



# FAO



## EMERGENCY CENTRE FOR LOCUST OPERATIONS

### DESERT LOCUST BULLETIN No. 177



A potentially serious Desert Locust situation has developed during May in the Horn of Africa and in adjacent areas of south-western Arabia. Numerous small swarmlets, some mixed with *Locusta*, were present in northern Somalia and in eastern Ethiopia. In Yemen, several swarms appeared and laid in interior desert areas where, by the end of the month, hopper bands were reported. A few swarms were also reported in the central highlands. During the forecast period, populations are likely to continue to breed and small swarms may form and accumulate in northern Somalia, the Railway area of eastern Ethiopia and in the interior of south-western Arabia while others could spread west into the summer breeding areas of Sudan, Eritrea and northern Ethiopia and scattered adults could move into the Indo-Pakistan monsoon breeding area.

Large-scale control operations continued against hopper band infestations in the central interior of Saudi Arabia where rains occurred throughout the month. Surveys in adjacent areas to the north and east did not detect any locusts and it is expected that the majority of current infestations can be contained and, thus, reducing the risk of large numbers of adults moving out of the areas towards summer breeding areas of North-East Africa and South-West Asia.

Elsewhere, no significant infestations were reported. In South-West Asia, only scattered adults were present in Pakistan and India where locust numbers are expected to increase in the Thar Desert with the onset of the monsoon. In West Africa, low numbers of adults are expected to appear in traditional summer breeding areas during the forecast period and start to lay when the seasonal rains occur.

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.

During May, good rains continued to fall in central Saudi Arabia and further south in Yemen. Most of these rains were associated with eastward-moving Mediterranean depressions or local depressions which drew warm, humid air northwards from the Indian Ocean. Unusually heavy rain was reported from the edge of the Empty Quarter in Saudi Arabia where Sharawrah received 34 mm on 2 May. During the second decade, light to heavy rains fell in the central and northern interior (Al-Ahsa reported 95 mm and Al-Khushariya 24 mm on the 12th, and Hail 24 mm on the 19th), on the eastern side of the Asir Mountains (Al-Baha received a total of 65 mm on 10-15 May, and Najran reported 21 mm on the 15th), and in the central highlands of Yemen (Sanaa reported 112 mm on the 16th) and Shabwah region where heavy rains fell on the 13-15th.

As a result of these rains, breeding conditions continue to remain favourable in the central interior of Saudi Arabia and are improving east of the Asir Mountains and in the Shabwah area of Yemen. Conditions are becoming unfavourable for breeding along the coastal plains of Aden and are reported to be dry along the Tihama of Saudi Arabia and Yemen. In eastern Arabia, breeding conditions are unfavourable in Oman and the United Arab Emirates.

Light to moderate rains fell along the coastal plains and highlands of Eritrea during the second decade. Aerial surveys indicated that wadis were flooded and green vegetation was present along most of the coastal plains. Light rains were reported on the southern Red Sea coast of Sudan on the 11th; however, conditions are said to be generally dry and not favourable for breeding.

In eastern Africa, rains associated with several local depressions fell throughout the month in the Dire Dawa area of eastern Ethiopia and probably at times over northern Somalia. Djibouti received 17 mm on the 12-13th. Breeding conditions are reported to be favourable over a large area extending from eastern Ethiopia to Djibouti and northern Somalia.

Throughout the month, the ITCZ remained around 15°N over the Sahel of West Africa and Sudan, except during the 26-28th when it moved up to 18°N. Light to moderate rains were reported from Chad (N'Djamena received 21 mm on the 24th and 17 mm on the 26th) and eastern Sudan (Kassala reported 7 mm on the 18th and Gedaref 13 mm on the 28th). However, there was no indication that the seasonal rains have started in the summer breeding areas.

In North-West Africa, only light rains occurred at times during the month north of the Atlas Mountains and in northern Mauritania where Bir Moghreïn received 13 mm on the 10-11th. However, conditions were reported to be dry.

In South-West Asia, light rainfall occurred in Rajasthan of India during the first half of May; however conditions continue to remain dry. South-westerly winds, which contribute to the Indo-Pakistan summer monsoon, developed over the western Indian Ocean on the 16th and continued throughout the month.



