



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 210



GENERAL SITUATION DURING FEBRUARY 1996 FORECAST UNTIL MID-APRIL 1996

Desert Locust infestations continued to decline during February along the Red Sea coast of Saudi Arabia and in North-West Africa. Some adults are expected to move from these areas towards spring breeding areas where substantial rains have fallen during the past few months. This movement could start once temperatures increase and probably has already started in Morocco and Algeria. There is a possibility that a few small swarms may appear during March and early April south of the Atlas Mountains in Morocco and Algeria while others could appear in the central and northern interior of Saudi Arabia originating from the Red Sea coastal plains. Adults are expected to lay eggs shortly after arrival. However, current reports indicate that breeding in both areas during the upcoming spring is likely to be on a smaller scale this year compared to the spring of 1995.

Control operations were undertaken during the first half of the month against a few small mature swarms in south-western Morocco and in adjacent areas of north-western Mauritania, covering a total of about 1,000 ha. Several swarms were seen by nomads in northern Mauritania which could not be confirmed but suggests that there may be additional small infestations present.

More than 11,000 ha of hopper bands were treated in Saudi Arabia on the Red Sea coastal plains. No significant locust infestations were reported from the rest of the Arabian Peninsula nor from the western side of the Red Sea. Only a few isolated adults were seen on the coastal plains of Sudan, Eritrea and northern Somalia.

Increasing numbers of adults were reported from Baluchistan in Pakistan where widespread rains fell during January. As a result, small scale breeding is likely to occur in this area as well as in adjacent areas of Iran.

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 FEBRUARY 1996

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.

February was characterized by rainfall over parts of the winter/spring breeding areas of North-West Africa and the Arabian Peninsula. Cloudy conditions prevailed over the southern Red Sea towards the end of the month.

In North-West Africa, above average rains associated with several depressions moving eastward over the Mediterranean fell south of the Atlas Mountains in Morocco and Algeria. Some of these rains extended from Sidi Ifni to Dakhla in south-western Morocco, over the northern Sahara of Algeria and southern Tunisia, spreading into north-western Libya. For example, Sidi Ifni received more than 37 mm, Tindouf 52 mm and Bechar (Algeria) 38 mm and Remada (Tunisia) 40 mm during the month. Light rains were also reported in western and northern Mauritania from Nouakchott to Bir Mogrein and Oued El Hamra at mid-month.

In Morocco, favourable conditions for breeding were reported in the extreme south-west as a result of these rains as well as those that occurred in late January. Although breeding conditions were reported to be unfavourable in Algeria, they are likely to be improving in areas of recent rainfall.

Even though rains fell in northern Mauritania, they were probably not enough to improve the generally poor breeding conditions found in most parts of northern Tiris Zemmour apart from a few wadis and run-off areas. Conditions were more favourable further south in the Magteir area south-east of Zouerate and in the western parts of Adrar and Tagant from north of Tidjikja to Chinguetti where green vegetation was reported in the inter-dunal areas.

Generally dry conditions persisted along the Red Sea coastal plains from Sudan to Somalia. In Eritrea, green vegetation was present from south of Massawa to Arafele and may exist in Wadi Melecet near Algena on the northern plains. In Sudan, green vegetation was reported in the Tokar Delta and in a few places along the plains further south. No significant rain was reported although clouds prevailed over the plains from Tio to Tokar during the last dekad of the month. In northern Somalia, only patches of green vegetation were present in some places along the base of the foothills. On the other side of the Red Sea, breeding conditions were slightly more favourable on the coastal plains of Saudi Arabia and Yemen. Light rain fell over the southern Tihama of Saudi Arabia at mid-month and green vegetation may be present on the Yemen plains near Hodeidah, Bajil and Zaydiyah and in the larger wadis south of Hodeidah to Hays. Some clouds occurred over the coastal plains from Hodeidah to Jeddah during the last dekad of February.

In Saudi Arabia, breeding conditions remained favourable on the northern Tihama, but were drying out on the Tihama south of Jeddah. Light to moderate rains fell over the spring breeding areas of the central interior during the month. However, temperatures were probably too low for breeding. Light rains fell several times along the Batinah coast of Oman, extending to the United Arab Emirates. As a result, conditions are expected to be improving for breeding in coastal areas and in the interior near Buraimi and Al-Ayn.

