



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 206



GENERAL SITUATION DURING OCTOBER 1995 FORECAST UNTIL MID-DECEMBER 1995

During October, Desert Locust swarms appeared for the first time this year in the winter breeding areas along the Red Sea coasts of Saudi Arabia and Yemen as well as in northern Mauritania. A few swarms may have reached south-western Morocco. Some of the swarms have already laid eggs. At the end of the month, heavy rains were reported on the southern Red Sea coast of Sudan and swarms appeared in the Tokar Delta. During the forecast period, additional swarms will probably arrive and lay in these areas and hopper bands are expected to form. Control operations in Saudi Arabia have covered more than 15,000 ha so far while ground and aerial operations continue in the summer breeding areas of western Mauritania and northern Sudan.

In the Red Sea area, maturing swarms were reported on the coastal plains of Saudi Arabia on 10 October. Two days later swarms arrived on the coast of Yemen. Both countries reported new swarms during the next ten days and some of these have probably already laid eggs. These swarms are thought to originate from earlier breeding in the interior of Eritrea and Sudan. Since very little rains had fallen on the coastal plains from Egypt to Eritrea, the swarms most likely flew over the dry areas and continued across the Red Sea. However conditions are expected to improve along the southern coastal plains of Sudan and northern plains of Eritrea as a result of heavy rains late in the month. Additional swarms are expected to appear on the coastal plains of both sides of the Red Sea during the forecast period as a result of current breeding in northern Sudan and, possibly, undetected infestations in the Eritrean Highlands. During October, control operations in northern Sudan covered about 1,700 ha.

In Mauritania, several swarms moved north in late September and October. Some of these have already laid resulting in the formation of hopper bands. Additional swarms are starting to form in western Mauritania where control operations against hopper bands covered 13,000 ha during October. Swarms escaping from this area will almost certainly move north during the forecast period and eventually lay eggs.

Elsewhere in West Africa, low numbers of solitary adults were present in late September and October in a few areas of northern Senegal, Mali and western Niger. Summer rains have come to an end and vegetation is becoming dry. Hence, no significant developments are expected.

In South-West Asia, infestations declined in the summer breeding areas and low numbers of adults are expected move towards western Pakistan and perhaps south-eastern Iran during the forecast period.

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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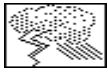
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WEATHER & ECOLOGICAL CONDITIONS DURING OCTOBER 1995

Based on field reports, METEOSAT and NOAA 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 October no significant rainfall was reported in the summer breeding areas of the Desert Locust from West Africa to South-West Asia. The Inter-Tropical Convergence Zone (ITCZ) continued its southern movement and for the most part was located well south of the summer breeding areas of the Sahel in West Africa and Sudan. This clearly indicates that the seasonal rains have come to an end in the above areas. Nevertheless, there were a few isolated showers reported during early October in Niger at Agadez and in Mali at Gao and Menaka. The former was associated with a depression over southern Tamesna on 1 October while the latter occurred as a result of northern extensions of the ITCZ to 20N on the 3rd and 4th.

Vegetation was reported to be drying up in most parts of the Sahel due to the end of the rains. However, some vegetation persisted on a localized scale in most countries in early October. In Mauritania, green vegetation was present in Trarza between Tamassoumit and Nouakchott, in Tagant from Rachid and Tidjikja to Tichit, in Hodh El Gharbi and Hodh El Chargui up to 18N and patches of green vegetation was reported in some depressions of Brakna. By the end of the month, vegetation was reported to be drying up south of 1830N. In Mali, green vegetation was present north of Tombouctou, vegetation persisted in some wadis of the Adrar des Iforas in northern Mali (from Kidal to Tessalit) and in parts of southern Tamesna from Menaka to 1730N. In Niger, green vegetation was present in southern Tamesna between In-Abangharit and Agadez. Small patches of vegetation persisted from Agadez to Arlit and in some wadis of the western and central Air up to 20N. In Chad, some vegetation persisted in the Biltine and Batha regions, extending to south of Fada.