## AREA TREATED IN MAY 1993

Egypt	2,200 ha
Ethiopia	no details available
Saudi Arabia	107,800 ha (April)
Yemen	15,000 ha (April) and 10,000 ha (May)



## WEST AFRICA

### MAURITANIA

No surveys were undertaken; however, two adult locusts were found in Aioun El Atrous on 11 May.

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

## NORTH-WEST AFRICA

### MOROCCO

Three mature adults were found in the Goulmim (3142N/0457W) area on 24 April.

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

## EASTERN AFRICA

### SUDAN

A few scattered immature adults were reported on the coastal plains of the southern Red Sea coast in early May.

### ERITREA

During the second half of April and first half of May, high densities of hoppers, up to 10 per sq. m., and adults, up to 2,500 per ha, were reported from a few places along the Eritrean coastal plains, mainly near Karora, north of Massawa, and in the Zulu area. Some infestations were mixed with *Locusta*.

### ETHIOPIA

From 22 April to 15 May, several swarmlets of *Locusta* mixed with Desert Locusts were reported in the Railway area of the eastern region from Erer (0933N/4125E), west of Dire Dawa, to Aiscia (1045N/4237E) near the Djibouti and Somali borders as well as further south on the edge of the Oga-den near Daghabur (0811N/4331E) and Awareh (0816N/4411E).

### DJIBOUTI

Small infestations of *Locusta* mixed with a few Desert Locusts were reported from several areas including the capital from mid April up to 15 May.

### SOMALIA

In late April, mixed infestations of *Locusta* and Desert Locust were present on the north-western coastal plains between Berbera and Zeila (1121N/4329E) where several late instar hopper bands were seen marching. The largest was estimated to be 180 x 130 m. in size. In the same area, four swarms were seen flying south on the 20th.

During the first half of May, numerous swarmlets were seen flying west towards the Ethiopian border from the coastal plains near Bulhar (1022N/4426E) and in the interior near Borama (0957N/4311E). Some swarmlets were reported to be copulating in areas of recent rains.

### KENYA, TANZANIA and UGANDA

No locust activity was reported up to 15 May.

## NEAR EAST

### SAUDI ARABIA

Infestations of small hopper bands of 1-2 ha continued to persist in the central interior area of 2400-2700N/4000-4400E and have reached the fourth instar by 11 May. Control operations are in progress

using 57 ground teams, 2 aircraft and 2 helicopters. Some hatching is still being reported in some areas. Surveys in peripheral areas to the north, south and east have not detected any populations. On the Tihama, the situation has improved with only a few scattered adults present near Qunfidah.

## YEMEN

A late report indicated that a few immature adults were seen on the Tihama near Wadi Hayran (1644N/4258E) on 19 April and south of Hodeidah the following day.

In the central highlands, an immature swarmlet was seen over Taiz (1333N/4403E) and Ibb (1358N/4412E) on 2 May and there were reports of a mature swarm over Sanaa and copulating locusts south of Sada'a (1625N/4343E). To the east in the Shabwa area, several mature swarms arrived and began laying in the Baihan, Ganh and Nuqub valleys and near Nisab on 3-5 May and again on the 15-17th. On the 23rd, first to third instar hopper bands were reported in these areas. Mature adults were also seen near Marib (1524N/4520E) and Safir (1533N/4550E).

Infestations persisted on the coastal plains west of Aden, where fifth instar hopper bands were reported from three locations near Al Waht (1258N/4453E) and a few fledglings were seen in the Gawalah area on the 22nd. Ground control operations were in progress.

## EGYPT

Small infestations of hopper bands and swarmlets continued to persist along the southern Red Sea coastal plains in early May where control operations were in progress.

## OMAN

On 17 May, five yellow adults were seen at the base of the Wahiba Sands in Wadi Batha (2224N/5850E) and a few fifth instar hoppers were found in Wadi Hasid (2206N/5935E).

## KUWAIT

No Desert Locusts were reported up to 31 May.

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

## SOUTH-WEST ASIA

### IRAN

A late report stated that scattered adults, at a density of 150 per sq. km were seen on the south-eastern coastal plains near Poshty, Birdaf and Darak during February.

