



# FAO



## EMERGENCY CENTRE FOR LOCUST OPERATIONS

### DESERT LOCUST BULLETIN No. 202



#### GENERAL SITUATION DURING JUNE 1995 FORECAST UNTIL MID-AUGUST 1995

The current Desert Locust upsurge in North-West Africa has spread to West Africa. Locusts that escaped survey and control operations in the spring breeding areas of North-West Africa first appeared in central Mauritania in about mid May where groups of adults and a few swarms were reported. This was followed by an increasing number of reports during the second half of May and throughout June of immature swarms moving south in central and southern Mauritania. Two swarms crossed into northern Senegal in late June and others have almost certainly crossed the southern border of Mauritania into western Mali. Other swarms were seen arriving from the north in northern Mali and northern Niger during the first half of June. Most of the swarms were small, low density and highly mobile as a result of prevailing dry conditions in the northern Sahel prior to the beginning of the summer rains. Consequently, control operations were not implemented in Mauritania and Mali.

Additional adult groups and swarms are expected early in the forecast period primarily in Mauritania and to a lesser extent in Mali and Niger. Some swarms may move into northern Senegal during periods when the ITCZ is unusually far south. The swarms are likely to disperse and rapidly mature and lay with the onset of the seasonal rains.

In North-West Africa, large scale control operations continued against immature swarms and hopper bands during May and the first three weeks of June in Morocco where more than 97,000 ha were treated. Control operations also continued, but on a smaller scale, in Algeria and to a lesser extent in the adjacent border areas of Libya. The situation is expected to improve in the Region during the forecast period as a result of control, emigration and increasingly dry vegetation conditions in the infested areas.

In North-East Africa, small scale control operations were carried out in late May against infestations persisting in a few places of southern Egypt. In Sudan, scattered locusts and perhaps a few groups of adults are expected to appear in the summer breeding areas of the western and central regions.

In South-West Asia, current information suggests that the summer monsoon has not yet commenced in the Indo-Pakistan locust breeding areas where only scattered adults are present.

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

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## WEATHER & ECOLOGICAL CONDITIONS DURING JUNE 1995

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, very little significant rainfall occurred in the Desert Locust recession area. Seasonal rains in the spring breeding areas of North-West Africa, the Red Sea and South-West Asia have come to an end and temperatures were reported to be increasing. As a result, ecological conditions were reported to be drying up in most of the currently infested areas in Morocco, Algeria and Libya. However, green vegetation may persist a bit longer in western Libya north of Ghat which received moderate rains in early June and in some wadis of central Algeria due to runoff from rains that fell in the Hoggar Mountains late in the month. Conditions were reported to be dry or drying up in previously infested areas on the coastal plains and sub-coastal valleys along both sides of the Red Sea and in the coastal and interior areas of Baluchistan in Iran and Pakistan.

Dry conditions prevailed in the summer breeding areas of the Sahel of West Africa and Sudan and in the Indo-Pakistan desert as seasonal rains have yet to commence. In West Africa, the ITCZ moved progressively northwards throughout the month. At the beginning of June, it was located well south of 15°N. However, at times the ITCZ fluctuated further north as a result of low pressure over the western Mediterranean. The most extreme example of this was on 20-22 June when it was located over Gambia and southern Senegal (13°N) and over Mauritania as far north as Tiris-Zemmour (22°N), over Mali at Taoudenit (23°N), south of Tamanrasset, Algeria and north of the Air Mountains (20°N) in Niger. North of these locations the prevailing winds were from the north-east. By the end of the month, the ITCZ was oscillating between 16-17°N.

Isolated light rains fell at a few places in southern Mauritania during June but not enough to improve the ecological conditions for breeding. Vegetation was dry in most areas except for north of Nema and near the Malian border at Djiguenni where sprouting vegetation was reported. In northern Mali, light rain fell in the Tilemsi Valley and adjacent areas of the western Adrar des Iforas early in the month while heavier rains fell on the 30th; for example, Tessalit received 22 mm. Breeding conditions in the Adrar des Iforas should start to improve. Dry conditions were reported in northern Niger as a result of a lack of rainfall during the month.

Isolated light to moderate rainfall was reported from a few places of western and central Sudan, primarily En Nahud, El Obeid, Umm Siayala and Bara in Northern Kordofan, El Fasher in Northern Darfur and in Ed Dueim and Wad Medani in the central region. The heaviest rains were near the Chad border at Geneina where 49 mm fell on the 27th. Heavy clouds were also seen over north-western Kordofan near Hamrat Esh Sheikh at the end of the month. Consequently, conditions are expected to be improving in a few areas of Northern Kordofan and Northern Darfur.

