

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 327

(31 Dec 2005)



General Situation during December 2005 Forecast until mid-February 2006

The Desert Locust situation remained generally calm during December. Control operations declined along both sides of the Indo-Pakistan border where small swarms were present during the first week. Adults that escaped control moved out of this area and reached the spring breeding areas in western Pakistan by mid-month. Small-scale breeding continued in western Mauritania and southern Algeria where limited ground control operations were required in both countries. So far, only small-scale breeding has occurred on the Red Sea coast in Sudan in the Tokar Delta but locust numbers remained low. During the forecast period, breeding is expected on both sides of the Red Sea and could commence in northern Mauritania and Western Sahara where good rains fell in December.

Western Region. Small-scale breeding continued during December in western and central Mauritania for the fourth consecutive month. As a result of a gradual increase in locust numbers as well as a shift from solitary to *transiens* locusts, ground control operations were conducted in a few areas. Scattered adults were present in northwest and northern Mauritania where ecological conditions improved and small-scale breeding commenced near Zouerate and could start in other areas in the coming weeks. Limited control operations were also carried out against hoppers and adults in southern Algeria. Scattered solitary adults were present in parts of Tamesna,

Niger. Low numbers of solitary adults are likely to persist during the forecast period in parts of northern Mali and Niger, and perhaps in southern Algeria.

Central Region. Small-scale breeding continued during December in the winter breeding areas along the Red Sea coast in Sudan in the Tokar Delta where scattered hoppers and adults were present. Isolated adults were present in subcoastal areas in northeast Sudan and near two farms in southern Egypt. In Yemen, ecological conditions remained favourable in some places along the Red Sea and Gulf of Aden coastal plains where hoppers and adults were present. During the forecast period, small-scale breeding will continue in the Tokar Delta and on the northern Tihama coast in Yemen. Limited breeding could also occur on the Red Sea coast in southeast Egypt where good rains fell in late December and, if more rainfall occurs, on the northern coast in Eritrea and central Tihama coast in Yemen.

Eastern Region. Ground control operations treated several small immature adult groups and swarms along both sides of the border in Rajasthan, India and Cholistan, Pakistan in early December. Thereafter, scattered mature adults appeared in eastern Pakistan and they moved progressively west across the Indus Valley and reached the spring breeding areas in coastal Baluchistan, western Pakistan at mid-month. Small-scale breeding will take place along the coast and in the interior of Baluchistan if rainfall occurs during the forecast period but low temperatures, especially in the interior, may delay hatching and hopper development.

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, 00100 Rome, Italy. It is also available on the Internet.

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Weather & Ecological Conditions in December 2005

Good rains fell in parts of the winter breeding areas in northern Mauritania and Western Sahara where breeding conditions were improving. Ecological conditions were also favourable for breeding in a few places along the Red Sea coast, mainly in Sudan. Vegetation dried out during December along the Indo-Pakistan border.

In the **Western Region**, good rains fell during a few days in the second half of December in northern Mauritania, Western Sahara and south of the Atlas Mountains in Morocco. Rainfall was heaviest along the northern coast (Laayoune, 51 mm) and adjacent interior (Smara, 33 mm) of Western Sahara. Light showers fell along the Atlantic coast in Morocco south of Agadir, in western Algeria near Tindouf and in northwest and northern Mauritania near Tijirat and Bir Moghreïn. Consequently, ecological conditions were already favourable or improving in these areas to allow breeding. Annual vegetation was drying out in western Mauritania near Tidjikja and Aftout Fai where locust breeding was in progress in December. Although vegetation was also drying out in northern Mali (Tlemsi Valley, Adrar des Iforas and Tamesna), northern Niger (Tamesna) and southern Algeria due to a lack of rainfall, ecological conditions remained favourable enough in a few places to allow low numbers of locusts to survive.

In the **Central Region**, showers fell at times in parts of the winter breeding areas on both sides of the Red Sea. Light rain fell on the 7th on the coast near Suakin, Sudan and Emit, Eritrea. Heavy rain was reported near Port Sudan on the 9th and near Abu Ramad, Egypt on the 23rd. Ecological conditions were favourable for breeding in the Tokar Delta and, to a lesser extent, along the coast between Tokar and Mehimet, Eritrea. Conditions were improving in subcoastal areas in northeast Sudan along Wadi Oko and on the Red Sea coast in southeast Egypt between Shalatyn and the Sudanese border. No significant rainfall was reported on the eastern side of the Red Sea, but ecological conditions remained favourable in some places along the Tihama and Gulf of Aden coastal plains in Yemen. In northern Oman, light

rain fell in spring breeding areas along the northern Batinah coast near Sohar at mid-month.

