



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 196



A potential dangerous locust resurgence continued to develop during December. Reports indicated that a moderate scale migration occurred towards the winter breeding areas of the Red Sea Trench and North-West Africa. Substantial infestations were reported from northern and central Mauritania, northern Mali and Niger, and the Red Sea coast of Sudan. Additional adults and swarms moved quite far north into south-western Morocco and southern Algeria from the northern Sahel. Other swarms crossed the Red Sea from Eastern Africa to the coastal plains of Saudi Arabia. Although most infestations remained on a small to moderate scale, a rapid population build-up could occur especially in the Red Sea area.

In North-West Africa, immature and maturing adults and swarms have reached north-eastern Mauritania and nearly up to Oued Draa of south-western Morocco. During periods of warm southerly winds associated with atmospheric disturbances over North-West Africa, swarms could move further north in southern, western and central Algeria, northern Mauritania and adjacent areas of Morocco. The majority of control operations were carried out in Mauritania by ground and air while smaller ground operations were undertaken in Algeria and Morocco. Breeding is in progress over a fairly wide area of northern Mauritania and to a smaller extent in a few places of southern Algeria. However low temperatures are expected to slow maturation of hoppers and adults with new swarms forming only late in the forecast period.

In the Red Sea area, current breeding will continue along the coastal plains of Sudan, Eritrea, Saudi Arabia with the possibility of swarm formation in late January and early February. Infestations may also be present or spread to the coastal plains of Yemen and southern Egypt where breeding conditions are reported to be favourable.

The current locust situation remains unclear in northern Somalia where survey and control operations are not possible at present due to insecurity. Conditions are expected to be favourable over large areas of the northern coast as a result of widespread heavy rains. Consequently small to moderate scale breeding could be in progress or occur during the forecast period which could lead to a significant population build-up.

No other significant infestations of locusts were reported.

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

Telephone: (39-6) 522-52420 or -54578 (7 days/week, 24 hr)

Facsimile: (39-6) 522-55271

E-Mail: Abderrahmane.Hafraoui@fao.org (via Internet)

Telex: 610181 FAO I



WEATHER & ECOLOGICAL CONDITIONS DURING DECEMBER 1994

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.

The unusually warm temperatures that continued up to late November in many areas of the Sahara significantly decreased during December due to a southward flowing cold air mass that prevailed during most of the month. Under the influence of a high pressure system that persisted over North-West Africa, seasonal eastward moving depressions were displaced further north. Consequently very little rainfall was reported in locust breeding areas of North-West Africa. Only light rains fell in south-west Mauritania on 24 December and in the north-west on the 27th. Ecological conditions were considered as favourable for breeding only in parts of the Tiris Zemmour region of northern Mauritania. In Algeria, green vegetation was reported to be persisting in wadis in the Tindouf area and west of the Hoggar Mountains.

Strong northerly winds associated with the high pressure system were present over infested areas of northern Mauritania and southern Morocco, which probably limited adult migration due to low temperatures. However, during most of the second and the third decades, winds were from the east to south-east over Mauritania, Mali, Niger and North-West Africa. In southern Algeria, there was a small depression present over the Hoggar Mountains during most of the first half of the month. As a result southerly winds occurred over parts of northern Mali and northern Niger which could have favoured limited adult migration towards the north.

Breeding conditions will continue to improve along the Red Sea coastal plains from Port Sudan to Massawa, Eritrea as a result of heavy rains received in late November and in early December at several locations. Conditions are already reported as favourable in Tokar Delta and along the northern coastal plains of Eritrea. Djibouti reported 41 mm in two hours on the 5th, and a total of 7 mm on the 9-10th. The extent of these rains is difficult to assess as cold clouds were not visible on satellite imagery. As a result of these and heavy rains that fell during November, favourable ecological conditions are expected to persist over a wide area extending from Djibouti to north-eastern Somalia.

Widespread rains were reported in Saudi Arabia along the Tihama from Jizan to Mecca, in the northern border areas and in the north central interior. Dense green vegetation was present along the central and southern Tihama coastal plains which may extend into Yemen.

Conditions are likely to improve in coastal and interior areas of Baluchistan in Pakistan where Pasni received a total of 60 mm and light rains fell in the interior during the first fortnight of December.



