

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 235
(5 May 1998)



General Situation during April 1998 Forecast until mid-June 1998

Desert Locust infestations declined along the Red Sea coastal plains and Gulf of Aden during April as a result of control operations and drying vegetation. Small scale breeding occurred on the plains near the Yemen and Saudi Arabian border, in southern Yemen and in Baluchistan of eastern Iran and western Pakistan. The majority of control operations undertaken during the month were in Saudi Arabia and to a lesser extent in Yemen where small swarms may form. Localized operations were also conducted in northern Somalia, Egypt, Ethiopia and Iran. Low numbers of locusts are expected to persist in some of these areas during the next six weeks while others may start to appear in the summer breeding areas of Sudan and along the Indo-Pakistan border.

Central Region. There was a substantial decline in aerial and control operations in **Saudi Arabia** from 150,000 ha in March to 22,000 ha in April. These were conducted against hopper bands and a few swarms on the Red Sea coastal plains near Medinah and near the Yemen border. Smaller ground operations were undertaken in adjacent areas of **Yemen** against

hopper bands. By the end of the month, infestations were confined to the border area where they are likely to persist and form a few small swarms. Localized infestations were also reported in southern Yemen where control was carried out against small hopper groups, and in **Egypt** near Lake Nasser against mature adult groups. Aerial control was undertaken against a few swarms in northern **Somalia** and in adjacent areas of eastern **Ethiopia**. Laying has probably occurred within a large area of northern Somalia and hatching is expected in the coming weeks. No locusts were reported in **Eritrea** or **Sudan** although some may start to appear in the summer breeding areas of these countries by mid June.

Eastern Region. Results from an Iran/Pakistan Joint Survey indicate that small scale breeding occurred in coastal and interior areas of Baluchistan in eastern **Iran** and **Pakistan**. Nevertheless, locust numbers are expected to decline as conditions become dry and adults move towards the summer breeding areas along the Indo-Pakistan border. The scale of this movement is assessed to be small.

Western Region. Only isolated adults were reported in the central Sahara of **Algeria**. Dry conditions prevailed in most areas and no significant developments are expected.

The FAO Desert 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 Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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Weather & Ecological Conditions in April 1998

Mostly dry weather prevailed in all regions. Only a few isolated showers were reported from some countries. Consequently, vegetation is drying up in most areas along the Red Sea coastal plains but remains greener in Baluchistan of Iran and Pakistan.

In the **Near East**, isolated showers fell at times during the month in a few places of the interior of Saudi Arabia. On the western edge of the Empty Quarter, Najran received 23 mm and Sharurah 20 mm. Further north, Hail received 12 mm and Medinah 11 mm. Consequently, small areas of green vegetation were reported in these areas. On the Red Sea coastal plains of Saudi Arabia and Yemen, maximum temperatures gradually increased during the month, reaching 41C in some places, and no significant rains were reported. Consequently, vegetation was either dry or becoming dry along the plains except in the border area between Jizan, Saudi Arabia and in Yemen near Midi and Wadi Hairan where light rains fell at the end of the month.

In **Eastern Africa**, no significant rainfall was reported except for light to moderate showers at times in the railway area of eastern Ethiopia. During the month, Dire Dawa received 57 mm. Vegetation was mainly dry and conditions were not favourable for breeding anywhere except along the Gad River. In northern Somalia, patches of green vegetation were present along the central coast and in the foothills. In general, conditions are not particularly favourable for breeding except in a few parts of the above mentioned areas. Strong south and south-westerly winds prevailed over northern Somalia on the 16-27th as a result of an unusual anti-cyclonic disturbance over the western Indian Ocean. These winds extended to the coastal areas of southern Yemen and Oman and western Pakistan. They may have carried some locusts to the southern Arabian Peninsula.

In **South-West Asia**, conditions were favourable for breeding in Baluchistan of western Pakistan and eastern Iran where heavy rains fell in March. In the

latter area, green vegetation was present in the Jaz Murian basin in the interior and on the coastal plains near Chabahar. In India, isolated showers fell in Rajasthan at Bikaner.

In **West and North-West Africa**, light rains and isolated showers fell at times in northern Mauritania and along the western coast of Morocco. In Mauritania, Nouadhibou received 26 mm and Atar 14 mm. Heavier rains associated with several eastward-moving depressions over the Mediterranean fell in southern Tunisia towards the end of the month. Consequently, small areas of green vegetation are likely to be present.



Area Treated

Egypt	147 ha	(22-28 April)
Ethiopia	2,150 ha	(25-31 March)
	100 ha	(16 April)
Iran	950 ha	(21 April)
Saudi Arabia	22,457 ha	(1-30 April)
Somalia	1,300 ha	(9-10 April)
Yemen	5,300 ha	(10-30 April)



Desert Locust Situation and Forecast

(see also the summary on the first page)

WEST AFRICA

Mauritania

• SITUATION

No locusts were seen in April.