In the **Eastern Region**, cold and dry weather prevailed during December in summer breeding areas along the Indo-Pakistan border as well as in spring breeding areas in Baluchistan, western Pakistan.



Area Treated

Nearly 1,800 ha were treated in December against hopper bands and swarms along the Indo-Pakistan border and small-scale breeding in Algeria and Mauritania.

Algeria	425 ha (14-23 December)
India	535 ha (1-5 December)
Mauritania	723 ha (December)
Pakistan	107 ha (16-30 November)
	108 ha (1-15 December)

Note: Reporting delays and discrepancies may affect the accuracy of these figures.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• **SITUATION**

During December, small-scale breeding continued in the west of the country where solitary and a few *transiens* hoppers, mixed with scattered fledglings and maturing adults, were present in the Aftout Fai (1834N/1424W) region, north of Moudjeria (1752N/1219W), and near Tidjikja (1833N/1126W). Hoppers were grouping in the Aftout Fai at densities up to 20 hoppers/bush. By mid-month, a few small hopper groups and bands formed, each less than 120 m² in size with a density of up to 7 hoppers/m², and laying was reported at one location. Most of the hoppers were fifth instar. Ground control teams treated 723 ha from 4 to 20 December. Low numbers of immature and mature solitary adults were scattered throughout Inchiri as well as in parts of Tiris-Zemmour near Zouerate (2244N/1221W) and Bir Moghreïn (2510N/1135W).

• **FORECAST**

Small-scale breeding may continue in parts of Aftout Fai and Inchiri where conditions remain favourable.

Scattered adults are likely to persist in these areas as well as near Tidjikja. Limited breeding is expected to commence in Tiris Zemmour near Zouerate and Bir Moghreïn, causing locust numbers to increase gradually during the forecast period. Intensive surveys should be maintained in all of these areas.

Mali

• SITUATION

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

• FORECAST

Low numbers of locusts are likely to be present and persist in the few places that remain green in the Tilemsi Valley, the Adrar des Iforas and Tamesna.

Niger

• SITUATION

In late November, scattered adults were present near Arlit and small-scale breeding was in progress in a few places in Tamesna.

During December, there was a report of solitarious hoppers in the extreme southeast near Nguigmi (1415N/1307E) on the 4th. In Tamesna, isolated immature and mature adults were present at a few locations northwest of In Abangharit (1754N/0559E) during the third decade.

• FORECAST

Isolated adults may persist in the few places that remain green in Tamesna.

Chad

• SITUATION

No locusts were reported during the first decade of December in BET and Wadi Fira.

• FORECAST

No significant developments are likely.

Senegal

• SITUATION

No locusts were reported during the second decade in December.

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

Algeria

• SITUATION

During the second half of December, solitarious third to fifth instar hoppers at densities of 10-20 hoppers/bush and immature solitarious adults at

densities of 5 adults/bush were present southeast of Tamanrasset (2250N/0528E). Ground control teams treated 425 ha from 14 to 23 December. No locusts were seen during surveys carried out in the south near the Malian border, in the east near Djanet and Illizi or in the north near El Bayadh.

• FORECAST

Isolated adults may persist in a few places along the southern side of the Hoggar Mountains.

Morocco

• SITUATION

No locusts were reported during November and December.

• FORECAST

Scattered adults may be present in parts of Western Sahara, especially near Smara, and small-scale breeding could occur in areas of recent rainfall.

Libyan Arab Jamahiriya

• SITUATION

No locusts were reported during December.

• FORECAST

Low numbers of locusts are likely to persist and breed on a small scale in areas that remain favourable in the southwest.

Tunisia

• SITUATION

No reports were received up to 30 December.

• FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

• SITUATION

During December, scattered solitarious hoppers and immature and mature adults were present at several places in the Tokar Delta. A few of the adults were seen laying eggs. Further north, isolated mature adults were seen in a few places in Wadi Oko north and east of Tomala (2002N/3551E) during the last week of the month. No locusts were seen in Wadi Diib.

• FORECAST

Small-scale breeding will continue in the Tokar Delta and to a lesser extent elsewhere along the Red Sea coastal plains between Suakin and the Eritrean border. Limited breeding may occur in Wadi Oko/Diib.



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Consequently, locust numbers are likely to increase slightly in both areas during the forecast period.

Eritrea

• SITUATION

No locusts were seen during surveys carried out on the Red Sea coastal plains between Mehimet (1723N/3833E) and Tio (1441N/4057E) from 12 to 23 December.

