

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 259
(4 May 2000)



General Situation during April 2000 Forecast until mid-June 2000

The Desert Locust situation remained calm during April in all regions except for two small outbreaks that were in progress in North-West Africa. Control operations intensified in northern Mauritania and in one area along the Algerian-Libyan border against small hopper bands from earlier breeding. By the end of the month, operations had finished in Mauritania where only small residual populations remained. These could eventually move towards southern from May onwards. Small groups and perhaps a few swarmlets could form from current infestations along the Algerian-Libyan border by the end of May. These are expected to move towards the summer breeding areas of the Sahel in June. Elsewhere, dry conditions prevailed and no significant developments are likely.

Western Region. Small patches and bands of hoppers continued to persist in the extreme north of Mauritania near the Moroccan border. Fledging commenced during the first week of April in one location as the remaining hoppers matured. Ground control operations finished on 20 April, having treated 350 ha during the month. Only low numbers of hoppers and adults remain in the north. As vegetation becomes drier, these may form small groups and move from mid May onwards to the summer breeding areas of southern Mauritania while there is a very

slight possibility that a few could move, at times of warm southerly winds, towards Morocco or Algeria. Breeding is in progress in a second area near the border of south-eastern Algeria and south-western Libya where high densities of hoppers had reached mid instar by late April. Control operations in both countries treated 4,500 ha during April. Any escapees are likely to form small adults groups or swarmlets from late May onwards. These are expected to move south towards the summer breeding areas of the Sahel. Isolated adults were reported in north-eastern Morocco. Small scale breeding occurred in south-eastern Air, Niger where solitary hoppers and a few small bands were present and are likely to persist.

Central Region. Dry conditions prevailed throughout the Region. Isolated adults were only reported in northern Somalia and low numbers of adults may be present in eastern Sudan where heavy rains fell which could lead to eventual breeding.

Eastern Region. Low numbers of adults are thought to be present in western Pakistan where generally dry conditions prevailed. This suggests that the movement from spring breeding areas towards the summer breeding areas along the Indo-Pakistan border will be insignificant this year.

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.

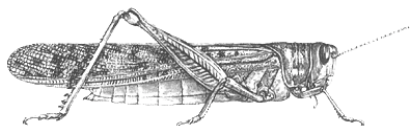
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Weather & Ecological Conditions in April 2000

For the second consecutive month, unusually dry weather prevailed in all locust areas during April. Conditions remained unfavourable for breeding except in one area along the Algerian-Libyan border.

In **West Africa**, no rainfall was reported. The prevailing winds (harmattan) were from the north-east over the Sahelian countries except in north-western Mauritania where north-westerly winds occurred. Some sandstorms affected the northern areas of West Africa during the second dekad. Despite the lack of rainfall, some patches of green vegetation persisted in wadis and low-lying areas of northern Mauritania near Bir Moghreïn, in a few places of the Adrar des Iforas in northern Mali and in parts of the south-eastern Aïr, Niger. These patches were in the process of drying out.

In **North-West Africa**, moderate to heavy rains were only reported on the coast of Morocco near Agadir. As a result of several depressions over the Mediterranean basin, south-westerly winds prevailed over the Region. Stronger winds, varying from the south-west to the south-east, were often observed primarily during the first dekad. In Morocco, vegetation continued to dry out and conditions were unfavourable for locust survival or breeding. In Algeria, vegetation was dry in the south-west and in the central Sahara. Some green patches persisted in a few wadis of the Tassili N'Ajjer area, especially south-east of Djanet where conditions remained suitable for breeding. Similar conditions prevailed across the border in south-western Libya.

In **Eastern Africa**, prevailing winds were mainly from the north and the north-east. Light to locally heavy rain was reported in eastern Sudan from Derudeb to Sinkat and Port Sudan as well as from a few places in northern Somalia. Dry conditions persisted throughout the Region except from one area on the Red Sea coastal plain of Eritrea north Massawa where a few patches of green vegetation were reported.

In the **Near East**, only light rain fell in the Asir Mountains of southern Saudi Arabia. Consequently, vegetation was dry and conditions were unfavourable for breeding along the Red Sea and Gulf of Aden coastal plains, in the spring breeding areas of the interior of Saudi Arabia and on the Batinah coast of northern Oman.