As a result of heavy rains last month in northern Mauritania, vegetation was becoming green in parts of the Akchar of north-eastern Inchiri, in south-western Adrar between Atar and Choum and from Chinguetti to Ouadane, and in Tiris-Zemmour south of Zouerate and in the El Hank area near Bir El Bared and from Oued El Ma to Ayoun Abd El Malek. Standing water was also seen in some places of the El Hank.

In the Red Sea - Gulf of Aden area, breeding conditions remained unfavourable along the coastal plains from Egypt to northern Somalia for most of the month due to very little rainfall. However, heavy rains and floods were reported south of Tokar Delta to Karora during the last week of October. Conditions were much more favourable for breeding along the Red Sea coastal plains of Arabia as a result of light to moderate rains from Jizan in Saudi Arabia to the Hays area of Yemen. Rainfall may have been heavier near the foothills of the Yemen Tihama from Suq Abs to Bajil. Green vegetation was present on the Saudi Arabian Tihama near Jizan and Qunfidah, and on the Yemen Tihama from Zabid to W. Habl. Light rains may have fallen in the interior of Yemen between Nisab and Shabwah. In north-west Somalia, conditions are favourable for breeding on the escarpment; however, vegetation was reported to be drying on the coastal plains from Lughaya to Geer.

Strong north-easterly winds associated with a tropical cyclone off the coast of central Oman prevailed from 12-17 October; however, no significant rainfall was reported. An isolated shower occurred on the Batinah coast of northern Oman at Sohar on the 22nd. Light rainfall also fell in parts of Rajasthan in India during the first half of October.

In North-West Africa, light to moderate rains fell throughout the month in southern Tunisia and adjacent areas of western Libya and eastern Algeria. Light rains were also reported in Algeria south of the Atlas Mountains near Bechar and in parts of the southern Sahara near Tamanrasset and in the Hoggar Mountains. Substantial clouds and light rain fell over south-western Morocco at the end of the month. Late reports indicated that rains fell during late September in western Algeria and south-western Morocco (84 mm at Smara). In the latter area, vegetation was greening up south-east of Aousred.



AREA TREATED

Eritrea	no details
Mauritania	13,088 ha (1-31 October)
Saudi Arabia	15,900 ha (10-20 October)
Sudan	3,709 ha (23-30 September) 3,628 ha (1-21 October)



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

Swarm laying continued in two main areas of Trarza up to mid October: along the coast near Nouakchott and 300 km further east near Tamassoumit (1836N/1238E). Hatching commenced west of Tamassoumit during the last dekad of September and by late October most of the hopper bands had reached fifth instar and some had fledged and were forming new swarms. However, there were still reports of first instar bands as late as the 26th. Along the coast, infestations were less advanced with hatching commencing on 6 October and continuing until the 20th. By the end of the month, most bands had reached the fourth instar. In between these two areas, smaller scale laying occurred in late September and early October north of Aleg (1702N/1358W) and also about 100 km east of Nouakchott. Hatching commenced on 4 October north of Aleg and bands had reached the fifth instar by the end of the month. In the latter area, hatching was not reported until the 16th. Generally, the bands in all of the above areas were numerous but less than 1 ha in size with moderate to high densities. Aerial and ground control operations were carried out against mature swarms on the coast up to 6 October followed by band control in all areas from the 14th onwards. More than 13,000 ha were treated during October.

In the northern regions, mature swarms were seen moving northwards from Trarza towards Inchiri and south-western Adrar during the first half of October. Some of these were reported to be copulating south of Akjoujt (1944N/1420W) during the second week. On the 16th, two swarms were seen copulating south-west of Atar on the southern side of Ibi Al Akdar at 1956N/1325W and 1959N/1321W. Hatching was in progress and first to second instar hopper bands were seen indicating that laying probably occurred in this area in late September. More early instar bands were found in the same area during the last dekad of October, some of these had reached the fourth instar.

MALI

Late reports stated that isolated locusts were present during September in a few locations of the Adrar des Iforas near Aguelhoc (1929N/0052E). Other adults were mixed with *Locusta* at densities of 200-300 per ha covering 600 ha in the Niger River Valley west of Niafunke (1556N/0400W) at Mare Takadji.