AREA TREATED IN DECEMBER 1994

Algeria	1,855 ha	(9-20 December)
Mauritania	9,019 ha	(21-30 November)
	13,354 ha	(1-20 December)
Morocco	48 ha	
Niger	117 ha	(4-25 November)
Sudan	25,373 ha	(1-30 November)
	460 ha	(1-19 December)



WEST AFRICA

MAURITANIA

During the last decade of November, some patches and bands of late instar hoppers persisted north of Moudjeria (1753N/1220W) and south of Tidjikja (1833N/1126W), while increasing numbers of adults, forming several groups and small swarms, continued to appear and move west to northwards. As a result, additional adults including numerous groups and some small swarms, were reported between Tidjikja and Atar, as well as south and east of Akjoujt where breeding continued. These infestations were extremely dispersed within western Tagant, southern Adrar, northern Traza and southern Inchiri which hampered control operations. A total of 9,019 ha, primarily mixed infestations of hoppers and adults, were treated by ground teams during this decade. A few isolated adults persisted near Tamchakett (1715N/1040W) and scattered immature adults commenced to appear south of Zouerate.

During the first decade of December, infestations started to decrease near Moudjeria and Tidjikja where only a few swarms and scattered adults were reported. Numerous hopper infestations of all instars, sometimes mixed with immature adults, were present primarily south and east of Akjoujt where aerial control operations treated 1,940 ha. Control was initiated for the first time east of Atar mostly against hopper bands. Some immature and mature low density swarms migrated to the coast north of Nouakchott and to western Inchiri. Further north, there were several additional reports of scattered adults south of Zouerate, while three small swarmlets, one of them mature, were seen about 500 km east of Zouerate at 2325N/0835W and 2340N/0745W.

During the second decade, ground and aerial control operations continued against young adults east and, to a lesser extent, south of Akjoujt, and against hoppers east of Atar. Control operations extended further east against late instar hoppers mixed with immature adults near Ouadane (2056N/1137W). On the coast north of Nouakchott, 2,100 ha of immature swarms were treated. In the Tiris Zemmour region, a few additional small groups and swarmlets were reported from the east and 32 ha of first-second instar hopper bands were treated at 2336N/0741W. Scattered immature adults first found along the track between 2401N/1124W and 2224N/1000W suggest that a further northern movement occurred.

ATLANTIC OCEAN

An isolated locust was reported from a ship about 200 km north-west of Nouakchott at 1845N/1800W on 31 December.

MALI

During the first decade of December, mixed infestations of hopper and maturing adult groups as well as some bands and swarms, were reported along the Tilemsi Valley up to the Algerian border and near Kidal.

NIGER

A late report was received, stating that scattered adults were present in the south-east near Diffa (1332N/1154E) during the first decade of October.

Nomads and local administrators reported several hopper bands and swarms west of Air Mountains between Arlit (1844N/0726E) and Wadi Anou Makarene (ca. 1808N/0708E), and near Iferouane (1904N/0825E) throughout November. Control operations against bands were carried out by farmers over 117 ha in Akokan (1843N/0726E). During the last week of the month, a survey team saw several swarms in Arlit, scattered adults at two places between Tahoua and Agadez as well as in Agadez, and immature adults up to 5,000 per ha mixed with scattered hoppers of second to fifth instars in Anou Makarene over a total of 800 ha.

CHAD

Scattered adults were found at several places along the track between Biltine and Fada on 30 November - 6 December. In the Fada region, small groups of immature and mature adults, at densities up to 8,000 per ha, were reported over 361 ha at Oued Kaorkite (1703N/2137E) on 2 December and 684 ha at Oued Ndou (1712N/2122E) on the 3rd. Further south in Wadi Edie, a small maturing swarm was found over 36 ha with some groups of second to fifth instar hoppers on the 5th. At these three locations, parasites were found on many adults. There were also unconfirmed reports of infestations in several other places near Fada.

No locust information was received from other countries in the Region up to 31 December.

NORTH-WEST AFRICA

MOROCCO

During the last week of November, two small low density swarms were reported from the extreme south near Dakhla at 2438N/1453W on the 23rd and Bir Anzrane (2355N/1430W). There were several reports of scattered adults along the coast and in the interior from the Mauritanian border near Bir Gendouz (2135N/1630W) to Laayoune (2707N/1312W).