In western Pakistan, low temperatures prevailed over most of the spring breeding areas of Baluchistan during the month. However, breeding conditions are expected to be improving in many places as a result of widespread rains in late January and light to moderate rains in February. Light rain fell in a few locations of Rajasthan in India during the month.



AREA TREATED

Mauritania	170 ha	(1-16 February)
Morocco	600 ha	(16-31 January)
	900 ha	(1-15 February)
Saudi Arabia	11, 396 ha	(11 January - 29 February)



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 February, infestations were confined to a small area in the north extending about 100 km south-east of Zouerate (2244N/1228W). Within this area, a few small immature and maturing swarms were reported as well as 15 ha of scattered fifth instar hoppers and immature adults at densities of up to 1,500 per ha. One maturing swarm covering 50 ha was treated on 1 February while another one seen copulating on 120 ha was treated on the 16th. Isolated adults were seen at several places within the same area as well as to the south and east of Chinguetti (2027N/1222W). Nearby, a dense immature swarm was seen by nomads on about the 7th near the Moroccan border at Choum (2119N/1301W). There were several other reports from nomads of immature swarms during the month south of Zouerate, north of Atar (2056N/1254W) and near Tidjikja (1834N/1126W). North of Zouerate, only a few isolated mature adults were seen on the 9th.

No locust information was received from other countries in the Region up to 29 February.

NORTH-WEST AFRICA

MOROCCO

During the second half of January, three small swarms at densities of about 20 adults per sq. metre were seen copulating in the extreme south-west near Tichla (2135N/1458W) on a few hundred hectares. Control operations were undertaken and treated 600 ha.

Small groups of adults persisted during the first half of February near Tichla and between Lawouida (2156N/1444W) and Imatlane (2156N/1446W). Mature adults, at densities of 10-50 adults per sq. metre, were reported to be copulating. A total of 900 ha were treated in these areas. A few solitary adults were seen on 14 February further north in Tata Province at Akka (2925N/0815W) which may be the first indication of movement towards the Oued Draa area. Nomads saw a swarm copulating near the Mauritanian border at Gleib Lehbaliya (2125N/1415W) on the 21st.

ALGERIA

No locusts were reported during January. Isolated immature pink adults appeared in the west near Tindouf at Djebilet (2644N/0715W) and Kabat Slouguia (2708N/0715W) on 15 and 17 February respectively. No other locusts were reported up to the 29th.

No locust information was received from other countries in the Region up to 29 February.

EASTERN AFRICA

SUDAN

A few isolated adults were present at a couple of locations along the coastal plains of the Red Sea south of Tokar on 18 January. No locusts were seen during surveys undertaken from 30 January to 11 February in Tokar Delta and along the coast from Suakin (1908N/3713E) to the Eritrean border.

ERITREA

There was an unconfirmed report of hopper groups on the northern coastal plains of the Red Sea between Marsa Taklai (1734N/3851E) and Marsa Baresi (1755N/3837E) in mid January. A few isolated locust adults were reported on the coast north of Massawa during 8-17 February; some of these were seen in cropping areas at 1553N/3905E.

SOMALIA

Isolated mature adults were present at a few places on the north-western coastal plains and along the base of the escarpment from 31 January to 19 February.

No locust information was received from other countries in the Region up to 29 February.

NEAR EAST

SAUDI ARABIA

Control operations continued against medium dense hopper bands along the Red Sea coastal plains during mid January up to mid February. Most of these were concentrated between Jeddah and Rabigh (2242N/3910E) while smaller infestations were present near Mecca (2125N/3950E), Tafil (2042N/3943E) and Al-Lith (2012N/4017E). There were a few reports of fledglings in early February. By the end of the month, control operations were still in progress in the Rabigh area. Only scattered late instar solitary hoppers and new adults were reported south of Mecca and near Al-Lith. More than 11,000 ha were treated by air and ground from mid January to the end of February.

KUWAIT

No locusts were seen during surveys carried out in January.

No locust information was received from other countries in the Region up to 29 February.

