

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 365

(2 March 2009)



General Situation during February 2009 Forecast until mid-April 2009

The Desert Locust situation remained calm during February. Low numbers of solitarious locusts were present in parts of northern Mauritania, central Algeria, in some of the winter breeding areas along both sides of the Red Sea and on the Gulf of Aden coast in southern Yemen. Limited breeding occurred in Mauritania and Yemen where hoppers were present, and egg-laying was reported in Eritrea, Saudi Arabia and Sudan. Very little rain fell in the recession area during February for the fourth consecutive month. Unless further rains fall, locust numbers will continue to decline, only low numbers of locusts are expected to persist in the above areas during the forecast period and further breeding is unlikely.

Western Region. Isolated solitarious adults were present in northwest and northern Mauritania during February. Small-scale breeding occurred near Zouerate but locust numbers remained low. A few adults were seen near irrigated areas in central Algeria. Low numbers of adults may also be present in parts of northern Mali and Niger but surveys could not confirm this because of continued insecurity. No locusts were reported elsewhere in the Region. Further breeding is unlikely to occur unless more rains fall. In any case, locust numbers will remain low and no significant developments are expected during the forecast period.

Central Region. Small populations of solitarious adults persisted on the Red Sea coast in Yemen, Saudi Arabia and near the border of Sudan and Eritrea during February. Some adults were seen laying eggs at the end of the month in Sudan and Eritrea. Small-scale breeding also occurred on the southern coast in Yemen where groups of adults laid eggs in early February in areas that were flooded four months ago. No locusts were reported elsewhere in the Region. Unless further rains fall, locust numbers will remain low in the winter breeding areas on both sides of the Red Sea but may increase slightly on the coast in southern Yemen once hatching commences in March. Regular surveys should monitor the situation carefully.

Eastern Region. The locust situation remained calm during February as generally dry conditions prevailed and no locusts were reported. During the forecast period, small-scale breeding is expected to occur in the spring breeding areas along the coast in southeast Iran where ecological conditions are already favourable and in western Pakistan if rains fall.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00153 Rome, Italy. It is also available on the Internet.

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Weather & Ecological Conditions in February 2009

Very little rain fell in the recession area during February for the fourth consecutive month. Consequently, vegetation began drying out in the winter breeding areas along both sides of the Red Sea but remained green in parts of northwest Africa. Ecological conditions were favourable for small-scale breeding on southern coast of Iran.

In the **Western Region**, no significant rain fell during February. Temperatures gradually increased in the central and southern Algeria Sahara. Ecological conditions were favourable for breeding near Adrar, Bechar and Tindouf but were drier and less favourable south of In Salah. Green vegetation persisted in parts of the Draa Valley south of the Atlas Mountains in Morocco as well as in some places in Western Sahara south of Aousserd and on the Adrar Settouf plateau. In Mauritania, vegetation was green in the northwest and north where ecological conditions were favourable to allow limited breeding in a few places. Small areas of green vegetation persisted in a few wadis in the Adrar des Iforas in northern Mali and in the Air Mountains in Niger. Light showers may have fallen in northeast Chad between Faya and Kalait and in the Mourdi Depression but vegetation remained dry.

In the **Central Region** winter breeding areas, very little rain fell for the third consecutive month during February. Nevertheless, green vegetation increased along the southern coastal plains of the Red Sea in Sudan between Aqiq and Aiterba. Vegetation remained green in other parts of the coast between Port Sudan and the Karora Plains on both sides of the Sudanese/Eritrean border. Even though light rains fell in some areas on the 6th, vegetation started to dry out at the end of the month. Vegetation was also drying out on the Eritrean coast south of Karora to Massawa even though light rains fell near Karora on the 24th. In Ethiopia, vegetation was drying out in the Somali region between Jijiga and northern Somalia but was greener near Dire Dawa from recent rains. In Saudi Arabia, green vegetation persisted in a few places on the Red Sea coast between Lith and Jizan. In Yemen, vegetation was green on the central Red Sea coast but was drying out further north. Vegetation

was also green on the Gulf of Aden coastal plains between Ahwar and Mukalla as well as in the interior between Shabwah and Al Hazm. Although light rains fell in a few places on the Batinah coast in northern Oman in early February and heavier rains fell in the nearby mountains, vegetation remained dry along the coast and ecological conditions were not favourable for breeding. Elsewhere, light rains may have fallen in northwest Sudan, north of Wadi Hawar, and in southwest Egypt near Jebel Uweinat.

In the **Eastern Region**, ecological conditions were favourable for breeding on the southeast coast in Iran where light rains fell in early February. Dry conditions prevailed elsewhere in the Region.



