



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 205



GENERAL SITUATION DURING SEPTEMBER 1995 FORECAST UNTIL MID-NOVEMBER 1995

New swarms of Desert Locust formed in western and northern Eritrea as well as in the adjacent areas of eastern Sudan during September. Although ground and aerial control operations are in progress, a substantial number of infestations may not be detected or controlled due to the difficulty of the terrain. Consequently, a few more swarms are expected to form in the next few weeks in the interior. Some of these swarms have started moving towards the Red Sea winter breeding areas. However, ecological conditions are currently dry on the coastal plains of Eritrea and Sudan. If rains do not occur in these areas, swarms are likely to continue across the Red Sea to the coastal plains of Yemen and Saudi Arabia where conditions are already favourable for breeding. FAO recommends that steps be immediately taken in these countries to undertake surveys and prepare for a control campaign in coastal areas.

In West Africa, most of the hopper bands that were not controlled in south-western Mauritania fledged and formed new adults and small swarms during the month. Exceptionally heavy and widespread rains fell during the second half of the month in western and northern Mauritania where up to eight times the normal amount was reported. Adult groups and small swarms are expected to move during the next few weeks from currently infested areas in the south-west towards northern Mauritania and adjacent areas of Morocco and lay in areas where the rains fell. Several swarms were seen near Nouakchott indicating that this movement has already started. At the same time, a few small swarms could also move southwards with the retreating Inter-Tropical Convergence Zone into northern Senegal where one swarm has already been reported. Small localized infestations of adults may persist and breed in south-eastern Mauritania. Elsewhere, low numbers of locusts are present in parts of Mali, Niger and Chad.

Small scale breeding has occurred in parts of western and central Sudan. Adults that are produced are expected to move during the forecast period towards the winter breeding areas along the Red Sea coastal plains.

In South-West Asia, scattered adults are present in parts of the desert along the Indo-Pakistan border as a result of small scale breeding that occurred this summer.

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 Locust, Other Migratory Pests and Emergency Operations Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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WEATHER & ECOLOGICAL CONDITIONS DURING SEPTEMBER 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.

In early September, only limited rain fell in parts of western Mauritania, eastern Mali and southern Niger. As a result, annual vegetation was reported to be drying out in most of the summer breeding areas of West Africa and Sudan. However in western Mauritania, large areas of green vegetation were present along the coast north of Keur Massene early in the month. The northern limit of this vegetation moved further north towards Nouakchott during the month, reaching up to 1730N. Further east, large areas of green vegetation were present generally south of Boutilimit, Aleg and Tamchakett, Aioun and Oualata, extending nearly to Tombouctou in Mali. Smaller patches of green vegetation were present between Magta Lahjar and Moudjeria of central Mauritania. Almost all of these were decreasing in size as the month progressed. However, green vegetation was increasing in the Rachid area near Tidjikja.

In Northern Mali, green vegetation was present in the larger wadis of the Adrar des Iforas, mainly from south of Kidal to north of Aguelhoc. There were small patches of green vegetation in the southern Tamesna of Mali north of Menaka. In Niger, vegetation was limited to small areas of Tamesna near In-Abangharit and on the western side of the Air mountains between Agadez and Arlit. There were larger areas of green vegetation in southern Niger south of Tahoua, Tanout and Diffa. Conditions were drying out in all of these areas. In Chad, patches of green vegetation were starting to dry out in northern Batha, eastern Kanem, eastern Biltine and south-west of Fada.

During the last two dekads of the month, substantial rains fell in many areas of the Sahel. The rains were unusually heavy in western and northern Mauritania from Nouakchott to Bir Mogrein. For example, Nouakchott received 117 mm, Akjoujt 88 mm, Atar 85 mm, Zouerate 107 mm and Bir Mogrein 42 mm. This is 2-8 times higher than the long term average for this time of year. Similar rains probably also fell in adjacent areas of south-western Morocco from Techla to Smara. As a result, breeding conditions are expected to improve in the next few weeks in all of these areas including parts of the El Hank region. In the summer breeding areas of southern Mauritania, vegetation that was starting to dry out will probably remain green for at least another month or so and provide conditions favourable for breeding and survival of locusts in the two Hodhs and eastern Tagant.