SOUTH-WEST ASIA

PAKISTAN

A late report indicated that solitary adults were present at 12 locations in coastal and inland areas of Baluchistan in early January. Adults were seen at 4 places along the coast between Pasni and Gwadar, at 5 places in the inland areas of Turbat and Panjgur, and at 3 places further north in the Kharan District. Densities ranged from 1-8 adults per site except in the Kharan District at Grang (2815N/6503E) where about 40 adults were seen on 5 January. The latter area is near to where control operations were carried out against hoppers in early December. Similar adult populations persisted in the same areas during the second half of January.

INDIA

No locusts were seen during surveys carried out in Rajasthan from mid January to mid February.

No locust information was received from other countries in the Region up to 29 February.



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

Small scale breeding may have occurred in western Tiris Zemmour, primarily south of Zouerate. If so, some small hopper infestations will appear during March. A few groups of adults and perhaps a few small swarms are likely to persist within the same region. Some of these may gradually move further north. Isolated adults are likely to persist in western Adrar and northern Tagant.

MALI

Isolated adults may be present and persist in a few areas of the Adrar des Iforas.

NIGER

Isolated adults may be present and persist in a few areas of Tamesna.

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

No significant developments are likely.

NORTH-WEST AFRICA

MOROCCO

A few hopper patches and small bands may appear in the Tichla area and perhaps in a few areas previously infested south-east of Dakhla. Additional adults and possibly some groups or a few small swarms are expected to appear during March south of the Atlas Mountains in the Oued Draa area. The beginning of this movement will be associated with an increase in daily temperatures. Adults will lay after arrival in areas of favourable conditions. Hatching could start by the end of the forecast period.

ALGERIA

Additional adults and possibly some groups or a few small swarms are expected to appear in the west near Tindouf and south of the Atlas Mountains near Bechar during March. These will mature shortly after arrival and probably lay on a small scale; hatching could start by the end of the forecast period.

LIBYA and TUNISIA

No significant developments are likely.

EASTERN AFRICA

SUDAN

Isolated adults are likely to persist and may breed on a small scale in a few places on the southern coastal plains of the Red Sea. Isolated adults may be present in Wadi Oko/Diib.

ERITREA

A few isolated adults are expected to persist and may breed in a few areas of recent rains on the Red Sea coastal plains near Massawa and Algena.

SOMALIA

Isolated adults are likely to persist at a few places along the north-western coastal plains and along the foothills of the escarpment.

DJIBOUTI, ETHIOPIA, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

EGYPT

Isolated adults may be present and persist on the south-eastern coast.

SAUDI ARABIA

Locust infestations will continue to decline along coastal plains north and south of Jeddah as a result of control operations, drying conditions and potential migration towards the interior. A few groups and possibly a few small swarms are likely to appear in the central north in areas that received recent rainfall. Adults are expected to lay shortly after arrival and low to moderate scale hatching could commence by the end of the forecast period if temperatures warm up.

YEMEN

Scattered adults are likely to be present and may be breeding on the Tihama and perhaps on the coastal plains near Aden. Isolated adults may be present in a few places of the interior of Sabatayn and Hadhramaut.

OMAN

Isolated adults may be present on the northern coastal plains and in the interior near Buraimi where small scale breeding could occur in areas of recent rains.

UAE

Isolated adults may be present and could breed in the Fujayrah and Al-Ayn areas.

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

No significant developments are likely.

SOUTH-WEST ASIA**IRAN**

Isolated adults are likely to be present and breeding at a few places along the coastal plains of south-eastern Baluchistan near Chabahar. Surveys should be undertaken to check the situation.

PAKISTAN

Adult numbers are expected to continue to increase in coastal and interior areas of Baluchistan where small scale breeding may have started. As a result, low numbers of hoppers are likely to appear during the forecast period.

INDIA

A few isolated adults may be present and persist in parts of Rajasthan.

AFGHANISTAN

No significant developments are likely.