NIGER

Isolated transiens adults were reported to be concentrating in a small area at Tondikiwindi (1426N/0205E) in the western region during the last dekad of September.

SENEGAL

Low densities of adults were reported in the Senegal River Valley west of Podor (1635N/1502W) from 23 September to 20 October.

No locust information has been received from other countries in the region up to 31 October.

NORTH-WEST AFRICA

MOROCCO

No locusts were reported during September.

ALGERIA

A few isolated adults were seen south-west of the Hoggar Mountains at 2231N/0411E from 11 September to 20 October.

No locust information has been received from other countries in the region up to 31 October.

EASTERN AFRICA

SUDAN

During the second half of September, infestations were mainly concentrated in the W. Odi area (1650N/3630E) north of Kassala and along the Atbara River south-east of Ed Damer (1735N/3358E) where adults were seen copulating in early September. During the last dekad of the month, several swarms were seen flying near the Atbara River. On the 25th, there was an unconfirmed report of a swarm to the east in the Red Sea Hills at Arkawti (1846N/3706E). Aerial and ground control operations continued in Wadi Odi and the surrounding areas west of Aroma (1525N/3601E) from 21 September and finished on 7 October, treating nearly 3,500 ha of fledglings and immature adults that were forming swarms of about 80-200 ha in size.

Reports received during October from the northern region suggest that widespread breeding may have occurred in the Baiyuda Desert west of Berber (1801N/3400E) and between the Nile and Atbara Rivers. Ground control operations commenced in the Baiyuda Desert on 3 October and treated nearly 1,000 ha of high density immature adults up to the 13th. Second to fourth instar hopper bands were seen at two locations on the 15-20th within 525 ha. In between the Nile and Atbara Rivers, ground teams treated 270 ha of fifth instar hopper bands and fledglings south-east of Ed Damer on 1-13 October and 441 ha of immature adults south of Shendi (1641N/3326E) on the 4-21st. First and second instar hoppers were seen along the Atbara River at Abaka (1718N/3427E) on the 14th indicating that breeding was still in progress.

In the central region, a swarm was reported to have dispersed west of Ed Dueim at 1344N/3144E on 29 September. Control operations treated 580 ha of high density solitary adults east of the Nile at Er Raqiq (1449N/3225E) on the same day. Control operations also treated about 75 ha of high density immature adults on 9 October at Gabra Umm Gammal (1550N/3148E) in W. Muqaddam west of Khartoum where immature adults were present in late September.

In the western region, ground control operations were carried out against moderate densities of immature adults covering 1,200 ha at two locations near Millet (1411N/2535E) in Northern Darfur on 29 September to 2 October. No locusts were seen during surveys in the El Geneina area near Chad on the 19-28th.

On the Red Sea coast, a mature swarm first appeared on 28 September in Tokar Delta. During the first three weeks of October, solitary mature adults were seen along the coastal plains 30 km north of Port Sudan and south from Tokar Delta to the Eritrean border. Maturing adults were also seen at mid month in the foothills at Agbabateit (1809N/3712E) on 6,500 ha at densities of about 1,300 adults per ha. Adults were generally present in cropping areas along the wadis. In Tokar Delta, gregarious adults were seen copulating on 14-15 October in an area of 700 ha and other solitary adults, at densities of 240-600 per ha, were present in several plots covering a total of 360 ha. On the 30-31st, several immature and mature swarms appeared in Tokar Delta. Damage was reported on crops.

ERITREA

Low numbers of solitary maturing adults were present at several places along the Red Sea coastal plains between Massawa and Mersa Gulbub 1625N/3910E) on 7-8 October. A few hoppers, some second instar, were seen at Shelshela (1553N/3904E) and Wadilo (1546N/3920E). A small swarm reportedly moved from the highlands south of Asmara to the southern coastal plains at Bada (1440N/4006E) on the 11th. Control operations continued against a few swarms that persisted in the highlands near Keren (1546N/3830E).