### PAKISTAN

During the second half of April, low densities of solitary adults were reported from 13 locations of coastal and interior areas of the Mekran with a maximum density of 600 adults per sq. km at Kuntardar (2555N/6235E) in Turbat district on the 24th.

During the first half of May, similar populations persisted on the Mekran and in Lasbela district with a maximum of density of 450 adults per sq. km at Siahdad (2550N/6448E) in Turbat district on the 10th.

### INDIA

During the second half of April, scattered adults were reported from 3 locations in Bikaner district with a maximum density of 150 adults per sq. km at Dharnok (2732N/7304E) on the 20th.

During the first half of May, extremely low densities of solitary adults were reported from Bikaner district of Rajasthan and Banaskantha district of Gujarat with a maximum density of 75 adults per sq. km at Naurangdesar (2805N/7331E) and Madogarh (2750N/7249E) in Bikaner district on the 15th.

No locusts were reported during the second half of May.

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



## FORECAST UNTIL MID-JULY 1993

### WEST AFRICA

#### **MAURITANIA**

Low numbers of adults are likely to appear in summer breeding areas of the south, mainly in the two Hodhs, Tagant and Trarza and start to breed when the seasonal rains begin.

#### **MALI**

Low numbers of adults are likely to appear in summer breeding areas of Adrar des Iforas and Tamesna and start to breed when the seasonal rains begin.

#### **NIGER**

Low numbers of adults are likely to appear in summer breeding areas of Tamesna and start to breed when the seasonal rains begin.

#### **CHAD**

Low numbers of adults may appear in summer breeding areas, mainly in Lake, Kanem, Batha, Biltine and Ouaddaï and start to breed when the seasonal rains begin.

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

No significant developments are likely.

### NORTH-WEST AFRICA

#### **ALGERIA**

Low numbers of adults may appear in the south near Tamanrasset and lay if rainfall occurs.

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

No significant developments are likely.

### EASTERN AFRICA

#### **SUDAN**

Low to moderate numbers of adults are likely to appear in summer breeding areas of Eastern Region and move west toward White Nile, Northern Kordofan, and Northern Darfur Provinces and start to lay once seasonal rains commence. Populations may be augmented by a few swarmlets arriving from infestations in the Horn of Africa during the forecast period.

#### **ERITREA**

Low numbers of adults are expected to persist along the coastal plains in areas of remaining green vegetation while others may move westwards.

#### **ETHIOPIA**

In the eastern region, the situation remains unclear; however, current populations are expected to be breeding in areas of recent rainfall with the possibility of new swarms forming by the end of the forecast period. Most of the current infestations are thought to be mixed with *Locusta*, and some may be augmented by swarmlets from adjacent areas of northern Somalia. During the forecast period, infestations are expected to spread further east towards northern Somalia.

#### **DJIBOUTI**

Low numbers of locusts are expected to persist in areas of green vegetation and are likely to be augmented by additional adults and perhaps a few swarmlets from adjacent areas.

## **SOMALIA**

The situation remains unclear; however, mixed swarmlets of Desert Locusts and *Locusta* are expected to continue to form and lay in areas of green vegetation along the northern coastal plains and the escarpment. Populations will probably accumulate in this area during the forecast period and may be augmented by those from adjacent areas to the west and north-west.

## **KENYA, TANZANIA and UGANDA**

No significant developments are likely.

## **NEAR EAST**

### **SAUDI ARABIA**

Locust numbers are likely to decrease in the central interior as a result of conditions becoming unfavourable and due to control operations, and by the end of the forecast period, only a few scattered adults are expected to persist. Low numbers of adults may be present or appear in areas of recent rainfall near Wadi Najran and adjacent areas of the extreme south-west.

### **YEMEN**

As a result of current breeding, locust numbers are expected to increase in the Shabwah area and form several small swarms which could start to lay by the end of the forecast period. Infestations are likely to spread further north towards Wadi Al-Jawf and east towards Wadi Hadhramaut where they will lay in any areas of recent rains. A few swarmlets may appear in the central highlands and small infestations are likely to persist on the coastal plains near Aden where populations may be augmented by adults and perhaps a few swarmlets coming from north-western Somalia.

### **EGYPT**

A few scattered adults may persist on the southern Red Sea coastal plains.

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

No significant developments are likely during the forecast period.