• FORECAST

Isolated solitary adults are likely to be present in a few areas of the north between Akjoujt and El Hank. Numbers will decrease as conditions become unfavourable and adults will start to move south and appear in summer breeding areas. The scale of this movement will probably be very small.

Mali

• SITUATION

No reports received.

• FORECAST

Low numbers of solitary adults may be present in a few of the major wadis in the Adrar des Iforas and Tilemsi Valley.

Niger

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of solitary adults may be present in a few places of Tamesna.

Chad

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Senegal

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Burkina Faso, Cape Verde, Gambia, Guinea Bissau, and Guinea Conakry

- **FORECAST**

No significant developments are likely.

NORTH-WEST AFRICA

Algeria

- **SITUATION**

Isolated adults were present north-west of the Hoggar Mountains during April.

- **FORECAST**

A few isolated adults may be present and persist in the central and southern Sahara.

Morocco

- **SITUATION**

No locusts were seen in February and March.

- **FORECAST**

Isolated solitary adults may be present in the extreme south-west and breeding in areas of recent rainfall.

Tunisia

- **SITUATION**

No locusts were seen in March.

- **FORECAST**

No significant developments are likely.

Libya

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

EASTERN AFRICA

Sudan

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults are expected to appear in the summer breeding areas by the end of the forecast period. Laying could occur if early rains fall.

Eritrea

- **SITUATION**

No reports received.

- **FORECAST**

Isolated locusts may be present in a few places on the southern Red Sea coastal plains. Low numbers of adults are likely to be seen in the highlands as they move towards the summer breeding areas of the western lowlands where they could appear by the end of the forecast period. There is a low risk that these may be supplemented by other adult groups and perhaps a few small swarms that could appear from Djibouti and north-western Somalia.

Somalia

- **SITUATION**

During the first half of April, a mature swarm was seen on the escarpment north-west of Hargeisa at Borama (0956N/4311E) and at Isha Sugule (0954N/4321E). Aerial control operations treated two medium dense mature swarms on the escarpment north-west of Agabar (1002N/4345E) and south of Hagal (1015N/4544E) on the 9-10th. One swarm was about 10 sq. km in size and the other was about 4 sq. km. There were also unconfirmed reports of two swarms in the mountains between Erigavo and Bosaso on the 12th.

- **FORECAST**

Swarm laying may have occurred in some coastal and interior areas from the Ethiopian border to Las Koreh. If so, hoppers are expected to appear and form small bands during the forecast period. Any mature swarms that persist will likely move inland.

Djibouti

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of solitary and perhaps transiens adults may be present along the northern coastal



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plains. There is a low risk that these may be supplemented by adult groups and perhaps a few small swarms that could appear from adjacent areas of northern Somalia. As conditions become dry, these are expected to move towards the north-west.

Ethiopia

• SITUATION

On 8 April, there was an unconfirmed report of a swarm east of Jijiga (0916N/4246E). On the 16th, control operations were undertaken nearby at Lefaisa (0936N/4258E), treating 100 ha of adults. No locusts were seen during surveys in the Afar region near Serdo (1158N/4113E) and Mego (1130N/4137E) at mid month.

• FORECAST

There is a low risk that scattered adults and perhaps a few small groups or swarms may appear from northern Somalia near Dire Dawa and Jijiga. Similar infestations may also appear in the Afar region and in the northern highlands. As conditions are expected to remain dry, these adults are likely to continue to move north-west towards the summer breeding areas of Eritrea and Sudan.

Kenya, Tanzania and Uganda

• FORECAST

No significant developments are likely.

NEAR EAST

Saudi Arabia

• SITUATION

Hopper band infestations persisted during April along the Red Sea coastal plains south-west of Medinah and near Jizan. Most of the bands were scattered in small patches of 100-500 sq. m in size. Control operations treated a total of 20,557 ha of hopper bands primarily near Medinah in the Ar-Riyan area (2308N/3920E), near Jizan and, to a lesser extent, near Lith, Qunfidah and Al-Baha. During the month, three swarms were reported near Jizan at Sharqiq (1747N/4148E) and Al-Mousim (1624N/4245E), varying in size from 2-4 sq. km. Two of the swarms consisted of maturing adults while the third contained immature adults. All of the swarms dispersed within a larger area of up to 30 sq. km. A total of 1,900 ha of swarms were treated. By the end of the month, the number of control teams had been

reduced and operations had ceased in most areas except near Jizan. In the interior, isolated solitary adults at densities of 2-5 per ha were reported from four areas between Jeddah and Riyadh and between Hail and Riyadh. So far, there is no indication of a large or significant migration from the Red Sea coastal plains to the spring breeding areas of the interior.

