



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 181



The current Desert Locust upsurge situation remains extremely critical as the winter season commences with substantial Desert Locust populations widespread throughout the invasion area, and the key factor will depend on ecological conditions during the next few months within the winter-spring breeding areas. In the summer monsoon breeding areas of Pakistan and India, large scale control operations continued against large numbers of hopper bands and swarms throughout September, but mainly swarms were present by the end of the month. The situation commenced to appear more serious in Mauritania where swarm formation was in progress and the seasonal migration towards western regions began with the first swarms reported in Nouakchott in late September. In Sudan, hopper bands are still present in Northern Kordofan where swarm formation have commenced; as a result, the migration towards the winter-spring breeding areas of the Red sea coast is expected to start during October.

Although a low risk exists of an eastwards migration in northern India based on current winds, most of the seasonal movement, depending on the change in the wind patterns during this forecast period, will occur westwards into the winter-spring breeding areas of Pakistan and Iran, and possibly through the Gulf into Oman and the UAE. Further development of the situation will depend on the scale of the migration which is believed to be moderate as a result of control operations.

In Mauritania, while additional hopper bands will appear in infested areas of central south where further laying occurred, breeding, possibly on a moderate scale, will almost certainly commence in Nouakchott area as a result of heavy recent rains. Some swarm are expected to migrate further north and reach southern Morocco, and there is also a low risk of small swarms invading northern Senegal from infested neighbouring areas.

In Eastern Africa, swarms will migrate from the central regions into the winter-spring breeding areas of the Red Sea coast of Sudan and Eritrea, and perhaps as far as the southern Tihama of Saudi Arabia.

No significant development are expected in other countries where primarily low density adults and sometimes hoppers were reported.

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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Please note that former numbers (Telephone: (39-6) 5707-4021 and -4578 / Telefax: (39-6)5797-5271) are valid only until 3rd of October, 1993



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 September, the ITCZ was localized between 17°N and 20°N over West Africa and Sudan, reaching up to 25°N over northern Mauritania on the 7th; however, there were some indications that the seasonal southwards movement of the ITCZ is commencing as it was located below 15°N over Senegal, Chad and Sudan during of a few days of the last decade. In relation to this movement, a high system was present over the Atlantic Ocean west of Morocco and seasonal depressions were moving eastwards across the Mediterranean at times during the entire month.

Widespread light to moderate rains fell in Mauritania from Hodh el Chargui to Trarza in early September, and moderate to heavy rains occurred again within the same areas extending to northern Senegal during the last decade and primarily in Nouakchott area which received 47 mm on the 23rd and again 53 mm on the 26th-27th. As a result, conditions are expected to be highly favourable in most areas of current infestations primarily in Assaba, southern Tagant, Brakna and Trarza. Some light to moderate rains occurred at times in Menaka, Gao and Kidal regions where the vegetation was reported to green up at places, and near Agadez in northern Niger during the first half of the month. However, rains were irregular and they are likely to come to an end in the Sahel of West Africa and ecological conditions were reported as unfavourable in most of northern Chad and Tamesna of Niger.

In Sudan, conditions were reported as favourable in Northern Kordofan in early September but no rains were reported in the country during the entire month and no significant cold cloud activity was observed above 15°N. In Eritrea, ecological conditions were reported as generally dry in the western region and along the Red Sea coast, except for a few wadis.

Although cold cloud activity was observed over the southern Tihama of Saudi Arabia and the Tihama and the highlands of Yemen during the first two decades of September, no significant rains were reported from the entire Arabian Peninsula, except from Saiq near the Jabal Akhdar of Oman which received 31 mm on 10 September.

In south-west Asia, the monsoon continues and south-western winds were persisting on the Arabian Sea. No rains were reported from Pakistan where conditions are dry, but significant rains continued to be received at places of Rajasthan, primarily Bikaner, Jaisalmer and Jodhpur during the first half of September and ecological conditions may remain favourable in several areas of Rajasthan; however, it is more likely that the rains have come to an end in most of the summer breeding areas.