Light rains fell during the month in parts of eastern Sudan and western and northern Eritrea. Vegetation is expected to start to dry out in these areas during the forecast period. No rains have been reported to date on the Red Sea coastal plains of Sudan and Eritrea where conditions are generally dry except for a few small patches of green vegetation north of Massawa. However, on the eastern side of the Red Sea, conditions are already favourable for breeding in many parts of the coastal plains from Jeddah, Saudi Arabia to south of Hodeidah, Yemen as a result of recent rainfall.

In South-West Asia, light rains fell in parts of Rajasthan of India during the first half of September where conditions remain favourable for breeding.



AREA TREATED

Eritrea	12,080 ha	(20 July - 27 September)
Mauritania	25,242 ha	(1-30 September)
Oman	20 ha	(4 September)
Senegal	33 ha	(18-25 August)
Sudan	14,678 ha	(up to 22 September)



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

During the first three weeks of September, infestations of late instar hopper bands mixed with increasing numbers of fledglings were confined to south-western Trarza, primarily north of the Lake R'Kiz area (ca. 1700N/1520W) and between Mederdra (1655N/1540W) and Tiguint (1715N/1600W). During the first dekad, a few small patches of third and fourth instar hoppers and groups of adults were reported for the first time further east in three places south of Boutilimit (ca. 1655N/1455W). As a result of a significant increase in ground and aerial control operations which treated more than 21,000 ha, the situation improved progressively throughout the month in the R'Kiz and Mederdra areas and by late September only groups of immature adults persisted. Those that escaped detection and control moved towards the north and west during the last week of the month. Several mature swarms first appeared and started to lay in areas of recent rains south of Nouakchott from the 24th onwards. Some of these continued to move north along the coast to Nouakchott and beyond, reaching 1821N/1553W by the 30th. Most of the swarms were reported to be copulating and laying. The swarms were small in size, mostly less than 10 sq. km although two were estimated to be nearly 20 sq. km. Swarm density varied from 10-40 adults per sq. m. Other small groups of adults and a very small swarm moved northwards in the interior near Boutilimit reaching just south of 18N by the 26th where they were seen laying. Control operations were carried out against these infestations during the last week, treating 3,960 ha.

In the south-eastern regions, only scattered adults persisted throughout the month near Nema and in southern Tagant. Although some yellow adults were observed, no significant infestations were detected. A few copulating adults were seen north-east of Moudjeria (1756N/1216W) on the 29th.

SENEGAL

Control teams treated a total of 33 ha of residual hopper bands in the Saint-Louis (1602N/1630W) and Louga (1537N/1613W) areas on 18-25 August. No locusts were reported between 26 August and 14 September. However, an immature swarm was seen at Diatar (1638N/1455W) on the 15th which may have arrived from the north.

MALI

A late report stated that no locusts were reported in the north-east during the first dekad of August. A few isolated mature adults, up to 5-10 per ha, appeared further south near Dossi (1549N/0117W) during the second dekad, and some adults and first to third instar hoppers were reported in the Timetrine area (ca. 1926N/0021W) during the third dekad of August. There was an unconfirmed report of isolated adults near Aguelhoc (1928N/0052E) during the first dekad of September.

NIGER

A late report stated that low numbers of mature adults, some of them laying, and second to fourth instar isolated hoppers were present in the Tillabery area (1428N/0127E) during the second dekad of August. Isolated solitarious adults and hoppers were reported near Filingue (1441N/0316E) during the third dekad.

During the first two dekads of September, fourth and fifth instar hoppers mixed with fledglings were present in the extreme south-east at a few places near Kabelaoua (1358N/1258E). Densities of 3-10 locusts per sq. m. were reported over areas of 5,000 ha and localized damage occurred to crops. Scattered adults were also reported near Maradi (1330N/0706E) and scattered adults and hoppers persisted near Tillabery. The situation was unclear in Tamesna and Air where no surveys were undertaken during August and September.

CHAD

A few isolated mature adults were reported from three locations south of Fada (1711N/2136E) on 2-10 September.

No reports had been received from other countries in the Region up to 30 September.