• FORECAST

Locust infestations will decline in all areas along the Red Sea coastal plains except near Jizan and the Yemen border where some adults are likely to persist and may form a few small swarms. Locust numbers may increase in the central and northern interior as scattered adults and perhaps a few small groups appear in areas of recent rainfall.

Egypt

• SITUATION

Small groups of mature adults were reported to have arrived at three places in the Lake Nasser area (ca. 2300N/3240E) on southerly winds on 18-20 April. Ground teams treated 147 ha and only a few scattered adults remained at the end of the month.

• FORECAST

Low numbers of adults may persist and breed in a few oases near Lake Nasser.

Yemen

• SITUATION

On the northern Red Sea coastal plains, hatching continued near Midi (1619N/4249E) in early April and extended over a large area between Wadi Hairan (1617N/4300E) and the Saudi Arabian border. As a result, numerous small early instar hopper bands at densities of up to 350 hoppers per sq. m were scattered within this area. By the end of the month, most of the hoppers had reached fourth or fifth instar. Groups of immature adults at densities of up to 300 per ha were reported at a few places in Wadi Hairan, suggesting that fledging was in progress. Ground control operations resumed on the 10th and treated 5,220 ha during the remainder of the month.

On the coastal plains east of Aden, ground control operations were carried out against small groups of third to fifth instar hoppers, at densities up to 500 per sq. m, and fledglings at several locations on 28-30 April. A total of 80 ha were treated.

• FORECAST

On the northern Red Sea coastal plains, hoppers that escape control in the Midi area will fledge early in the forecast period and may form small groups or swarms. Adults could persist in areas of recent rainfall or move east towards the interior or west across the Red Sea. On the Aden coastal plains, additional hatching may occur early in the forecast period. Any hoppers that escape control operations may form

small groups of adults that could persist or move into the interior of Shabwa and Hadhramaut where small scale breeding could occur if rains fall.

Kuwait

- **SITUATION**

No locusts were seen in March.

- **FORECAST**

No significant developments are likely.

Oman

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults may be present in a few places along the Batinah coast and perhaps in Sharqiya where breeding may be in progress in areas of recent rainfall. By the end of the forecast period, numbers should start to decline as conditions dry out. Surveys are recommended.

UAE

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults may be present on the Fujayrah coast. Surveys are recommended.

Bahrain, Iraq, Israel, Jordan, Qatar, Syria and Turkey

- **FORECAST**

No significant developments are likely.

SOUTH-WEST ASIA

Iran

- **SITUATION**

In mid March, isolated mature adults at densities up to 3 per ha were present in the interior of Baluchistan at a few places west of Iranshahr (2715N/6041E). By the end of the month, laying was reported in several places. On the coastal plains, mature adults at densities up to about 300 per ha, mixed with fourth instar hoppers and fledglings, were seen later in the month at several places west of Chabahar (2518N/6038E).

During April, mature adults at densities up to about 200 per ha were present on the coastal plains east of Chabahar as well as on the Vashnum Plains (2523N/6040E) throughout the month. On the 24th, control operations treated 950 ha of hoppers of all instars, fledglings, immature and mature adults at Roudar (2532N/5959E). In the interior, mature adults persisted near Iranshahr while low numbers of solitary mature adults were reported further east near Saravan (2725N/6217E).

- **FORECAST**

Small scale breeding will continue early in the forecast period in a few places along the south-eastern coastal plains near Chabahar and in the interior areas of Iranshahr and Saravan. As conditions start to dry up, locust numbers will decrease and, by the end of the forecast period, adults are expected to move east towards the Indo-Pakistan summer breeding areas.

Pakistan

- **SITUATION**

During the first fortnight of April, scattered solitary adults were present at a few places in coastal areas of Mekran, Lasbela and Khuzdar districts of Baluchistan. Low numbers of hoppers and a maximum of 40 adults were seen in Turbat district at Sulaika (2550N/6256E) on the 2nd.

During the second fortnight, adults persisted in the coastal and interior areas of Baluchistan and increased in number to about 80 adults per location. Solitary hoppers were maturing in the Turbat area at Sulaika where fourth and fifth instar hoppers at densities of 1-2 per bush were seen in a 20 sq. m area. Isolated fifth instar hoppers were also reported nearby at Shooli (2536N/6215E) in a one sq. km area on the 29th.

- **FORECAST**

Small scale fledging will occur throughout the forecast period. Locust numbers will decline in Baluchistan as adults move east towards the summer breeding areas along the Indo-Pakistan border where they should appear by the end of the forecast period. This movement is expected to be on a small scale.