• FORECAST

Small-scale breeding is expected to occur in a few places along the Red Sea coast, mainly in areas of recent rainfall or runoff near Shelshela and Mehimet. Consequently, locust numbers are likely to increase slightly during the forecast period.

Ethiopia

• SITUATION

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

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

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

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

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

• FORECAST

Isolated adults may be present on the northwest coast between Djibouti and Berbera and could breed on a limited scale if rainfall occurs.

Egypt

• SITUATION

During December, isolated immature and mature solitary adults were present in trees near two farms in the Western Desert at Sh. Oweinat (2219N/2845E). No locusts were seen elsewhere in the Western Desert, on the northwest coast of the Mediterranean, near Lake Nasser or along the Red Sea coastal plains.

• FORECAST

Isolated adults may appear in the winter breeding areas along the Red Sea coast between Shalatyn and the Sudanese border and eventually breed if rainfall occurs.

Saudi Arabia

• SITUATION

Isolated solitary adults were seen at one location on the southern coastal plains of the Red Sea near Jizan (1656N/4233E) in December.

• FORECAST

Low numbers of solitary adults are expected to persist on the southern coastal plains of the Red Sea near Jizan and breed on a limited scale if rainfall occurs during the forecast period.

Yemen

• SITUATION

During December, isolated mature adults were present on the central coastal plains of the Red Sea west of Bajil (1458N/4314E) and near Bayt Al Faqih (1430N/4317E). On the northern plains, first to third instar hoppers at densities of 6-7 hoppers/m² and immature adults were seen near Midi (1619N/4248E). On the Gulf of Aden coast, isolated third to fourth instar hoppers and immature adults persisted at two places near Zinjibar (1306N/4523E) and a few immature adults were seen on the coastal plains west of Aden.

• FORECAST

Small-scale breeding will continue in a few places along the Red Sea causing locust numbers to increase slightly. Isolated adults may persist along parts of the Gulf of Aden coastal plains.

Oman

• SITUATION

No locusts were seen on the Musandam Peninsula during the second decade of December.

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

No locusts were seen during surveys carried out on the southern coast near Bander-e Lengheh and in the interior of Sistan-Baluchistan near Iranshahr from 11 to 12 December.

- **FORECAST**

Low numbers of adults may be present in coastal and interior areas adjacent to Baluchistan, Pakistan. If so, small-scale breeding could eventually take place if rainfall occurs.

Pakistan

- **SITUATION**

During the second half of November, 11 fifth instar hopper bands and 18 groups of immature adults formed near the Indian border in the Cholistan Desert southeast of Rahimyar Khan (2822N/7020E). Ground control teams treated 107 ha. No locusts were reported elsewhere in the summer breeding areas.

During the first half of December, five groups of immature adults were seen in the above-mentioned areas on 1-3 December and control teams treated 108 ha. During the second week, mature solitarious adults began to move towards the south and southwest, appearing in the Khairpur and Tharparkar Deserts on the 10th, as well as further west, appearing in the Nara Desert on the 12th, crossing the Indus Valley and reaching Lasbela (2612N/6620E) and the Shooli area near Turbat (2600N/6303E) on the 14th. During the second half of December, a few more mature solitarious adults appeared in the Khairpur and Tharparkar Deserts on the 21st and 22nd.

- **FORECAST**

Locust numbers are expected to increase slightly in the spring breeding areas in Baluchistan as adults arrive from the summer breeding areas along the Indian border. Small-scale breeding will take place in coastal and interior areas in Baluchistan if rainfall occurs during the forecast period but low temperatures, especially in the interior, may delay hatching and hopper development.

India

- **SITUATION**

During the first half of December, several small immature swarms varying in size from 10 to 180 ha were present between the Rajasthan Canal and the Pakistani border where hopper bands had formed during October and November. Ground control teams treated 535 ha from 1 to 5 December. Groups of immature adults were also seen moving south in Jaisalmer and Jodhpur districts during the first week. Only isolated immature adults remained in the above areas until mid-month. Thereafter, no further locusts were reported.

- **FORECAST**

Low numbers of adults may persist in a few places that remain green between the Rajasthan Canal and the Pakistani border.

Afghanistan

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.



Announcements

Locust reporting. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent twice/week and affected countries are encouraged to prepare decadal bulletins summarizing the situation. During recession periods, countries should report at least once/month. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@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.

Desert Locust Mapper. The Locust Group has launched an updated version of the Desert Locust Mapper that allows users to access locust data, both historical and current, and display swarm, band, hopper and adult infestations on maps at different scales. See: www.fao.org/ag/locusts (Mapper)

Desert Locust environmental brochure. FAO has produced a brochure for the general public and donor community entitled *Fighting the Locusts... Safely*, available for download at www.fao.org/ag/locusts (Publications – documents). It is being translated into French and Arabic.