AREA TREATED IN SEPTEMBER 1993

Mauritania	24,089 ha	(20 August - 20 September)
Sudan	74,455 ha	(up to 13 September)
Eritrea	700 ha	(on 19 August; mixed Desert Locust and grasshoppers)
Pakistan	15.986 sq.km	(17 July - 6 September)
India	265,000 ha	(up to 15 September)



DESERT LOCUST SITUATION

WEST AFRICA

MAURITANIA

During the last decade of August, hopper bands continued to be controlled over 9113 ha at numerous places of northern Assaba primarily west and east of Kiffa, southern Tagant mainly south-west of Tidjikja, west of Hodh el Garbi south of Tamchakett (1715N/1045W) and in eastern Brakna near Maghta Lajar (1729N/1303W).

Fledgling and swarm formation commenced in late August and some 80 small to medium swarms, many of them maturing or already mature, were reported between 1840-1635N/1000-1400W up to 20th of September. Some laying occurred in previously infested areas of south-western Tagant and to a lesser extent in northern Assaba, from 13 September onwards. Control operations continued against remaining hopper bands and 44 swarms, ranging in size from 20-1500 ha, were treated by air and by ground during the second decade of September.

By the end of the month, swarms were reported to have reached Nouakchott area on 27 September, and adults further north in Inchiri near Akjoujt (1945N/1423E); further details are awaited.

MALI

Scattered immature and mature adults were observed at three locations of Adrar des Iforas, up to 20-50 mature adults per ha over 10 ha near Tadelok (1939N/0202E) on 27-31 August.

During surveys carried out in the first half of September, scattered immature or maturing adults and hoppers were reported at some locations between northern Adrar des Iforas at Aborrhach (2041N/0114E) and north of Menaka; most of these were present over a total of 550 ha at three places along Oued Irherrher (ca. 2000N/0010E).

NIGER

Isolated adults were reported near Diffa on 10 September. During a survey carried out on 10-16 September, a few isolated adults were reported only from Aïr near Anou Makarene (1806N/0732E) and Tamesna at In Abangharit (1753N/0603E).

CHAD

During the second half of August, isolated adults continued to be reported from different locations in northern and eastern regions at Zouar (2030N/1635E), Faya, Fada near Ouaddi Nabar (1704N/2134E), Biltine (1435N/2056E), Am-Sack (1348N/1952E) and Salal (1445N/1711E), and some hatchings also occurred at Kapka (1506N/2140E).

During September, scattered immature adults resulting from small scale localized breeding were found in Tibesti in Ouaddi Marou (1942N/1653E) and similarly, scattered hoppers and immature adults were present in Miski area (1950N/1757E) early in the month. There was also an unconfirmed report of a swarm seen north-west of Fada at the end of the first decade of September. However, only isolated adults and small scale breeding were reported in this area by the end of the month. Elsewhere, scattered low density adults were present.

SENEGAL

No locust activity was reported up to 7th of September.

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

NORTH-WEST AFRICA

MOROCCO

No locust activity was reported during August.

ALGERIA

No locusts were found during surveys in the extreme south up to 31 August.

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

EASTERN AFRICA

SUDAN

In late August, 4th and 5th instars hopper bands were reported over a total of 50,000 ha in Northern Kordofan south of Sodiri in the Al Mazroub area (1355N/2910E).

During the first half of September, hopper bands were reported from Northern Kordofan near Um Saiyalla (1424N/3109E) where aerial control were undertaken over 1,200 ha, Kagmar (1420N/3024E) and Mazroub (1428N/2826E), and to a lesser extent in Eastern Province near Derudeb (1732N/3606E). Swarm formation commenced in Northern Kordofan in late August/early September.

By the end of the month, an unconfirmed report was received, stating that a few swarmlets had reached the Red Sea coast.

ERITREA

Aerial control operations were carried out over 700 ha of mixed populations of Desert Locust and grasshoppers in Tessenei area (1511N/3642E) on the 19 August.

