south of Nizwa as well as along the southern Batinah coast on 5-12 June.

### **KUWAIT**

No locust activity was reported during May and June.

**No locust information had been received from other countries in the region up to 30 June.**

## **SOUTH-WEST ASIA**

### **PAKISTAN**

Late reports indicated that scattered adult locusts persisted along the coast and interior areas of Baluchistan during May where infestations were seen at 18 locations along the coast in Gwadar, Turbat and Lasbela districts and at 9 locations in the interior of Khuzdar and Chagai districts during the first fortnight; a maximum density of 450 adults per sq. km was reported at Jahadool (2855N/6440E) on 10 May. A similar number of infestations was seen during the second fortnight in the same areas with a maximum density of 450 adults per sq. km at Chagai (2912N/6443E) south of the Afghanistan border.

During the first half of June, scattered adults were seen at a total of 22 locations of Turbat, Pasni and Tharparkar with a maximum of 600 adults per sq. km at Watta Dohra (2527N/6638E) on 1 June. This was the first report of infestations in the summer breeding areas.

## INDIA

During the second half of May, isolated adults at densities of 25-350 per sq. km were reported in six locations of Jaisalmer, Bikaner and Churu districts with a maximum at Rustam (2746N/7124).

During the first half of June scattered adults continue to be reported in the above locations of Rajasthan with a maximum density of 375 per sq. km at Rustam (2746N/7124E) in Jaisalmer. During the second half, infestations were only reported at two locations of Bikaner district with a maximum density of 225 adults per sq. km at Shamrhu Ka Burj (2739N/7226E).

## IRAN

A late report stated that no locusts were present during March and April.

**No locust information had been received from other countries in the region up to 30 June.**



## WEST AFRICA

### MAURITANIA

The situation in the north should become clear early in the forecast period as any remaining swarms will have moved further south. Infestations are expected to increase in the south in areas of green vegetation as a result of immature swarms arriving from the north. These swarms will mature and lay on a small, perhaps moderate, scale with the onset of the seasonal rains and hopper bands may appear by the end of the forecast period.

### MALI

Infestations are expected to increase early in the forecast period in the northern Adrar des Iforas as a result of adults groups and perhaps a few small swarms arriving from further north. At this stage, however, it is difficult to assess the potential scale of the migration from the north. These populations will mature and lay with the onset of the seasonal rains towards the end of the forecast period. Southern circuit swarms present in the south-west will move through the Niger River area towards Gao; however, these are not expected to constitute a significant threat.

### NIGER

Infestations are expected to increase early in the forecast period in northern Tamesna as a result of adult groups and perhaps a few small swarms arriving from further north. Although at this stage it is difficult to assess the potential scale of the migration from the north, any adults arriving will mature and lay with the onset of the seasonal rains. A small number of additional swarms may appear along the ITCZ and could move further east during the forecast period as a result of migration of southern circuit swarms from the west and these may lay in areas of green vegetation.

### CHAD

A few isolated adults may be present in Tibesti and adjacent areas to the south and, if so, will lay with the onset of the seasonal rains; however, no significant developments are expected. There is a low probability of a few small swarms appearing from the west along the ITCZ.

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

No significant developments are likely.

## NORTH-WEST AFRICA

### **MOROCCO**

Current infestations will decline further as a result of control operations, unfavourable breeding conditions and migration towards the Sahel; consequently, only a few isolated adults are likely to persist by the end of the forecast period.

### **ALGERIA**

Current infestations will decline as a result of control operations, unfavourable breeding conditions and migration towards the Sahel; consequently, only a few isolated adults are likely to persist by the end of the forecast period.

### **TUNISIA and LIBYA**

No significant developments are likely.

## EASTERN AFRICA

### **SUDAN**

Low numbers of adults are expected to appear in the summer breeding areas of central and western Sudan during the forecast period and lay with the onset of the seasonal rains. Although the scale is unlikely to be large, surveys in all areas are advised. There is a very low probability that a few small swarms may appear from the west in Northern Darfur.

### **ERITREA**

A few isolated adults may persist in any areas that remain green on the Red Sea coastal plains and adjacent interior areas; however, no significant developments are expected.

### **ETHIOPIA**

A few isolated adults may occur in the Railway Area and breed in areas of recent rains.

### **SOMALIA**

A few isolated adults may persist and breed in a few places along the northern coast in areas of green vegetation; however, no significant developments are expected.

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

No significant developments are likely.

## NEAR EAST

### **SAUDI ARABIA**

A few isolated adults may be present on the southern Tihama near Jizan.

### **YEMEN**

A few isolated adults may be present on the Red Sea coastal plains as well as those east of Aden and in the interior desert areas from Shabwa to Marib.

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

No significant developments are likely during the forecast period.