During December, adults and 14 small loose swarms, a few of them maturing, were mostly seen between Twarta (2345N/1555W) and Cap Barbas (2208N/1534W) and to a lesser extent in the Laayoune area. Scattered adults were reported at some locations as far north as Guelmine (2859N/1001W). A total of 48 ha were treated, primarily in irrigated areas near Twarta.

ALGERIA

A late report stated that there was no locust activity during the second half of October and only scattered immature adults at some locations west of Tamanrasset during the first decade of November.

During the second decade, increasing numbers of immature adults were reported within the same areas, primarily in Oued Tigharghart (2335N/0138E), Oued Tin Zebana (2230N/0154E) and Oued Amded (2217N/0322E), over a total of 10,000 ha at densities of 1-3 per sq. m.

During the first and second decades of December, dispersed adult infestations were present west and south of the Hoggar mountains at numerous places between Asedjrad, Tanezrouft Tan Ahenet and Tassili du Hoggar regions. Although mostly scattered adults were reported, some groups were also present. Control operations began over 1,855 ha, primarily against high numbers of immature adults in Asedjrad in Oued Talahouiat (ca. 2459N/0042E) and Oued Tassanghanet (ca. 2438N/0136E). A few yellow adults were observed in these areas as well as some solitary hoppers of all instars.

No locust information was received from other countries in the Region up to 31 December.

EASTERN AFRICA

SUDAN

During November, ground aerial control operations continued in Northern Kordofan and Khartoum States. The majority of the infestations were present in north-eastern parts of Northern Kordofan, consisting of medium density maturing adults and medium to heavy densities of late instar hoppers covering an area of 34,850 ha. A total of 22,850 ha were treated. In Khartoum State, medium density adults and low density late instar hoppers were present on 2,835 ha. A total of 2,035 ha were treated. Hoppers of all instars were reported in the Baiyuda Desert of Northern State on 1,800 ha of which 488 ha were treated by ground. Mature adults were also seen further east near Atbara in Wadi Al Halagi (1725N/3425E) on 8 November.

During December, ground control operations continued against small infestations of high density late instar hoppers and new adults in Northern State, treating 60 ha near Atbara. A total of 400 ha of immature adults were treated in Khartoum State. The situation in Northern Kordofan was reported calm as adults moved further east into the central states. A medium density immature swarm of about 20 ha was seen further east in the Ed Dueim area at Alsofi (1430N/3206E).

On the Red Sea coast, scattered mature adults were first reported in the Tokar Delta on 13 November. Laying was in progress. By the end of November, a total of 11,170 ha were reported infested in Tokar. No locusts were seen north to Suakin or south to Eritrea. On 16 December, medium density mature swarms were reported over a total of 1,200 ha along the foothills south of Tokar near Khor Dirtet (1805N/3821E). Increasing numbers of adults were reported in south-eastern Tokar Delta covering 1,050 ha. Adults were also seen further north towards Suakin in Khor Gwob (1859N/3722E) on 100 ha. In the northern subcoastal areas, solitary laying adults at densities up to 3,540 ha per ha and medium density second to fifth instar hoppers were seen in Wadi Diib (2145N/3607E) and Wadi Oko (2100N/3553E) from 1-19 December.

ERITREA

Laying adults, at densities of 7,000-10,000 per ha, were reported over a total of 55 ha in three places near Mersa Teclay (1732N/3848E) close to the Sudanese border on 6-11 December. No locusts were seen during surveys further south near Massawa on 7-8 December.

No locust information was received from other countries in the Region up to 31 December.

NEAR EAST

SAUDI ARABIA

Several mature swarms were seen coming from the west in late November and early December. The first swarm, about 5 sq. km in size, was reported on the northern Tihama in Wadi Al Malaf (2330N/3850E) on 29 November where it was seen laying. Another swarm was flying near Al Musayid (2408N/3908E) on 4 December. About ten other swarms were reported north of Jeddah up to mid-December. Solitary adults were scattered within a total estimated area of 850,000 ha along the Tihama south of Jeddah and north of Jeddah near Badr (2344N/3846E).