An extensive helicopter survey was conducted along the coastal plains and hills north of Massawa, during which scattered adults, at densities up to 300 per ha, of both African Migratory Locust and Desert Locust were reported over 400 ha in Wadi Shelshela (ca. 1555N/3908E) on the 14-15 September. No Desert Locusts were found during another extensive helicopter survey carried out along the western lowlands and the western escarpment on 20-26 September. However, by the end of the month, an unconfirmed report was received, stating that a few swarmlets had reached the Red Sea coast.

ETHIOPIA

During an helicopter survey, high densities of 4th-5th instar hoppers were observed over 1000 ha in eastern Tigray by late August, and scattered solitary adults were observed in the eastern region and in the Danakil depression up to 15 September. However, the situation remains unclear and further details are awaited.

SOMALIA

No locusts were reported during helicopter surveys on the north-western coastal plains; however, further details are awaited.

DJIBOUTI, KENYA, TANZANIA and UGANDA

No locust activity was reported up to 15 September.

NEAR EAST

EGYPT

No locust activity was reported up to 29th of August.

KUWAIT

No locust activity was reported up to 29th of August.

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

SOUTH-WEST ASIA

PAKISTAN

Further details were received about the situation during the second half of August, during which a total of 17,218 late instar hopper bands were controlled in Tharparkar, Cholistan and Nara deserts, and, to a lesser extent Lasbela district; 58 immature swarms, ranging in size from 1 to 10 sq. km and a few of them copulating, were controlled by air and by ground in Tharparkar, Nara and Cholistan deserts during the same period.

In early September, most of hopper bands in these areas had fledged and small immature swarms (1-2 sq. km) developed, but late instar hopper bands persisted in the Tharparkar desert. A total of 138 swarms have been controlled up to 18 September. There have been no reports to date of further breeding.

INDIA

During the second half of August, control operations were carried out in Rajasthan and in Banaskantha district of Gujarat against 23 swarms and a large number of hopper bands. Most of the swarms were reported in Rajasthan in Barmer district, and to a lesser extent in Bikaner district whilst bands were mainly concentrated in Barmer and Jaisalmer districts.

During the first half of September, control operations were undertaken against 93 immature swarms in Rajasthan in Jodhpur and Jaisalmer districts, and to a lesser extent in Bikaner and Barmer districts and Bhuj district of Gujarat. Hopper bands persisted mainly in the Barmer district by mid-September.

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



WEST AFRICA

MAURITANIA

Small, possibly moderate, scale swarm migration from central south Mauritania is in progress. Swarms are expected to move mainly towards western and north western regions in particular Trarza, Inchiri and Adrar, possibly reaching as far north as Tiris Zemmour by the end of the forecast period. Depending on the winds, there is also a moderate risk of a southwards migration by swarms towards southern Brakna, Gorgol and Guidimaka regions. Breeding on a moderate scale is likely to commence early in the forecast period in areas of recent rains such as western Trarza. Some hatchings will also occur in previously infested areas primarily Tagant and Assaba, although no further breeding is expected on a large scale within these areas.

MALI

Scattered adults present in Adrar des Iforas and possibly in Tamesna are likely to persist and breed on a small scale in areas of green vegetation.

NIGER

Isolated adults present in Aïr and Tamesna may persist and breed on a small scale in areas of green vegetation.

CHAD

Scattered adults present in northern and eastern regions are likely to persist and continue to breed on a small scale in areas of green vegetation. However, there is a low risk of a migration of a few small swarms from the summer breeding areas of western Sudan during October with the southwards movement of the ITCZ.

SENEGAL

There is a low to moderate risk of a few swarms invading the northern regions along the Senegal Valley. Surveys should be undertaken to monitor the situation.

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

No significant developments are likely.

NORTH-WEST AFRICA**ALGERIA**

Isolated adults are likely to be present in the south and may be augmented by migrating adults incoming from the summer breeding areas of the Sahel.

MOROCCO

Isolated adults may be present in the south. However, there is a moderate to high risk of an invasion of small swarms beginning in the extreme south as from mid-October and depending on the winds. Surveys and review of the control potential should be undertaken to monitor any further development of the situation.

TUNISIA and LIBYA

No significant developments are likely.