## SOUTH-WEST ASIA

### **PAKISTAN**

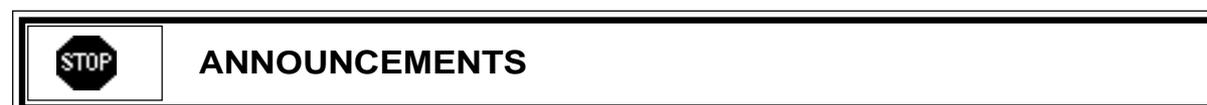
Infestations in Baluchistan will decline and no further developments are expected as adults move towards the summer breeding areas along the Indo-Pakistan border. Low numbers of adults are expected to appear in the Sind-Tharparkar area and lay with the onset of the monsoon rains during the forecast period.

## **INDIA**

Current infestations will persist in Rajasthan and locust numbers are expected to increase as adults appear from the west and lay with the onset of the monsoon rains. However, infestations are expected to remain on a small scale.

## **AFGHANISTAN and IRAN**

No significant developments are likely during the forecast period.



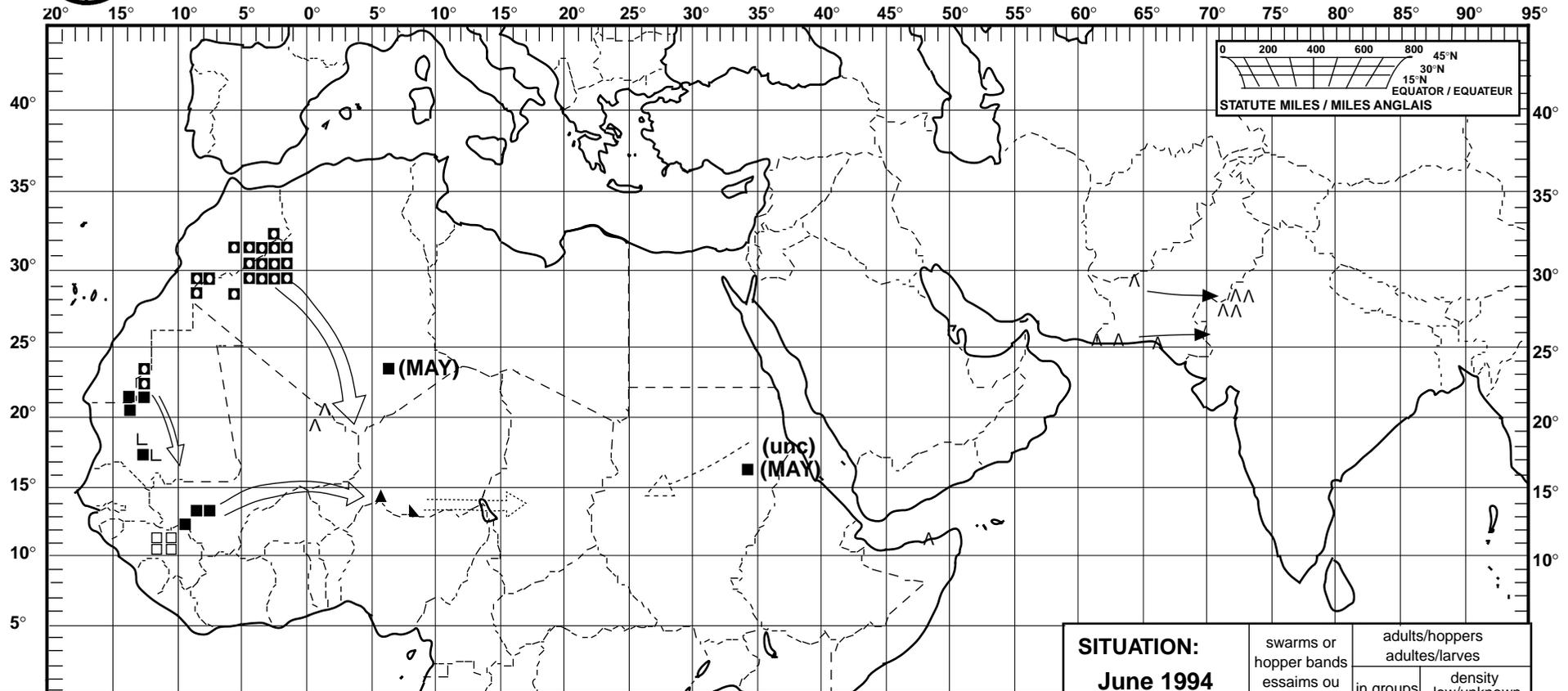
Recent reports indicate an emerging threat from Red Locust in Tanzania, Zambia and possibly Mozambique. Swarms of Red Locust have recently been reported in the traditional outbreak areas of Wembere, Malagarasi and Rukwa and there also has been an indication of migration by swarms from these outbreak areas. FAO will be monitoring the situation closely.

4 July 1994



# Desert Locust: summary No. 190

## Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.8.94	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: June 1994 juin 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)	◼	◉	◍