In Oman, vegetation was reported to be dry or drying up along the Batinah coastal plains north-west of Muscat and in all interior areas.

In South-West Asia, extremely high temperatures were reported in the summer breeding areas of India and Pakistan. Although there was no evidence to suggest that the monsoon rains had started, Jaisalmer reported 22 mm of rain on 21 June.



## AREA TREATED IN JUNE 1995

Algeria	8,799 ha	(21-31 May)	Morocco	63,922 ha	(1-31 May)
	14,155 ha	(1-30 June)		53,602 ha	(1-20 June)
Egypt	2,300 ha	(19-25 May)	Niger	600 ha	(12 June)
Libya	1,173 ha	(29 May - 20 June)	Saudi Arabia	22,474 ha	(1-30 April)



## DESERT LOCUST SITUATION

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

### WEST AFRICA

#### MAURITANIA

Immature swarms were first reported coming from the north on 12-13 May at Choum (2120N/1301W) and Atar (2030N/1303W). From mid May onwards, several other swarms were reported flying south from the Adrar region to Trarza, Brakna and Tagant: near Tichit (1825N/0930W) on 17 May, in the Moudjeria (1752N/1220W) area on the 22-26th, north-east of Nouakchott on the 26th and south-east of Nouakchott on the 27th. Swarms were also seen in the Hodh El Charghi region flying south near Nema (1637N/0715W) on the 28th and by the end of the month small groups of adults were also reported there.

Throughout June, scattered immature adults, groups and swarms continued to move south into the central and southern regions. There were nearly 60 reports of swarms, most of them seen moving southwards in Adrar, Inchiri, Tagant, Trarza, Brakna, Assaba, Gorgol and Hodh El Charghi. Some adult groups and swarms first reached the Senegal River Valley on the 10th at Bogue (1635N/1415W). Other groups and swarms reached the Malian border south of Aioun El Atrous (1638N/0936W) and Nema from the 11th onwards. Additional swarms and scattered adults were reported east of Nema to the Malian border as well as to the north-east. Most of the swarms were small with densities less than 50 per sq. metre, highly mobile and probably covered a total area of less than 10,000 ha.

#### MALI

On 5 June, a maturing swarm was seen in the Adrar des Iforas west of Aguelhoc at In-Emsel (1928N/0048E) where damage was reported on vegetation. Some locust adults were also reported at Aguelhoc (1928N/0052E) moving from the north to the south on the same day. Another swarm arrived on the 7th north of Aguelhoc. Nomads reported seeing swarms between Tombouctou and the Mauritanian border during June.

#### NIGER

In early June, swarms continued to appear from the north in the Air. A 5 km long swarm was seen between Agadez and Arlit at 1809N/0733E on the 9th. Control operations were carried out on 600 ha against a swarm near Arlit on the 12th.

#### SENEGAL

Solitary adults, at densities of 5-10 per ha, were seen on 26 May covering 800 ha near Podor (1639N/1458W). On 20 June, a low density maturing swarm of 50-350 adults per tree entered the Senegal River Valley at Podor from the north and was seen on 1,500 ha. This swarm moved west to Dagana (1630N/1530W) on the 21st. A second swarm was seen near Podor on the 22nd flying west.

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

### NORTH-WEST AFRICA

#### MOROCCO

During May, control operations increased in the infested areas of Guelmim (2858N/1005W), Tata (2948N/0758W), Ouarzazate (3035N/0655W), Errachidia (3127N/0424W) and Bouarfa (3233N/0126W) south of the Atlas Mountains. There were a total of 204 sightings of hopper bands and 167 sightings of immature and mature swarms. Hopper band size varied from less than 1 ha to 3,500 ha with up to 150 hoppers per sq. metre; although most bands were less than 20 ha with under 50 hoppers per sq. metre. Swarm size varied from 5-2,000 ha and were as dense as 60 adults per sq. metre; however, most swarms were less than 500 ha with about 15 adults per sq. metre. Nearly all of these were treated, totalling more than 42,000 ha of swarms and 21,000 ha of bands. Hatching was still in progress up to 26 May. Swarms first started moving south by mid month and had reached the Tichla area (2133N/1435W) on 15 May. By the end of the month, most of the remaining infestations were newly formed swarms.