SOMALIA

During surveys of the north-western coast and interior areas, scattered adults were found along the escarpment in the Tugga Dobo Valley (1019N/4320E) and on the coastal plains near Lughaya (1043N/4356E) on 26-28 September.

No locust information has been received from other countries in the region up to 31 October.

NEAR EAST

EGYPT

During the last dekad of October, scattered mature adults were present on the south-eastern coastal plains from Halaib (2213N/3638E) to Shalatein (2308N/3535E), at a few places in the Red Sea Hills as far north as El Sheikh (2412N/3435E) and in one wadi on the western side of the Red Sea Hills at El Barawai (2503N/3346E). Similar infestations were also present in several cropping areas along the Nile Valley from Abu Simbel (2219N/3122E) to Garf Husein (2317N/3247E). East of the Nile, scattered immature adults were seen at Uweinat Oasis (2240N/2845E). No locusts were reported from Dakhla Oasis.

SAUDI ARABIA

Three immature swarms first appeared on the southern Tihama in the Al-Shuqayq (1743N/4201E) area north of Jizan on 10 October coming from the west. This was followed by additional reports of low density swarms arriving on the coastal plains near Jizan at Baysh (1725N/4232E) and Abu Arish (1658N/4250E) and east of Qunfidah on the 10-20th. Several swarms were also seen in the Asir Mountains east of Lith near Al-Baha (2005N/4128E) and further south near Abha (1812N/4230E). Two maturing swarms were seen coming from the west on the 17-18th near Jeddah. Most of the swarms varied in size from 2-16 sq. km. Scattered adults were present at densities of 1,000-1,500 per ha in the Jizan area. Control operations were immediately undertaken and treated 6,300 ha of swarms and 9,600 ha of solitary adults.

YEMEN

On 12 October, three immature swarms were first seen on the northern Tihama coastal plains flying from west to east over Al Khashm (1536N/4311E). These apparently dispersed over a large area between Hodeidah and Harad (1612N/4303E). There were several additional reports of small maturing swarms on the Tihama between Suq Abs (1601N/4311E) and Bajil (1504N/4317E) on the 15-16th, some of these were copulating. Solitary third and fourth instar hoppers resulting from earlier local breeding were reported at Al Ghurzah (1539N/4302E) on the 16th. In the interior, one swarm was reported in the Al-Jawf area near Al-Jar (1606N/4453E) on the 17th. This probably came from the Tihama although there is a small possibility that it could have originated from the interior of Oman.

In late October, gregarious mature adults were seen during surveys on 26-28th at several locations west of Suq Abs between W. Ayn (1550N/4300E) and W. Habl (1601N/4311E). Lower numbers of adults were seen south of Hodeidah in the Al-Mansuriyah (1442N/4313E) area. No locusts were reported further south to Zabid or on the northern coastal plains from W. Habl to Harad.

KUWAIT

A late report indicated that no locusts were seen during surveys in August.

No locust information has been received from other countries in the region up to 31 October.

SOUTH-WEST ASIA

PAKISTAN

During the second half of September, isolated adults continued to be present in parts of Tharparkar and Cholistan deserts as well as further west in Uthal district. A maximum of 24 adults was seen at Kurachio Wala Dar (2819N/7155E) in Bahawalpur district on the 28th.

During the first half of October, a few isolated adults persisted in Tharparkar where a maximum of two adults were seen at Perchee Jeeveri (2534N/6956E).

INDIA

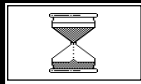
During the second half of September, isolated adults continued to be reported from Bikaner, Jaisalmer and Barmer districts of Rajasthan. A maximum of 20 adults was reported at Lunar (2636N/7014E) in Jaisalmer district on the 19th. A few fifth instar hoppers were seen at Sewra (2732N/7218E) in Bikaner district on the 21st.

During the first half of October, isolated adults persisted in Bikaner and Barmer districts of Rajasthan with a maximum of 13 adults seen at Sewra on the 11th.