YEMEN

Isolated adults were reported from the northern Tihama in Wadi Hayran (1618N/4320E) during the third week of November.

EGYPT

No locusts were seen during a survey in late December in the Halaib area.

KUWAIT

No locust activity was reported during November.

No locust information was received from other countries in the Region up to 31 December.

SOUTH-WEST ASIA

IRAN

No locusts were found during surveys along the coast of Baluchistan between Poshty (2527N/5928E) and Gowater (2508N/6127E) on 29 October - 1 November. However, isolated adults were reported near Chah Bahar on 7 November.

PAKISTAN

No locusts were reported during the second half of November and the first half of December.

INDIA

No locusts were reported during the second half of November and during December.

No locust information was received from other countries in the Region up to 31 December.



WEST AFRICA

MAURITANIA

Hoppers and adults that are currently present in the north will slowly mature. Limited movements further north could occur during periods of warm southerly winds associated with eastward moving Mediterranean depressions. By the end of the forecast period, a few swarms are likely to form and could lay in favourable areas or start to move northwards if temperatures increase.

MALI

Current infestations will persist in areas that remain green along the Tilemsi Valley and in northern Adrar des Iforas and slowly mature due to low temperatures. Limited movements towards the north could occur during periods of warm southerly winds associated with eastward moving Mediterranean depressions.

NIGER

Current infestations will persist in areas that remain green in Tamesna and slowly mature and perhaps lay. Limited movements towards the north could occur during periods of warm southerly winds associated with eastward moving Mediterranean depressions.

CHAD

Small adult infestations are expected to persist in Ennedi near Fada and may be present and persist in parts of Tibesti near Zouar. Adults will slowly mature and perhaps lay during the forecast period.

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

No significant developments are likely.

NORTH-WEST AFRICA

ALGERIA

Current infestations are expected to persist in areas of runoff south and west of the Hoggar Mountains. Populations will slowly mature during the forecast period and adults could lay. During periods of warm southerly winds, small numbers of adults could appear from the south while others could move a limited distance further north towards central and western Algeria.

MOROCCO

Current infestations are expected to persist in coastal and interior areas of the south-west. Populations will slowly mature during the forecast period and adults could lay. During periods of warm southerly winds, additional adults may appear from the south while others could move a limited distance north-east towards Oued Draa and the southern side of the Atlas Mountains. As temperatures warm up at the end of the forecast period, additional adults will start to move further north.

TUNISIA and LIBYA

No significant developments are likely.

EASTERN AFRICA

SUDAN

Infestations are expected to increase on the southern Red Sea coastal plains north and south of Tokar Delta as well as in the delta itself. Hoppers will appear early in the forecast period and could start to form small bands. A second generation of breeding could occur in subcoastal areas of the north if conditions remain favourable.

ERITREA

Infestations are expected to increase along the coastal plains from Massawa to the Sudanese border. Hoppers are likely to appear early in the forecast period and could start to form small bands.

SOMALIA

The current situation remains unclear. Conditions are expected to be favourable over large areas of the northern coast. Consequently small to moderate scale breeding could be in progress or occur during the forecast period which could lead to a significant population build-up.

DJIBOUTI

Isolated adults may be present and breeding in areas of recent rainfall.

ETHIOPIA, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

SAUDI ARABIA

Infestations are expected to increase along the central and southern Tihama plains as a result of current breeding and any additional adults coming from the west. A second generation of breeding could occur in some coastal areas if conditions remain favourable. Late in the forecast period a further wave of adults could appear from the west.

YEMEN

Adult numbers are likely to increase along the northern Tihama where breeding is expected to occur during the forecast period. Infestations will probably remain on a small scale. A few isolated adults may be present along the coastal plains of Aden.

EGYPT

Scattered adults are expected to be present and breeding in some areas along the southern coastal plains near the Sudanese border. Breeding is expected to continue during the forecast period.

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

No significant developments are likely during the forecast period.

SOUTH-WEST ASIA

PAKISTAN

Scattered adults are likely to be present and will persist in some parts of Baluchistan along the coast and in interior areas.

INDIA

Isolated adults may be present and will persist in some parts of Rajasthan.