In **South-West Asia**, no significant rainfall was reported from the Region. Conditions continued to be dry in the spring breeding areas of Baluchistan in western Pakistan and in the adjacent areas of south-eastern Iran. However, heavy rains may have fallen on the south-western coast of Pakistan at Jiwani where the conditions could improve.



Area Treated

| | |
|------------|----------------------|
| Algeria | 4305 ha (1-25 April) |
| Libya | 200 ha (20 April) |
| Mauritania | 352 ha (1-20 April) |



Desert Locust Situation and Forecast

(see also the summary on the first page)

WEST AFRICA

Mauritania

• SITUATION

During the first two dekads of April, small patches and bands of hoppers continued to form and mature in the extreme north near the Moroccan border. Most of the infestations were concentrated in the Tamreiket area north-east of Bir Moghreïn (2510N/1135W) between W. Zouania (2535N/1116W) and W. El Mrhader (2535N/1105W) where third to fifth instar hoppers were present during the first dekad. Fledging commenced on the 4th and by the end of the dekad most of the remaining hoppers had reached the fifth instar. Control operations treated 290 ha. During the second dekad, teams focused on infestations on a smaller scale south of Bir Moghreïn in the Beirat Tourassine area where breeding occurred last month. Most of these consisted of small patches and bands of first to third instar hoppers. Control operations treated 62 ha. During the last dekad, only a few residual populations remained in the above areas. Scattered solitary first to third instar hoppers were found from south of the above areas to Zouerate which is probably an extension of the breeding in Tourassine. There were unconfirmed reports of adults in the El

Hank and Oudane areas of the north-east, probably from local breeding earlier this year. There were also reports of adults in Tagant near Tichit (1821N/0929W), probably those that were seen during February in the same area.

- **FORECAST**

Residual populations as well as any that escaped control or detection may form small adult groups in the north and north-east. As vegetation dries out, most of these are expected to move south towards the summer breeding areas in Tagant and the two Hodhs where they are likely to disperse and may be difficult to detect. There is a slight possibility that some may move towards the north or north-east during rare periods of warm southerly winds associated with the passage of Mediterranean depressions. Adults in the Tichit area are likely to slowly mature and lay if rainfall occurs.

Mali

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of locusts may be present and are likely to persist in a few wadis in the Adrar des Iforas.

Niger

- **SITUATION**

Scattered immature adults, at densities up to 300 per ha, were seen in several wadis of south-eastern Air during surveys carried out from 30 March to 4 April. Most of the locusts were solitary although at a few places both solitary and transiens adults were present. At one location (1804N/1001E), small but dense second to fourth instar bands were present on 1 April.

- **FORECAST**

Hoppers will continue to mature in south-eastern Air and probably persist as adults, perhaps in small groups, in the limited areas of green vegetation.

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**

In the extreme south-east, copulating and laying by high densities of adults, up to 70 per sq. metre, continued during the first half of April at 11 places south-east of Djanet near the Libyan border. First to third instar hoppers at densities up to 1100 per bush were first reported on the 18th and continued to the end of the month. Ground control operations treated 4,305 ha of adults and hoppers on 1-25 April.

- **FORECAST**

Hopper groups and bands will continue to mature and form groups of adults and perhaps a few small swarms from mid May onwards. If no further rain falls, vegetation will become dry and adults are likely to start moving south towards the summer breeding areas of the Sahel by the end of the forecast period. There is a slight possibility of adults and perhaps a few groups moving from northern Mauritania in May to the central and western Sahara where they are likely to disperse.

Morocco

- **SITUATION**

Scattered immature adults were reported in the north-east at Bourdim (3201N/0312W) on 10-23 April.

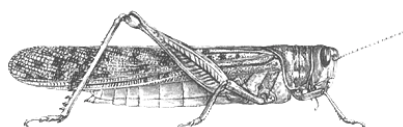
- **FORECAST**

Locust numbers will decline along the southern side of the Atlas Mountains in the north-east. The area of current infestations in northern Mauritania may extend into Morocco south of Smara. There is a slight possibility of adults and perhaps a few groups moving from these areas towards the southern side of the Atlas Mountains during periods of warm southerly winds in May.

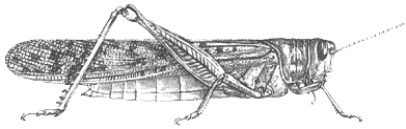
Libyan Arab Jamahiriya

- **SITUATION**

Mature adults, at densities of 6-7 per sq. metre, and first instar hopper bands, at densities of 20-35 per sq. metre, were reported in the extreme south-west near Ghat and the Algerian border at Tetaghassin (2533N/



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0955E) on 14-22 April. Scattered mature adults were also reported nearby at Tanazoft (2456N/1014E). Ground control operations treated 200 ha of adults and hoppers on the 20th.