NORTH-WEST AFRICA**ALGERIA**

A few isolated adults were reported south of Tamanrasset at 2146N/0438E between 21 August and 10 September.

No reports had been received from other countries in the Region up to 30 September.

EASTERN AFRICA**SUDAN**

Throughout August and in early September, hopper bands were maturing at several locations in Kassala Province primarily in Wadi Odi (1648-1658N/3609-3647E). Aerial and ground control operations treated a total of 16 places covering 3,040 ha on 18 August - 22 September. Those that escaped control began to form immature swarms, ranging in size from 135-800 ha, during the first half of September. By the 24th, there were a total of 18 reports of small swarms covering more than 12,000 ha.

Control operations treated a total of 5,850 ha of late instar hoppers and fledglings at six locations in Northern Kordofan near Umm Saiyala (1415N/3102E) on 31 August - 14 September. Infestations were up to 1,600 ha in size, at densities up to 75 hoppers per sq. m and 10,000 immature adults per ha. Several patches of late instar hoppers and fledglings were present south-west of Ed Damer near Homari (1622N/3515E) on 19 September.

No locusts were reported during surveys in the summer breeding areas of Northern Darfur, Ed Dueim (1400N/3220E), Kosti (1311N/3241E) and Khartoum areas up to 7 September. However, there was an unconfirmed report of a swarm near Khartoum on 20 September, which may suggest that migration has commenced towards the Red Sea coast.

ERITREA

During the first half of September, patches and bands of late instar hoppers were present in the Barka Province primarily north of Keru (1546N/3714E) and on both sides of the Barka River near Carcobet (ca. 1615N/3725E) as well as in several mountainous areas of difficult access north of Keren between the Asmat area (1620-1630N/3750-3805E) and Adoba Abi (1710N/3805E). However, the extent of the infestations is difficult to assess. Although ground and aerial control operations were launched in many places, several immature swarms formed in these regions throughout the month. A few swarms were reported south of Asmara on 14-15 September and in the Azamo plains (ca. 1450N/3910E) on the 26th which suggests that migration towards the winter breeding areas of the Red Sea has commenced. On the 30th, additional immature swarms appeared near Keren, one was estimated to be at least 8 sq. km in size. Aerial and ground operations were in progress.

No major infestations have been reported to date on the Red Sea coastal plains. However, as a result of unusual rainfall during July and August, fifth instar transiens hoppers and immature adults were seen grouping in small areas of the Shelshela plain (1556N/3905E) during the first half of September. Scattered solitary adults were also seen along the coastal plains between Shelshela and Mersa Gulbub (1625N/3910E) on the 14th and similar infestations were reported in the Karora area (ca. 1750N/3825E).

ETHIOPIA

There was an unconfirmed report of a swarm near Shire (1400N/3815E) in the Tigray Region in mid-September.

No reports had been received from other countries in the Region up to 30 September.

NEAR EAST

SAUDI ARABIA

During September, hoppers of all instars, at densities of 4-5 per sq. m., and fledglings and immature adults, at densities of 1-2 per sq. m., were reported within a total of 9,600 ha of crops near Jizan (1655N/4230E) on the 17th. A few immature solitary adults were seen flying at night near Medinah (2426N/3935E) on the 21-23rd.

OMAN

A small patch of first to third instar hoppers, covering 20 ha at a density of 25 per sq. m., was treated in the Sharqiya region near Ibra at 2243N/5841E on 4 September.

No reports had been received from other countries in the Region up to 30 September.

SOUTH-WEST ASIA

INDIA

Isolated adults persisted at six locations of Bikaner and one location of Jaisalmer districts during the second half of August, and at five locations of Bikaner, two of Jaisalmer and two of Barmer during the first half of September. A maximum of 7 adults were seen in Bikaner district at Sewra (2732N/7228E) on 7 September.

PAKISTAN

During the second half of August, scattered adults persisted at a total of 41 locations in the summer breeding areas of Cholistan and Tharparkar deserts and in Lasbela district. A maximum of 15 adults were seen at Bhorewala (2833N/7216E) in Bahawalpur district on the 25th.

During the first half of September, isolated adults continued to be reported in the above areas with a maximum of 10 adults seen at Nakti (2527N/6611E) in Uthal district on the 9th.