India

- **SITUATION**

No locusts were reported during the second fortnight of March and in April.

- **FORECAST**

Isolated solitary adults are likely to be present and persist in a few places of Rajasthan and Gujarat.

Afghanistan

- **FORECAST**

No significant developments are likely.



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Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

NON-GREGARIOUS ADULTS AND HOPPERS

ISOLATED (FEW)

- very few present and no mutual reaction occurring;
- 0 - 1 adult/400 m foot transect (or less than 25/ha).

SCATTERED (SOME, LOW NUMBERS)

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1 - 20 adults/400 m foot transect (or 25 - 500/ha).

GROUP

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

ADULT SWARM AND HOPPER BAND SIZES

VERY SMALL

- swarm: less than 1 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • band: 50+ ha

RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.

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.



Announcements

Locust information on the Internet: new information has been added to the locust home pages on the FAO internet site:

- details and photos of a regional training course on Desert Locust survey held in Yemen (<http://www.fao.org/news/global/locusts/crcrtrain/crcmain.htm>)
- the most up-to-date information on the current Desert Locust situation (<http://www.fao.org/news/global/locusts/locuhome.htm>)

DLCC Technical Group: the meeting has been re-scheduled for 6-8 October in Rome.

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.



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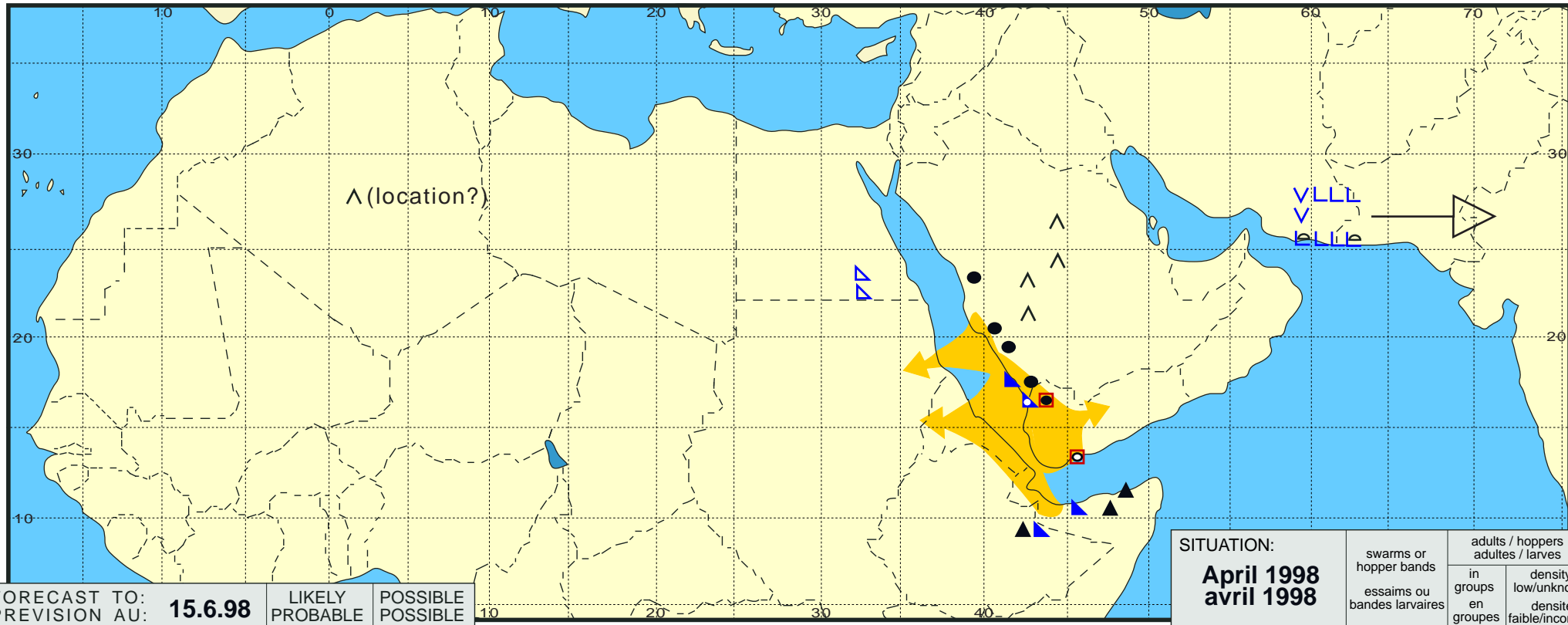
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Desert Locust Summary

Criquet pèlerin situation résumée

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FORECAST TO: PREVISION AU: 15.6.98	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: April 1998 avril 1998	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)			