IRAN

Scattered adults are expected to persist along the south-eastern coast of Baluchistan near Chah Bahar.

AFGHANISTAN

No significant developments are likely during the forecast period.

	ANNOUNCEMENTS
---	----------------------

In order to facilitate the assessment of locust data received from the field, all Plant Protection Departments and FAO Representatives are kindly requested to address any locust reports sent by facsimile or telex to the attention of " **K. Cressman and M. de Montaigne, AGP Division** ".

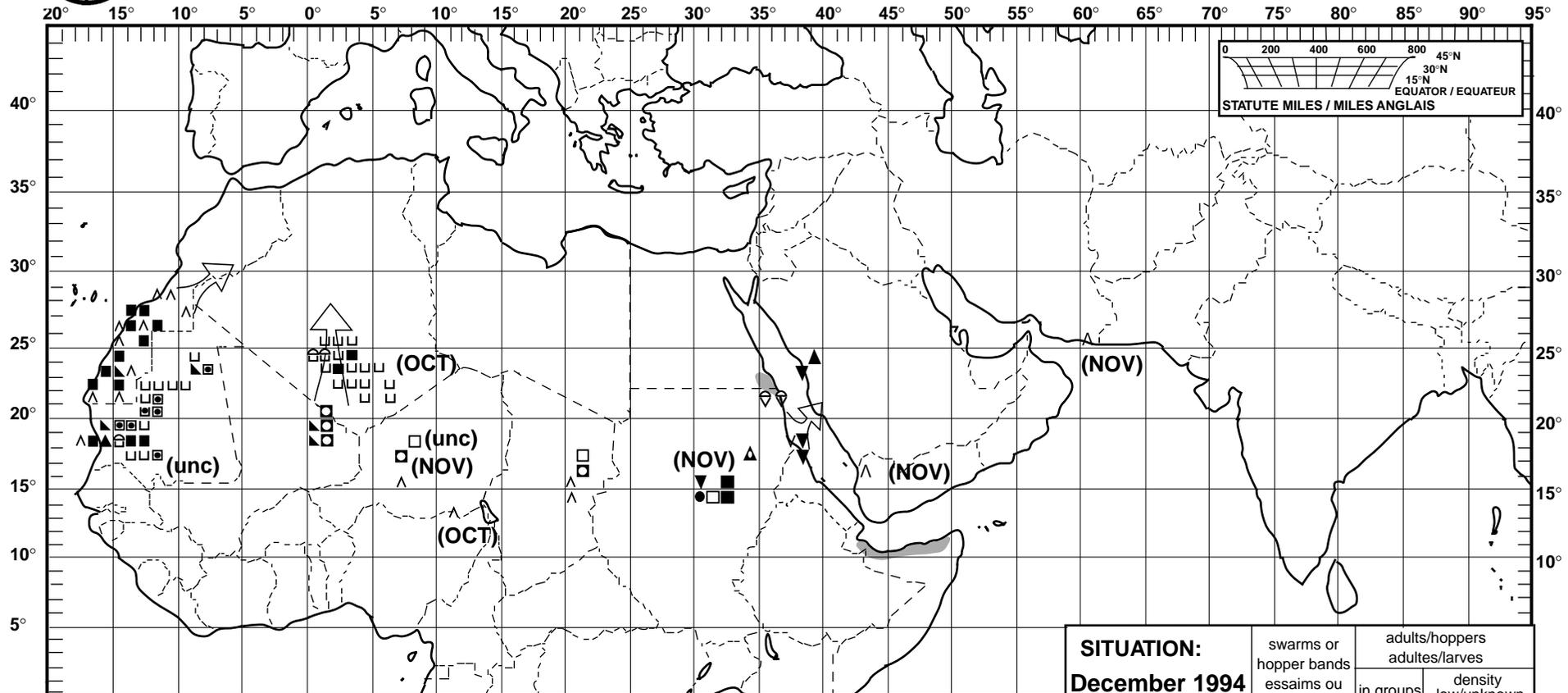
The staff of ECLO would like to wish affected countries and the international donor community a very happy and prosperous New Year.

4 January 1995



Desert Locust: summary No. 196

Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.2.95	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: December 1994 decembre 1994	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)			

15° 20° 25° 30° 35° 40° 45°