## **SOUTH-WEST ASIA**

### **PAKISTAN**

Locust numbers will continue to decrease on the Mekran as adults move towards the summer monsoon breeding areas of Cholistan and Tharparkar deserts where they are expected to appear during the forecast period and start to lay once the monsoon begins.

### **INDIA**

Locust numbers will increase as a result of small-scale movement of adults from the west and start to lay late in the forecast period once the monsoon begins.

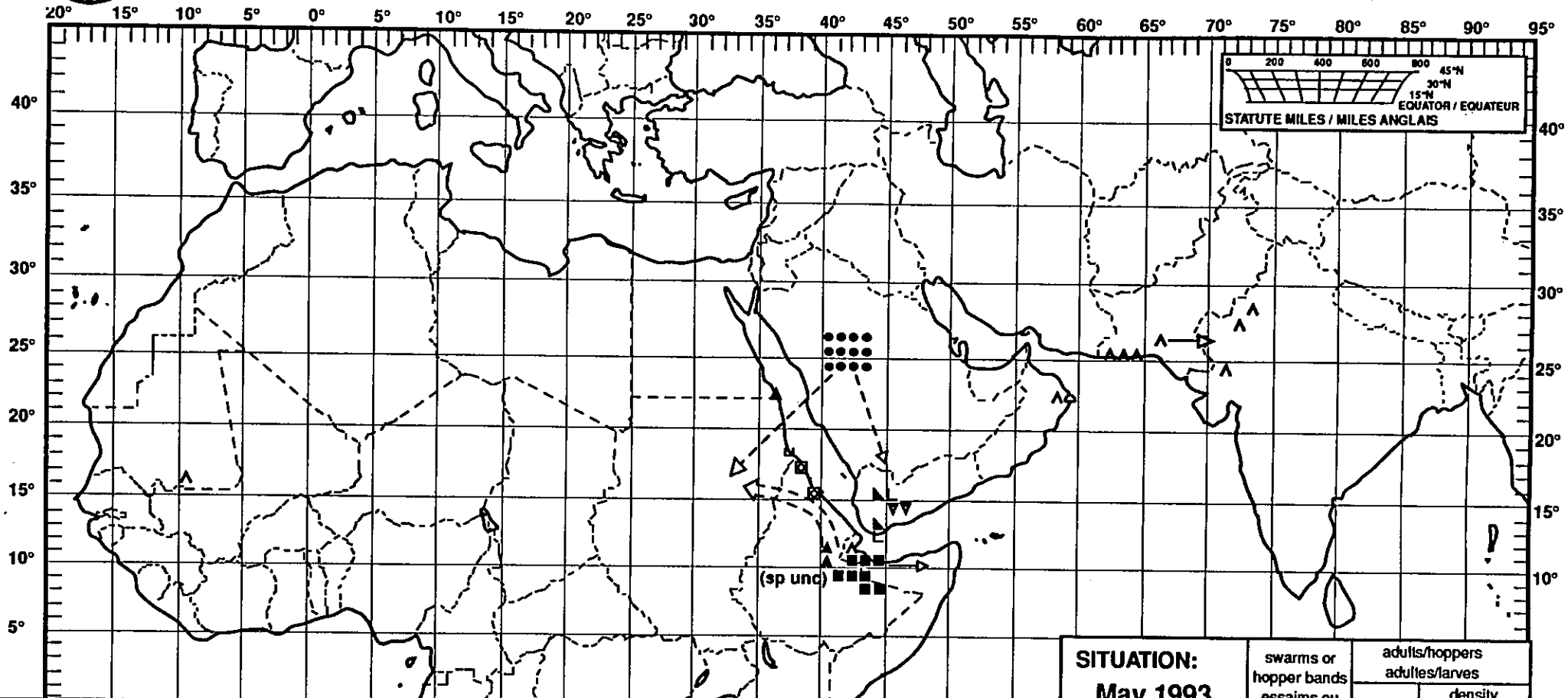
## **IRAN and AFGHANISTAN**

No significant developments are likely during the forecast period.



# Desert Locust: summary Criquet pèlerin: situation résumée

## No. 177



FORECAST TO: PREVISION AU: 15.7.93	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: May 1993 mai 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 pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			