- **FORECAST**

Hopper groups and bands will continue to mature and form groups of adults and perhaps a few small swarms from mid May onwards. If no further rain falls, vegetation will become dry and adults are likely to start moving south towards the summer breeding areas of the Sahel by the end of the forecast period.

Tunisia

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

EASTERN AFRICA

Sudan

- **SITUATION**

No locusts were reported during April.

- **FORECAST**

Low numbers of adults may be present on the western side of the Red Sea Hills north of Kassala. If additional rain falls, small scale breeding could commence at the end of the forecast period.

Eritrea

- **SITUATION**

A few isolated adults were seen on the Red Sea coastal plains north of Massawa during surveys carried out on 26-28 April. No locusts were seen on the plains south of Massawa.

- **FORECAST**

No significant developments are likely.

Somalia

- **SITUATION**

Isolated immature adults were seen at one location in the east near Meleden (1024N/4950E) on 30 March. No locusts were seen elsewhere in the interior during surveys carried out from 28 March to 2 April.

- **FORECAST**

No significant developments are likely.

Ethiopia

- **SITUATION**

No locusts were seen during surveys carried out in April from Dire Dawa to the Djibouti border and from Jijiga to the Somali border.

- **FORECAST**

No significant developments are likely.

Djibouti

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Kenya, Tanzania and Uganda

- **FORECAST**

No significant developments are likely.

NEAR EAST

Saudi Arabia

- **SITUATION**

No locusts were seen during surveys on the Red Sea coast and in the spring breeding areas of the interior during the first half of April.

- **FORECAST**

No significant developments are likely.

Yemen

- **SITUATION**

No reports received.

- **FORECAST**

A few scattered adults may be present in areas of recent rainfall on the Tihama; however, no significant developments are expected.

Egypt

- **SITUATION**

No locusts were seen during surveys on the Red Sea coastal plains and adjacent subcoastal areas from Safaga to the Sudanese border as well as in the Western Desert at Sh. Owainat on 24 April.

- **FORECAST**

No significant developments are likely.

Kuwait

- **SITUATION**

No locusts were seen during March.

- **FORECAST**

No significant developments are likely.

Oman

- **SITUATION**

No locusts were seen during surveys on the Batinah coast on 19-20 March.

- **FORECAST**

No significant developments are likely.

United Arab Emirates

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

SOUTH-WEST ASIA

Iran

• SITUATION

No reports received.

• FORECAST

Low numbers of adults may be present in a few places on the south-eastern coastal plains between Jask and Chabahar and in the interior between Jaz Murian and Iranshahr. If so, numbers will decrease as conditions become dry.

Pakistan

• SITUATION

During the second fortnight of March, low numbers of solitarious adults, up to 5 per ha, continued to mature in coastal and interior areas of Baluchistan. New populations were found further north between Dal Bandin (2856N/6430E) and the Afghanistan border as well as closer to the Iranian border west of Turbat.

No reports were received for April.

• FORECAST

Locust numbers will decrease as conditions become dry and adults move east towards the summer breeding areas along the Indo-Pakistan border. This movement is expected to be insignificant.

India

• SITUATION

No locusts were seen during surveys in the second half of March and first half of April.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Locust situation in Madagascar

Malagasy Migratory Locust. During April, an estimated 25,000 ha of residual swarms, varying from 20 to 700 ha in size, were present in the mid west of the country between Miandrivazo, Tsiroanomandidy, Manja and Morondava. Elsewhere, the situation was calm.

Red Locust. Numerous populations persisted in the north (east of Nayunga) and in the south-west (south-east of Tulear) during April.



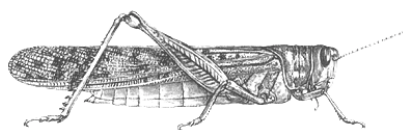
Announcements

Locust reporting. Affected countries are kindly reminded to make sure that locust situation reports are sent to FAO HQ by the 25th day of the month so the information can be included in the FAO bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

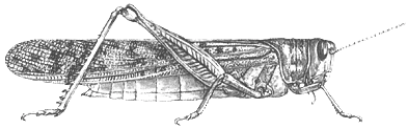
Reporting by email. Affected countries are encouraged to send completed FAO Locust Survey Forms with a brief interpretation of the results by email to eclo@fao.org.