IRAN

A late report started that no locusts were seen during surveys undertaken along the south-eastern coastal plains from Poshty (2527N/5928E) to Govater (2508N/6127E) on 29 July to 5 August.

No locust information has been received from other countries in the region up to 31 October.

**FORECAST UNTIL MID-DECEMBER 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 hopper patches and several bands are expected to appear at places in Inchiri and Adrar where new groups and swarms may start forming from mid-November onwards. A few swarms may have reached southern Tiris Zemmour during October and laid, perhaps resulting in hopper bands. Hoppers that escape control operations in Trarza and western Tagant will form several groups, possibly a few small swarms during the forecast period. These are expected to move north towards the Adrar and Tiris Zemmour regions where they will mature and lay if warm temperatures and favourable ecological conditions persist.

SENEGAL

A few isolated adults may persist in the western part of the Senegal River Valley.

MALI

Scattered adults are expected to be present and may be breeding in some wadis of the Adrar des Iforas near Aguelhoc and Kidal.

NIGER

Scattered adults are expected to be present and may be breeding in areas of green vegetation in Tamesna primarily between In Abangharit and Agadez.

CHAD

A few isolated adults may be present and persist in parts of Ennedi near Fada.

BURKINA FASO, CAMEROON, GUINEA BISSAU and GUINEA CONAKRY

No significant developments are likely.

NORTH-WEST AFRICA

MOROCCO

A few small mature groups and swarms are almost certainly present in the extreme south-west. These are expected to be supplemented by small immature swarms coming from the south during November. Laying is likely to occur in areas of recent rains. Movement further north towards the southern side of the Atlas Mountains could occur if temperatures remain warm or on warm southerly winds associated with eastward moving depressions over the Mediterranean.

ALGERIA

A few groups of adults and swarms may reach the Tindouf area from the south if temperatures remain warm or during periods of warm southerly winds. These are expected to mature and breed in areas of recent rains. A few isolated adults are likely to persist south of the Hoggar Mountains and gradually move north towards the central Sahara.

LIBYA and TUNISIA

No significant developments are likely.

EASTERN AFRICA

SUDAN

Additional swarm formation is expected to occur in the summer breeding areas from the Baiyuda desert to the Atbara River. However, locust infestations will decline as a result of control operations and adult migration towards the Red Sea. Additional adults and a few small to medium size swarms will continue to appear on the Red Sea coast and possibly in Wadi Oko/Diib during November where they are expected to breed in areas of recent rains.

ERITREA

Previous infestations in the highlands will continue to decline as a result of adult migration east towards the Red Sea. There is still a possibility that adults and a few small swarms from the interior could appear on the coastal plains, and breed with the onset of the rains. However, if dry conditions persist on the coast, migration may continue east across the Red Sea.

ETHIOPIA

A few groups of adults may be present in the northern highlands.

SOMALIA

Scattered adults are expected to persist along parts of the northern coastal plains and the escarpment and breed in areas of green vegetation or rainfall.

DJIBOUTI, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

EGYPT

Scattered adults are expected to remain on the south-eastern Red Sea coastal plains and adjacent areas of the interior and breed on a small scale with the onset of the rains. However, if dry conditions persist on the coast, adult migration may occur east across the Red Sea. Isolated adults may stay in some irrigated areas in the southern Nile Valley and breed.

SAUDI ARABIA

Additional adult groups and a few small swarms are likely to appear from the west on the Tihama during November and lay. As a result of earlier laying in this area, hatching and hopper band formation are expected to be in progress which may produce new adults from late November onwards.

YEMEN

Additional adult groups and a few small swarms are likely to appear from the west on the Tihama during November and lay. Hopper patches and a few small bands are expected to appear at several places along the Tihama between Zabid and Wadi Habl which may produce new adults from late November onwards.

OMAN

Scattered adults may be present on the Batinah coast and perhaps in the Sharqiya regions.

UAE

Scattered adults may be present in Fujayrah.

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

No significant developments are likely.