Area Treated

No control operations were reported during February.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During February, isolated solitary immature and mature adults persisted in the northwest between Akjoujt (1945N/1421W) and Atar (2032N/1308W), and in the north near Zouerate (2244N/1221W) and Bir Moghreïn (2510N/1135W). Only a few adults were seen at each location except for one place near Zouerate where densities reached 300 adults/ha. Small-scale breeding occurred at a few sites to the south and east of Akjoujt and west of Zouerate where solitary hoppers of all instars were present.

• FORECAST

Low numbers of locusts are likely to persist in the northwest and north and breed on a small-scale in any areas that receive rainfall during the forecast period.

Mali

• SITUATION

No reports were received in February.

• FORECAST

Isolated adults may be present in parts of the Adrar des Iforas where they could breed on a small-scale if rains fall during the forecast period.

Niger

• SITUATION

No surveys were carried out and no locusts were reported during February.

• FORECAST

Isolated adults may be present in parts of the Air Mountains where they could breed on a small-scale if rains fall during the forecast period.

Chad

• SITUATION

No surveys were carried out and no locusts were reported during January and February.

• FORECAST

No significant developments are likely.

Senegal

• SITUATION

No surveys were carried out and no locusts were reported during February.

• FORECAST

No significant developments are likely.

Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sierra Leone and Togo

• FORECAST

No significant developments are likely.

Algeria

• SITUATION

During February, surveys were carried out in the west near Tindouf (2741N/0811W) and Beni Abbes (3011N/0214W), in the central Sahara near Adrar (2753N/0017W) and in the south near Tamanrasset (2250N/0528E). No locusts were seen except for a few individual mature solitary adults on the edge of irrigated crops near between Adrar and In Salah (2712N/0229E).

• FORECAST

Low numbers of solitary adults are likely to persist in parts of the central Sahara. Small-scale breeding could occur in favourable areas between Tindouf and Beni Abbes as well as near irrigated areas in parts of the central Sahara.

Morocco

• SITUATION

During February, isolated mature solitary adults were seen at a few places south of the Souss Valley near Tiznit (2941N/0943W). Elsewhere, no locusts were seen during surveys in the northeast near Bouarfa (3232N/0159W) and in Western Sahara near Guelta Zemmur (2508N/1222W) and between Ma'Tallah (2223N/1502W), Bir Gandouz (2136N/1628W) and Tichla (2137N/1453W).

• FORECAST

Small-scale breeding could occur in parts of the Western Sahara in those areas where ecological conditions remain favourable and if more rains fall.

Libyan Arab Jamahiriya

• SITUATION

No surveys were carried out and no locusts were reported during February.

• FORECAST

No significant developments are likely.

Tunisia

• SITUATION

No surveys were carried out and no locusts were reported during February.

• FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

• SITUATION

During February, scattered solitary adults at densities up to 350 locusts/ha persisted on the Red Sea coastal plains between Aqiq (1813N/3811E) and the Eritrean border where they matured. On the 21st, some adults were seen copulating. A few immature and mature adults were reported between Tokar (1827N/3741E) and Suakin (1906N/3719E) but no locusts were seen in the Tokar Valley or along the coast between Suakin and Eit (2009N/3706E). At the end of the month, no locusts were seen on the northern coast or in adjacent interior areas during a joint survey with Egypt.

• FORECAST

Limited hatching will occur on the coast near Aiterba in early March and hoppers will fledge by mid-April. Unless further rains fall, breeding will end and locust numbers are expected to decline along the coast.

Eritrea

• SITUATION

During February, isolated solitary adults persisted at a few places on the Red Sea coastal plains near Karora (1745N/3820E) and Embere (1628N/3856E). On the 24th, adults were seen laying eggs in crops near Embere.



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• FORECAST

Limited hatching will occur by mid-March near Embere but, unless further rains fall, locust numbers will decline along the Red Sea coast during the forecast period.

Ethiopia

• SITUATION

No locusts were seen during surveys carried out in February near Dire Dawa (0935N/4150E), Jijiga (0922N/4250E) and along the railway towards Djibouti.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No reports were received in February.

• FORECAST

Low numbers of adults may be present on the northwest coastal plains between Berbera and the Djibouti. Unless further rains fall, breeding is unlikely to occur and locust numbers will decline during the forecast period.