EASTERN AFRICA**SUDAN**

Hopper bands present in Northern Kordofan will continue to fledge and further swarm formation will occur; this is likely to be on a moderate scale. As a result, a moderate number of small swarms is expected to migrate during October towards the winter-spring breeding areas of the Red Sea coasts and commence to breed if ecological conditions are favourable. There is a low possibility of a few swarms moving westwards through Darfur.

ERITREA

As a result of the migration towards the winter-spring breeding areas, some small swarms are expected to reach the Red Sea coastal plains and small, possibly moderate, scale breeding will occur if ecological conditions are favourable.

ETHIOPIA

Breeding by scattered low density adults is likely to occur in the forecast period. There is a possibility of a small scale swarm migration into western Ethiopia from the east.

DJIBOUTI, KENYA, SOMALIA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST**SAUDI ARABIA**

There is a low to moderate risk of small groups or swarmlets migrating from the summer breeding areas of Sudan onto the Tihama during October where they are likely to start breeding if ecological conditions are favourable. Otherwise, isolated adults may be present on the Tihama and in Wadi Jawf. Surveys and a review of the control potential should be undertaken as a precautionary measure.

YEMEN

There is a low risk of small groups or swarmlets migrating from the summer breeding areas of Sudan onto the Tihama during October where they are likely to start breeding if ecological conditions are favourable. Otherwise, isolated adults may be present on the Tihama and on the coastal plains of Aden. Surveys and a review of the control potential should be undertaken as a precautionary measure.

EGYPT

There is a low risk of small numbers of adults reaching the south-eastern Desert coastal areas as a result of the migration from the summer breeding areas of Central Sudan.

OMAN

During the forecast period, swarms may appear on the Batinah coast as a result of the seasonal migration from south-west Asia, and localized breeding may occur if conditions are unusually favourable.

UAE

During the forecast period, swarms may appear in the Fujayrah as a result of the seasonal migration from south-west Asia, and localized breeding may occur if conditions are unusually favourable.

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

No significant developments are likely.

SOUTH-WEST ASIA**INDIA**

Breeding may occur on a moderate scale in some areas of recent rains in Rajasthan. There is a low risk of a swarm movement from Rajasthan towards east but present wind patterns are unfavourable for any significant movement westwards. However, within the forecast period, the wind patterns will change and the risk of a swarm movement westwards will increase; although the scale of this migration is difficult to assess since large scale control operations are in progress, it is believed that it will be on a moderate scale.

PAKISTAN

Breeding may occur on a moderate scale in some areas of Tharparkar if ecological conditions are favourable. There is a low risk of a swarm movement towards east but present wind patterns are unfavourable for any significant movement westwards. However, within the forecast period, the wind patterns will change and the risk of a swarm movement westwards towards Baluchistan and the Gulf will increase; although the scale of this migration is difficult to assess since large scale control operations are in progress, it is believed that it will be on a moderate scale. No breeding is expected in Baluchistan during the forecast period unless ecological conditions are unusually favourable.

IRAN

Within the forecast period, the wind patterns will change and the risk of a swarm movement from the infested areas of the summer breeding areas will increase. As a result, swarm migration, possibly on a moderate scale, will reach Baluchistan. Surveys and review of the control potential should be undertaken to monitor any further development of the situation.

AFGHANISTAN

There is a low, possibly moderate, risk of swarms migrating into the southern regions.

	RECENT ACTION TAKEN
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With the generous assistance of the international donor community and national governments of locust-affected countries, action taken continues in all affected countries to mount control operations and to maintain the survey teams against the current Desert Locust infestations. In addition to this assistance (please refer to Bulletin no 180):

1. In Mauritania, two aircraft by Luxembourg bilateral assistance; two aircraft by France bilateral assistance and the Ecoforces operation is re-established; one helicopter and pesticides by FAO; pesticides by Algeria, Tunisia and Morocco.

2. In Chad, one helicopter and one logistician (France/Ecoforces).
3. FAO Technical Cooperation Programme projects have been prepared for Mauritania, Senegal and Niger to provide technical assistance and equipment.