No reports had been received from other countries in the Region up to 30 September.



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

Current infestations are expected to decline in the south-west as adults move further west and north towards winter breeding areas. As a result, groups of adults and small swarms will almost certainly appear in areas of recent rainfall along the coast and in Inchiri, Adrar and Tiris-Zemmour regions during the forecast period. Movement further north as well as locust maturation will depend on the persistence of warm temperatures. If temperatures do remain warm, laying could start by end of the forecast period. Early in the forecast period, hopper bands are expected to form along the coast north and south of Nouakchott as well as further inland north of Boutilimit. In the two Hodhs and Tagant, scattered adults may persist and breed in areas of recent rainfall.

SENEGAL

Low numbers of adult groups and perhaps a few small swarms are likely to cross into the Senegal River Valley from the north and slowly move southwards during the forecast period with the retreating ITCZ. A few of these swarms, if mature, may lay in areas of green vegetation.

MALI

Low numbers of adults are expected to persist in the main wadis of the Adrar des Iforas and may breed in areas of green vegetation. Some concentration may occur as vegetation becomes dry.

NIGER

Low numbers of adults are expected to persist in parts of Tamesna and along the western edge of the Air and may breed in areas of green vegetation. Scattered adults may persist near Tillabery, Zinder and Diffa. Some concentration may occur as vegetation becomes dry.

CHAD

Scattered adults may concentrate and persist in remaining areas of green vegetation in northern Batha, eastern Kanem and eastern Biltine.

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

No significant developments are likely.

NORTH-WEST AFRICA**ALGERIA**

There is a low possibility of groups of adults and perhaps a few small swarms reaching the Tindouf area if temperatures remain unusually warm. Low numbers of adults may also appear in the extreme south from summer breeding areas.

MOROCCO

Low to moderate numbers of adult groups and a few small swarms are likely to appear in the extreme south-west near Tichla. Movement further north as well as locust maturation will depend on the persistence of warm temperatures. If temperatures do remain warm, laying could start by end of the forecast period between Tichla and Smara.

LIBYA and TUNISIA

No significant developments are likely.

EASTERN AFRICA**SUDAN**

Current infestations in the summer breeding areas of the central and western regions will decline as adults move east towards the winter breeding areas. Infestations in the Eastern Region west of the Red Sea Hills are also expected to decline; however, some adults may persist in any areas that remain green. Consequently, low to moderate numbers of adult groups and a few small swarms are expected to appear on the southern coastal plains of the Red Sea and lay with the onset of the rains from early in the forecast period onwards.

ERITREA

Low to moderate numbers of swarms and adult groups are expected to continue to form early in the forecast period in the western lowlands and highlands. However, infestations will decrease in these areas as adults move east towards the Red Sea coastal plains. Some of these may pass through the Keren and Asmara areas on their way towards the coast. Consequently, adult groups and a few small swarms are expected to appear on the coastal plains of the Red Sea at any time and lay with the onset of the rains.

ETHIOPIA

A few small swarms may appear in the extreme north of Tigray as adults move towards the coastal plains along the Red Sea.

SOMALIA

Scattered adults are expected to persist in a few areas along the northern coastal plains and may breed in areas of rainfall.

DJIBOUTI, KENYA, UGANDA and TANZANIA

No significant developments are likely.

NEAR EAST

EGYPT

Adults may appear in the south-east along the Red Sea coastal plains and lay with the onset of the rains.

SAUDI ARABIA

Low to moderate numbers of adult groups and a few small swarms may appear at any time from the west on the southern Tihama and lay in areas of recent rainfall.

YEMEN

Low to moderate numbers of adult groups and a few small swarms may appear at any time from the west on the Tihama and lay in areas of recent rainfall.

OMAN

Scattered adults and perhaps a few groups may concentrate and persist in any green areas in Sharqiya. A few isolated adults may appear on the Batinah from the Indo-Pakistan summer breeding areas at the end of the forecast period.

UAE

A few isolated adults may appear on the coast of Fujayrah from the Indo-Pakistan summer breeding areas at the end of the forecast period.

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

No significant developments are likely.