Publications on the Internet. New FAO publications and meeting reports are available for downloading at www.fao.org/ag/locusts (Publications):

- Report of the 3rd session of the FAO Commission for Controlling the Desert Locust in the Western Region (French, Arabic)
- Report of the 27th Executive Committee meeting of the FAO Commission for Controlling the Desert Locust in the Central Region (English, Arabic)



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DLCC. The next session (38th) of the Desert Locust Control Committee (DLCC) has been postponed until 15-19 May so that a comprehensive report of an independent evaluation of the recent Desert Locust campaign can be presented and discussed.

2006 events. The following meetings are tentatively scheduled:

- **EMPRES/WR.** 4th Liaison Officers meeting, Algiers (Algeria), 25 February - 1 March (tentative)
- **EMPRES/WR.** Steering committee meeting, Algiers (Algeria), 4-6 March (tentative)
- **CRC.** 25th Session, Dubai (UAE), April
- **DLCC.** 38th Session, Rome, 15-19 May
- **FAO Locust Group.** Extended Group meeting, Rome, 22-24 May
- **CLCPRO.** 2nd Session, end May or early June
- **SWAC.** 25th Session, Afghanistan or Iran, October



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.

REGIONS

WESTERN

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

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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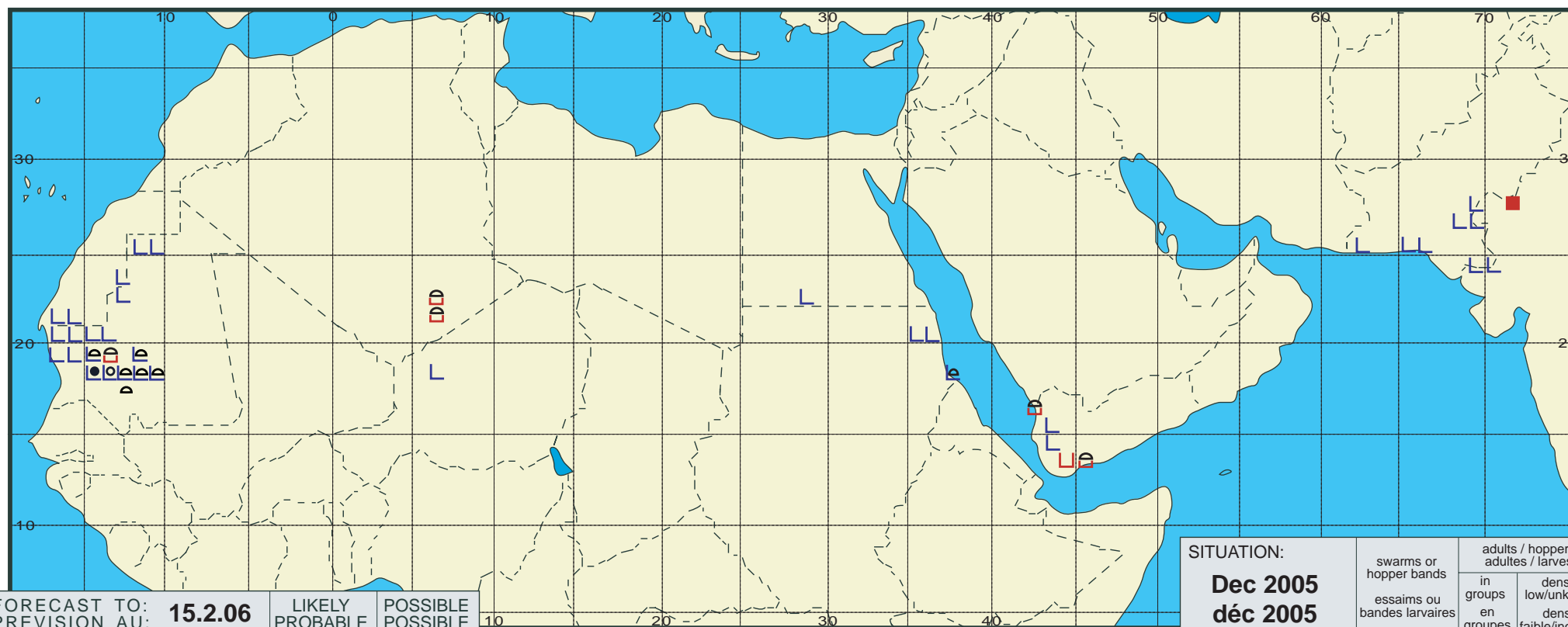
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	15.2.06	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: Dec 2005 déc 2005	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)			