In order for FAO/ECLO keep all donors and locust-affected countries informed of any new or significant developments in the locust situation, all reports of locusts should be immediately sent to ECLO by facsimile and include date, coordinates of location, species, stage, density and estimated area of infestation.



ANNOUNCEMENT

We wish to announce with deep regret the death of a field officer in Ethiopia after an helicopter crashed in Ogaden late September. FAO expresses its condolences to his family and his Government. A pilot and an engineer were also severely injured in the same accident and FAO hopes that they both will soon recover.



NOTICE

New telephone and fax numbers will be operational at FAO Headquarters starting on Monday, 4 October 1993. Below are the new fax and telephone numbers for ECLO:

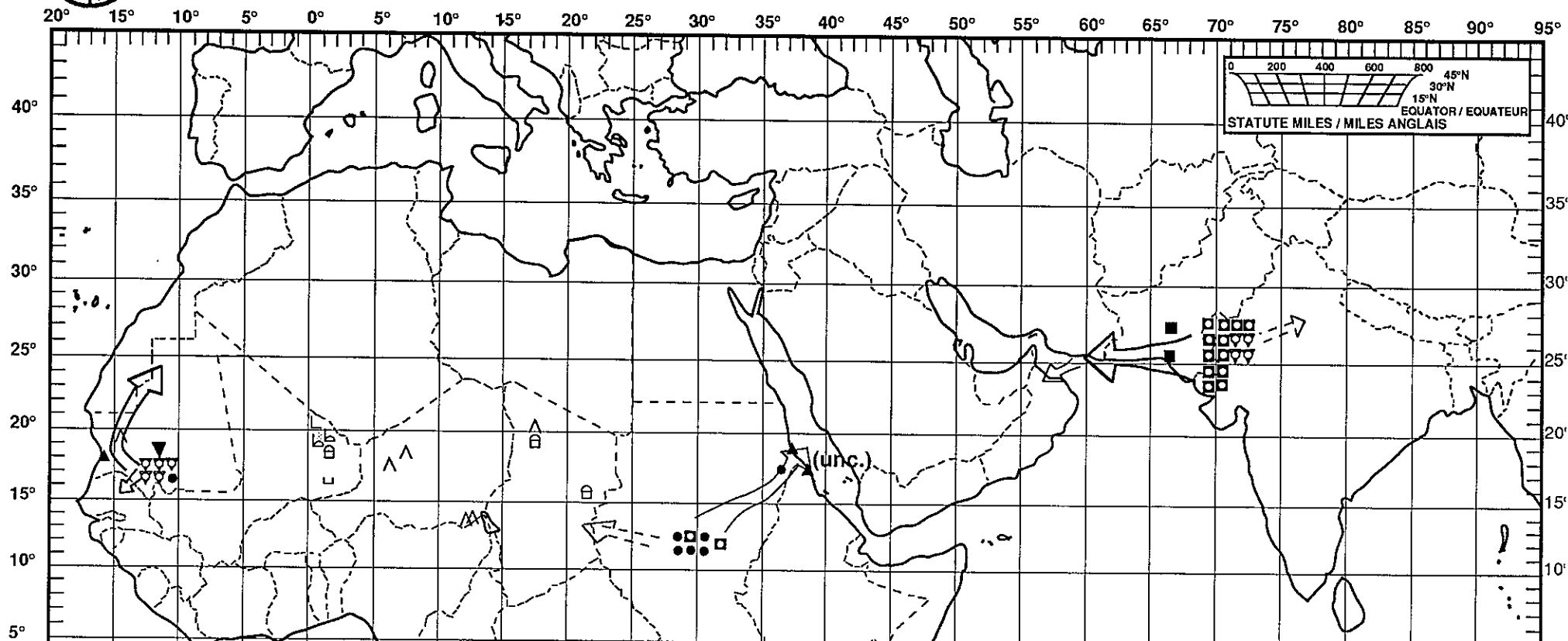
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ECLO Senior Officer:	0039-6-522-54021 / 52709
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1 October 1993



Desert Locust: summary Criquet pèlerin: situation résumée

No. 181



FORECAST TO: PREVISION AU: 15.11.93	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: September 1993 septembre 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)	◼	◼	◼