During 1-20 June, control operations continued in the above areas, treating 100 hopper bands covering nearly 19,000 ha and 131 immature swarms on more than 34,000 ha. The average size of hopper bands was 190 ha with a density of 14 hoppers per sq. metre. Swarms varied in size from 1-2,100 ha; however, most of the swarms were about 250 ha in size with an average of 13 adults per sq. metre. The majority of the swarms were in the Tata area whereas most of the hopper bands were concentrated in the Errachidia and Guelmim areas.

## **ALGERIA**

During the last decade of May, new infestations of immature adults and swarms were reported in the central Sahara and in the Saoura Depression between Tindouf (2742N/0810W) and Adrar (2751N/0019W). Infestations varied from 3-1,700 ha in size although most were less than 100 ha. Densities up to 100 hoppers per sq. metre were reported. By the end of the month, adult densities had increased to 150 per sq. metre in some places. Control operations treated nearly 9,000 ha mostly in the Bechar (3135N/0217W), Tamanrasset (2250N/0528E), Tindouf and Adrar areas of central and western Algeria. Smaller control operations were carried out in the Ouargla (3200N/0516E) and Illizi (2632N/0830E) areas of the eastern region.

During June, infestations progressively declined in most areas although hoppers and adults continued to be reported mainly near Adrar and to a lesser extent Bechar and Djanet (2434N/0930E). A number of immature adult groups and swarms were seen moving south during the first decade of the month. By mid month, most all hopper infestations had fledged and formed new adults. There were no additional reports of hoppers after the 16th. By the end of the month, only small immature adults and groups persisted primarily in the irrigated perimeters near Adrar and In Salah and their size and density had decreased to less than 50 ha and less than 20 per sq. metre. Control operations treated more than 14,000 ha during the month.

## **LIBYA**

Control operations were carried out against groups of hoppers and immature adults close to the Algerian border near Ghat (2459N/1011E) on 857 ha and east of Ghadames (3010N/0930E) on 180 ha from 29 May to 20 June. Operations also treated 100 ha of immature adult groups in the south-east at Khofra oasis (2415N/2318E).

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

## **EASTERN AFRICA**

### **SUDAN**

During the second half of May, scattered mature adults, at densities of 120-240 adults per ha, were seen at two locations south of Tokar Delta near Aqiq. Isolated adults were reported in a few wadis along the coastal plains between Tokar Delta and Port Sudan. No locusts were reported in Tokar Delta.

No locusts were seen during surveys on the central and southern coastal plains of the Red Sea on 5-10 June. No locusts were reported in Northern Kordofan.

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

## **NEAR EAST**

### **EGYPT**

Ground control operations continued in late May against low density hopper bands in Abu Tartour (2528N/2924E) and Owainet (2240N/2845E) oases in the South-West Desert. Solitary maturing adults were present near Lake Nasser, on the western side of the Red Sea Hills and on the south-eastern coastal plains of the Red Sea near Shalatein (2308N/3536E) and Abu Ramad (2221N/3626E). No locusts were seen during surveys in late May in the southern Sinai.

### **SAUDI ARABIA**

A late report indicated that control operations were carried out against swarms and bands in the mountains on the northern Tihama between Badr (2343N/3850E) and Yanbu (2407N/3802E) within a 400 sq. km area during April. Several swarms moved into the central interior in late March and early April where control was carried out near Hail (2726N/4141E) against two small mature swarms. Some swarms were reported to

be copulating and laying. Isolated solitary locusts were seen from Hail to Afif (2353N/4259E) and in a few places along the southern Tihama and adjacent mountains. More than 22,000 ha were treated during April.

## OMAN

No locusts were found during surveys carried out in the northern coastal and interior areas of Sur, Ras Al Had, Ibra, Ibri, Nizwa and Sohar during the first half of June.

## IRAQ

The unconfirmed report of locusts in the south (Bulletin No. 200) in late April was confirmed as grasshoppers.

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

## SOUTH-WEST ASIA

### PAKISTAN

During the second half of May, low density adults were present at 25 locations in the interior and coastal areas of Baluchistan. The largest infestations were reported from the Chagai area of Nushki district where up to 36 adults were seen at a total of 10 locations. Isolated adults were reported from Khuzdar, Turbat, Gwadar and Lasbela districts.

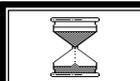
During the first half of June, locusts were reported from a total of 6 locations in the spring breeding areas near Pasni and Nushki. Isolated adults were first seen in the summer breeding areas of Cholistan at three locations with a maximum of 18 adults reported at Balwala Toba (2916N/7150E) on 10 June.