SOUTH-WEST ASIA

PAKISTAN

Locust numbers are expected to decline in Tharparkar and Cholistan during the forecast period as vegetation dries up and adults start to move towards Baluchistan. Consequently, increasing numbers of scattered adults may appear along the coast west of Karachi and adjacent interior areas.

INDIA

Locust numbers are expected to decline in Rajasthan during the forecast period as vegetation dries up and adults start to move towards Baluchistan of Pakistan.

IRAN

A few isolated adults may appear at the end of the forecast period on the Chabahar coast from the Indo-Pakistan summer breeding areas.

AFGHANISTAN

No significant developments are likely.



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

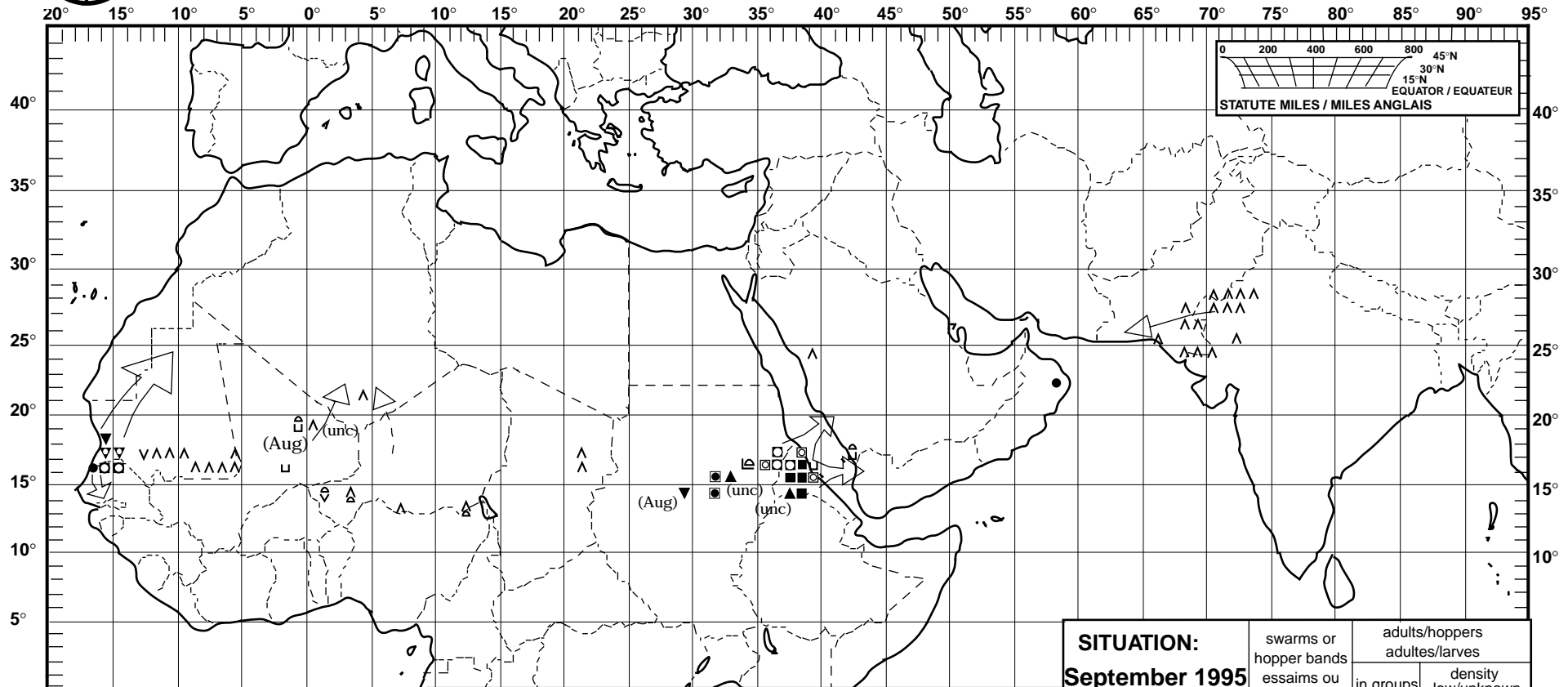
Other reporting terms

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. 205

Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.11.95	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		

SITUATION: September 1995 septembre 1995	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)	◼	◉	◑