SOUTH-WEST ASIA

PAKISTAN

A few isolated adults are likely to persist in the desert near the Indian border, but numbers will decline as adults move west towards the winter-spring breeding areas. As a result, scattered adults are expected to appear on the coastal plains and adjacent areas of the interior in Lasbela and Baluchistan.

IRAN

A few isolated adults may appear on the coastal plains near Chabahar.

INDIA

A few isolated adults are likely to persist in Rajasthan.

AFGHANISTAN

No significant developments are likely.

issued: 2 November 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

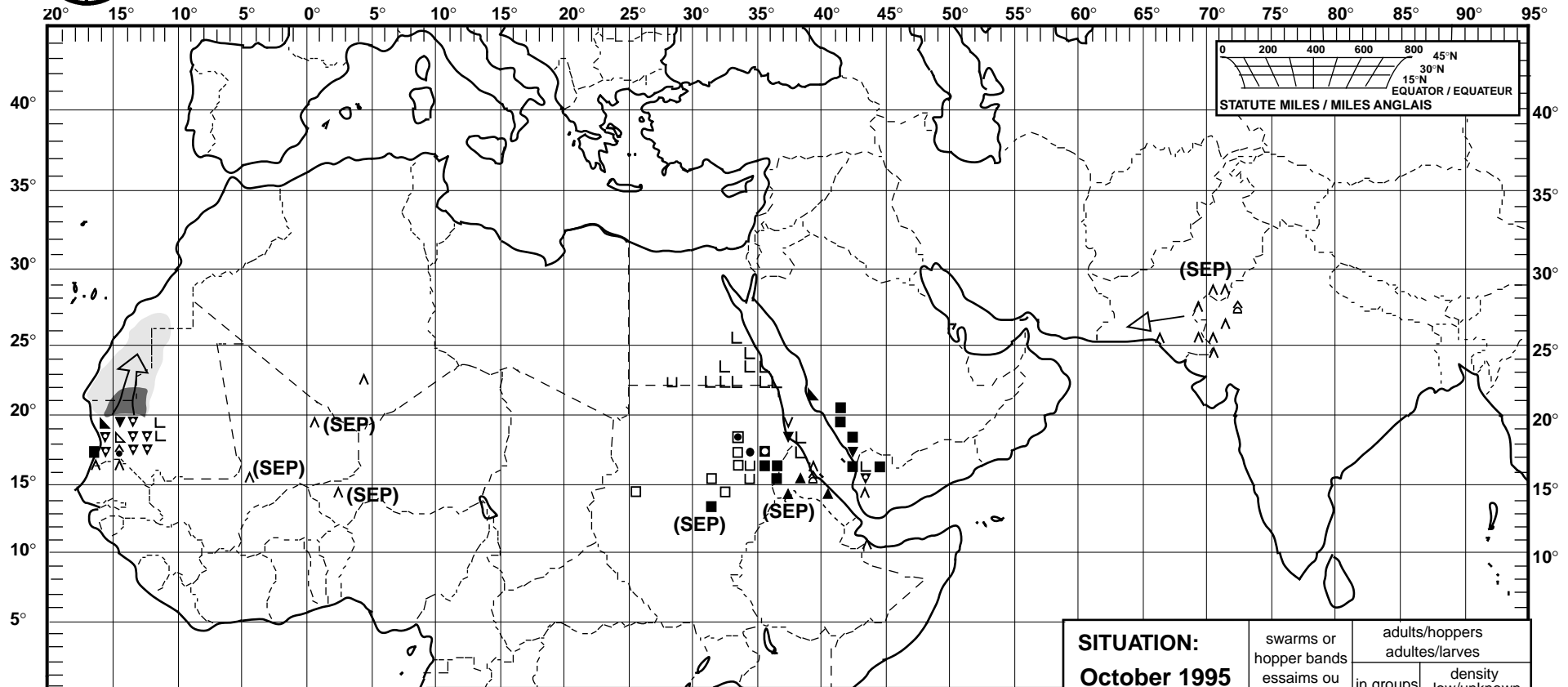
Other reporting terms

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. 206

Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.12.95	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: October 1995 octobre 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)			