### INDIA

Late reports indicated that isolated adults were present in Jalore district of Rajasthan at Sanchoe (2445N/7146E) on 4 May and at one place each in Jaisalmer and Bikaner districts during the second half of May.

During the first half of June, isolated adults were reported from one place each in Jaisalmer, Jalore and Bikaner districts of Rajasthan. A maximum of four adults was seen at Asutar (2713N/7009E) and Sanchoe (2445N/7146E).

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



## FORECAST UNTIL MID-AUGUST 1995

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

Additional swarms are expected to appear in the central and southern regions early in the forecast period where they will mature rapidly and lay with the onset of the summer rains. By the end of the forecast period, hoppers bands are likely to form on a moderate scale.

### MALI

Adult groups and a few swarms are almost certainly present south of the Mauritanian border between Niore and Nara. A few additional adult groups and swarms are expected to appear early in the forecast period in the north, primarily in the Adrar des Iforas and Tamesna, and in the west where they will mature rapidly and lay with the onset of the summer rains. By the end of the forecast period, hoppers bands are likely to form on a small scale.

**NIGER**

A few additional adult groups and swarms are expected to appear early in the forecast period in the north, primarily in Tamesna and the Air, where they will mature rapidly and lay with the onset of the summer rains. By the end of the forecast period, hoppers bands are likely to form on a small scale.

**CHAD**

Scattered adults and perhaps a few small adult groups may appear early in the forecast period in the north, primarily BET, and lay with the onset of the summer rains. By the end of the forecast period, hoppers are likely to be present.

**SENEGAL**

A few additional adult groups and swarms are likely to appear early in the forecast period in the north. However this movement is only likely to occur during times when the ITCZ is unusually far south of Dakar. Any infestations that appear will rapidly mature and lay with the onset of the summer rains resulting in hoppers and perhaps small bands by the end of the forecast period.

**BURKINA FASO, CAMEROON, CAPE VERDE, GAMBIA, GUINEA BISSAU and GUINEA CONAKRY**

No significant developments are likely.

**NORTH-WEST AFRICA****ALGERIA**

Current infestations are expected to further decline early in the forecast period due to control and emigration and as ecological conditions become unfavourable. There is a possibility that small numbers of adults will persist in any areas that remain green, primarily near Adrar, In Salah and in the wadis near the Hoggar Mountains.

**MOROCCO**

Current infestations are expected to further decline during the forecast period due to control and emigration and as ecological conditions become unfavourable. There is a possibility that small numbers of adults will persist in any areas that remain green south of the Atlas Mountains.

**LIBYA**

Current infestations are expected to further decline early in the forecast period in most areas due to control and emigration and as ecological conditions become unfavourable. There is a possibility that a few adults will persist in any areas that remain green, primarily north of Ghat.

**TUNISIA**

No significant developments are likely.

**EASTERN AFRICA****SUDAN**

Scattered adults and perhaps a few small groups may already be present in some areas of Northern Kordofan, Northern Darfur, Northern and White Nile Provinces. These are expected to be augmented by additional adults from the north and north-east early in the forecast period. Laying should commence with the onset of the seasonal rains, producing hoppers by the end of the forecast period.

**ERITREA**

Scattered adults may be present in the western lowlands and breed in areas that receive rainfall.

**SOMALIA**

Low numbers of adults may be present along the western coastal plains of the north where localized breeding may occur in any areas of green vegetation.

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

No significant developments are likely.

## NEAR EAST

**EGYPT**

Current infestations in the south are expected to decline due to control and emigration; however, there is a low possibility that some adults will persist and breed in irrigated areas.

**SAUDI ARABIA**

Although no reports were received, there is a low to moderate possibility that small scale infestations were present in the interior which by now should have declined. As a result of control and emigration, only low numbers of adults are expected to persist in previously infested areas.

**YEMEN**

Isolated adults may be present and persist along the Tihama and coastal plains of Aden.

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

No significant developments are likely.

## SOUTH-WEST ASIA

**PAKISTAN**

Locust numbers are expected to increase during the forecast period from Tharparkar to Cholistan as a result of breeding that will commence with the onset of the monsoon rains.

**INDIA**

Locust numbers are expected to increase during the forecast period in Rajasthan and parts of Gujarat as a result of breeding that will commence with the onset of the monsoon rains.

**AFGHANISTAN and IRAN**

No significant developments are likely.

**New ECLO email address**

A new email address has been established at FAO/ECLO for receiving locust reports, remote sensing and meteorological data. Those individuals or organizations who have access to email facilities and have locust and environmental information to send to ECLO should address their mail to **ECLO@fao.org**.