Egypt

• SITUATION

No locusts were seen during surveys carried out in the second week of February on the Red Sea coast near Halaib (2213N/3638E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During February, local breeding occurred on the Red Sea coastal plains near Qunfidah (1909N/4107E) and Jizan (1656N/4233E) where solitary mature adults were seen in a few places. No locusts were seen during surveys carried out in the winter breeding areas on the coast near Jeddah (2130N/3910E) and

Lith (2008N/4016E) and in the spring breeding areas in the interior.

• FORECAST

Low numbers of locusts will persist along the Red Sea coastal plains and breed on a small scale between Lith and Jizan. Unless further rains fall, breeding is not likely to continue and locust numbers will decline.

Yemen

• SITUATION

During the first week of February, small groups of mature solitary and *transiens* adults at densities of up to 12 adults/m² laid eggs in one area on the southern coast near Erqa (1347N/4729E). Scattered maturing and mature solitary adults mixed with a few late instar hoppers were seen at other places along the coast between Ahwar (1333N/4644E) and Sayhut (1512N/5115E). At mid-month, isolated immature and mature solitary adults were seen west of Aden near Am Rija (1302N/4434E). On the Red Sea coast, small-scale breeding occurred in few places between Zabid (1410N/4318E) and Bajil (1458N/4314E) where isolated solitary and *transiens* hoppers were present in addition to scattered adults. A few adults were also reported further north between Al Zuhrah (1541N/4300E) and Midi (1619N/4248E). In the summer breeding areas in the interior, isolated immature and mature adults were seen at one place southeast of Al Abr (1608N/4714E).

• FORECAST

Small-scale breeding will continue on the central coastal plains of the Red Sea and along the Gulf of Aden coast between Ahwar and Sayhut as long as ecological conditions remain favourable. Breeding could extend into adjacent areas or continue longer if more rains fall during the forecast period. Consequently, locust numbers may increase slightly but probably not enough to form an outbreak.

Oman

• SITUATION

No locusts were seen during surveys carried out in the extreme south of the Dhofar region near the border with Yemen in February.

• FORECAST

Small-scale breeding could occur on the northern Batinah coast if rains fall during the forecast period.

Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, Syria, Tanzania, Turkey, Uganda and UAE

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

No locusts were seen during surveys carried out on the southeast coast near Jask (2540N/5746E) and Chabahar (2517N/6036E) and in the interior near Kahnuj (2757N/5742E) and Bampur (2711N/6028E) from 27 January to 25 February.

• FORECAST

If rainfall occurs in coastal areas between Jask and the Pakistani border, small-scale breeding is expected to take place but locust numbers should remain low.

Pakistan

• SITUATION

Late reports indicated that there were no locusts present during January. No reports were received during February.

• FORECAST

Low numbers of adults may be present on the Baluchistan coast between Pasni and the Iranian border. Small-scale breeding is expected to occur in areas that receive rainfall but locust numbers should remain low.

India

• SITUATION

No locusts were seen during surveys in Rajasthan and Gujarat during February.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Announcements

Desert Locust warning levels. A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Locust reporting. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red)

periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLD Desert Locust Information Service (eclod@fao.org). Information received by the end of the month will be included in the FAO Desert Locust 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.

Google group. FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding data management and analysis, GIS, eLocust2 and satellite imagery. Interested information officers should contact DLIS (eclod@fao.org) for details.

MODIS imagery. Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can be downloaded in different formats suitable for GIS at: http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html. The site is available in English and French. Address comments and questions to Pietro Ceccato (pceccato@iri.columbia.edu).

New information on Locust Watch. Recent additions to the web site are:

- **DLCC working papers.** Working papers for the 39th session in English, French and Arabic are uploaded as they become available, so please check the *Latest Additions* section on Locust Watch regularly.

2009 events. The following activities are scheduled or planned:

- **DLCC.** 39th Session, Rome (10-13 March)
- **EMPRES/WR survey training.** 2nd regional workshop for master survey officers, Agadir, Morocco (30 March – 10 April)



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- **CRC Equipment evaluation.** Sprayers and protective clothing testing workshop, Ismailia, Egypt (9-19 May)
- **CRC/SWAC Locust Information.** Inter-regional workshop for Desert Locust Information Officers in the CRC and SWAC, Cairo (27-28 May)
- **CRC Aerial training.** 2nd regional aerial training course, Lake Zeway, Ethiopia (7-12 June)
- **CLCPRO.** 5th Executive Committee (22-23 June) and 5th CLCPRO Session (24-27 June), Agadir (Morocco)
- **CRC Training.** 5th Desert Locust sub-regional training course, Damascus, Syria (3-17 July)
- **EMPRES/WR Locust Information.** Regional workshop for Desert Locust Information Officers, Algiers (mid-July, tentative)
- **CRC Planning.** Contingency planning workshop, Cairo (26-31 July)
- **EMPRES/WR Research.** Regional workshop on Desert Locust research, Dakar (early October, tentative)
- **EMPRES/WR Liaison Officers.** 8th EMPRES Liaison Officers meeting (mid-December, tentative)
- **EMPRES/WR Steering Committee.** 4th EMPRES Steering Committee meeting (mid-December, tentative)



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.