The following meetings on Desert Locust will be held during the first half of 1996:

- EMPRES Liaison Officers Meeting for the Central Region: 15-17 April, Sana'a (Yemen)
- 21st Session of the Executive Committee of the Commission for Controlling Desert Locust in the Central Region and 21st Session of the Commission: 7-14 May, Cairo (Egypt)
- 20th Session of the Commission for Controlling Desert Locust in North-West Africa and 24th Session of its Executive Committee: 8-13 June, Nouakchott (Mauritania)
- 5th Session of the Desert Locust Technical Group of the Desert Locust Control Committee: 25-28 June, FAO-HQ Rome (Italy)



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

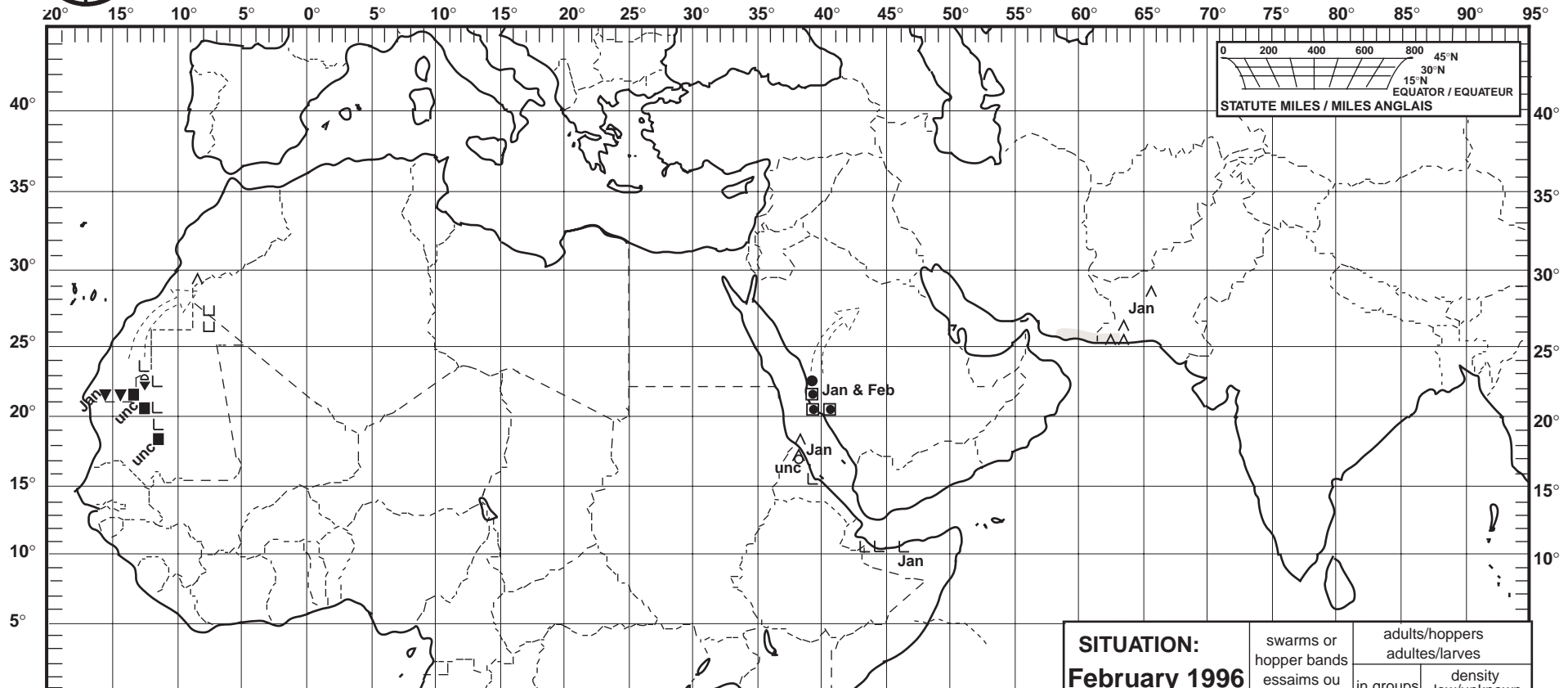
Other reporting terms

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 Criquet pèlerin: situation résumée

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FORECAST TO: PREVISION AU: 15.04.96	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: February 1996 février 1996	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)	◼	◼	◼