The other email addresses of ECLO staff remain the same:

Senior Officer: Abderrahmane.Hafraoui@fao.org  
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4 July 1995



## GLOSSARY OF TERMS

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

### Non-gregarious adults and hoppers

isolated	very few 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	enough present for mutual reaction to be possible but no ground or basking groups seen; 1 - 20 adults per 400 m foot transect (or 25 - 500 per ha). other terms: some, low numbers.
group	forming ground or basking groups; more than 20 adults per 400 m foot transect (or more than 500 per ha).

### 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

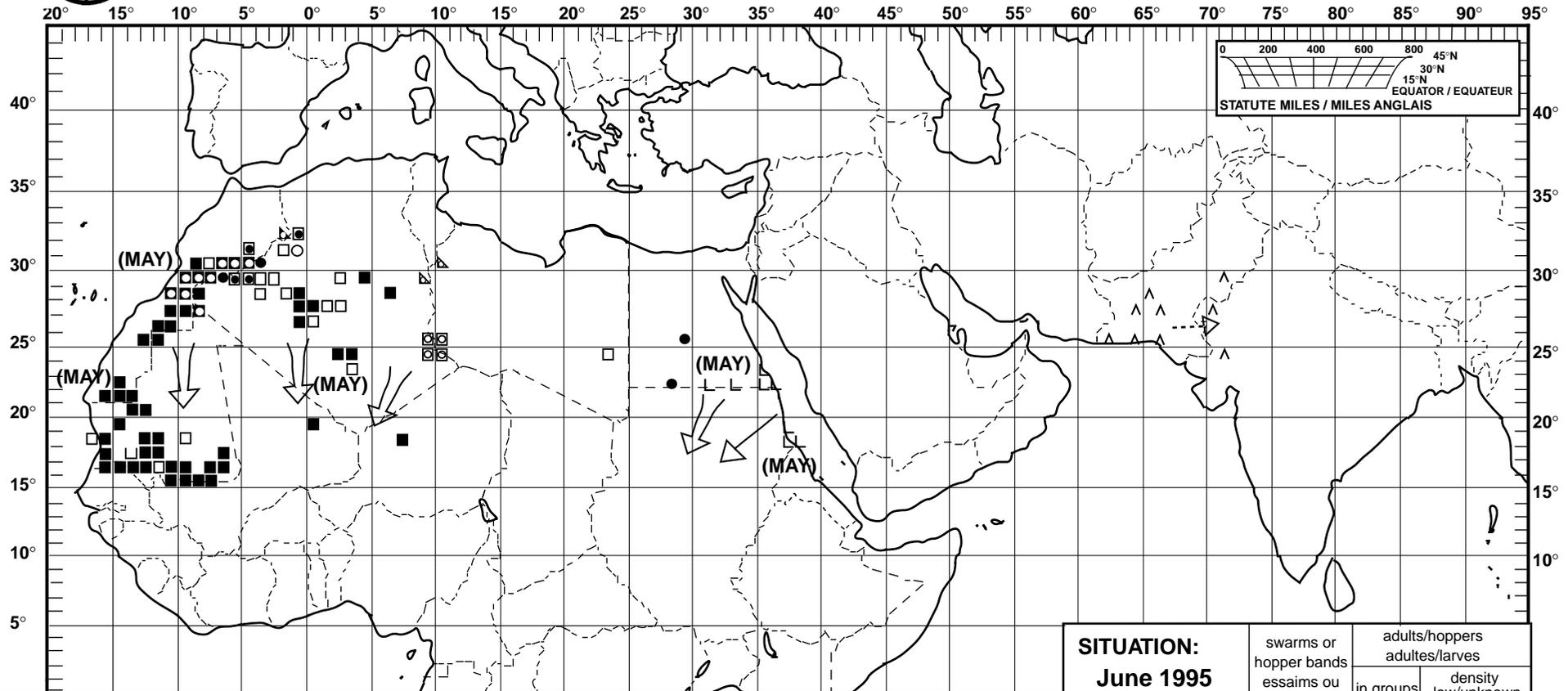
### Other reporting terms

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
decline	a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.
outbreak	a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.
plague	a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.
recession	period without widespread and heavy infestations by swarms.
remission	period of deep recession marked by the complete absence of gregarious populations.
upsurge	a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to-gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.



# Desert Locust: summary No. 202

## Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.8.95	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:</b> <b>June 1995</b> <b>juin 1995</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)			