WARNING LEVELS

GREEN

- Calm. No threat to crops. Maintain regular surveys and monitoring.

YELLOW

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

ORANGE

- Threat. Threat to crops. Survey and control operations must be undertaken.

RED

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

REGIONS

WESTERN

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during plagues only: Burkino Faso, Cape Verde, Gambia, Guinea and Guinea-Bissau.

CENTRAL

- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



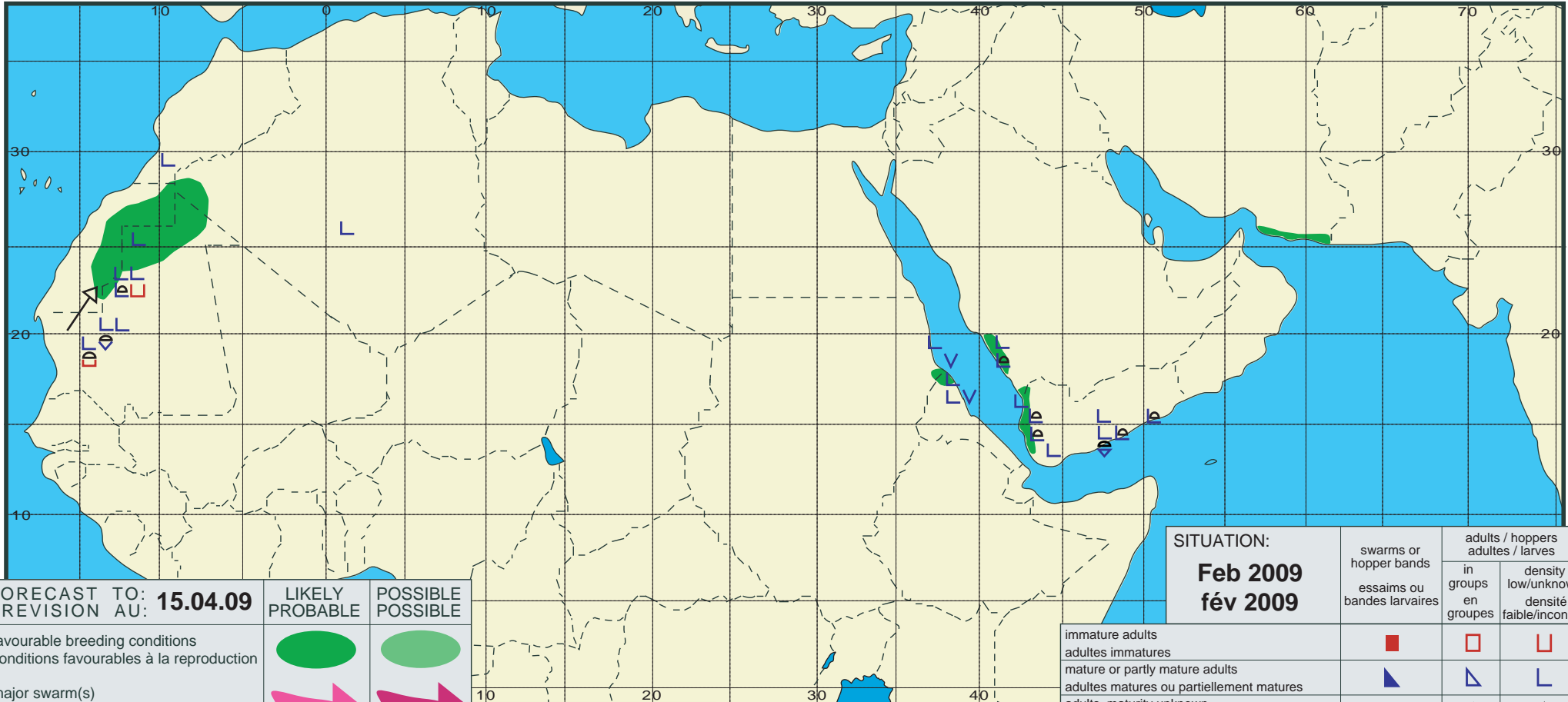
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.04.09	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: Feb 2009 fév 2009	swarms or hopper bands	adults / hoppers	
	essaims ou bandes larvaires	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)			