Egypt / Sudan Joint Survey. The report of the *First Joint Survey of the Desert Locust Winter Breeding Areas on the Egyptian-Sudanese Border* is available on the Internet at: <http://www.fao.org/news/global/locusts/egysud/jsmain.htm>.

DLCC Technical Group. The 7th session of the Technical Group of the FAO Desert Locust Control Committee will be held in Rome on 12-15 June. The Group will discuss Desert Locust guidelines, environmental monitoring, training and research networking, and the DLCC mandate.



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NW Africa Executive Committee. The 29th session of the Executive Committee of the FAO Commission for Controlling the Desert Locust in North-West Africa will be held in Algiers on 24-29 June.



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.

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.

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.

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

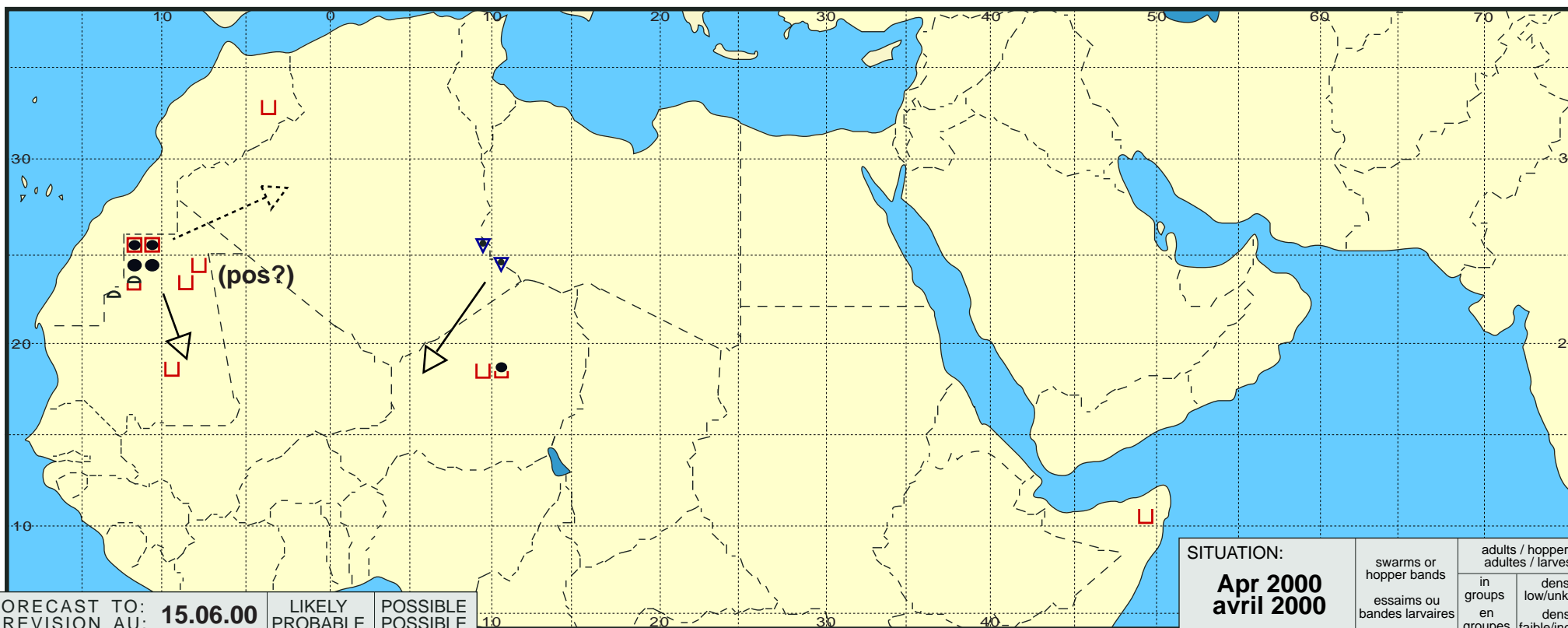
- period of deep recession marked by the complete absence of gregarious populations.



Desert Locust Summary

Criquet pèlerin - Situation résumée

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| FORECAST TO: PREVISION AU: 15.06.00 | 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: Apr 2000 avril 2000 | 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) | | | |