

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 317



**General Situation during February 2005
Forecast until mid-April/June 2005**

(3 March 2005)

The Desert Locust situation continued to improve in the Western Region during February. Intensive control operations against immature swarms continued in Algeria but declined in Morocco. Nevertheless, breeding will occur from March to May mainly in Algeria and to a lesser extent in Morocco, Tunisia and perhaps Libya but on a much smaller scale than last year. In West Africa, the few immature swarms present in parts of southern Senegal and Guinea will move to Mali in the coming months. In the Central Region, control operations treated an increasing number of small hopper bands near the Red Sea coast on both sides of the Egyptian and Sudanese border. A few swarms could form and cross the Red Sea to Saudi Arabia. Local breeding also occurred in northern Somalia. As temperatures increase in Northwest Africa, existing locust populations will be easier to detect. It is essential that intense survey and control operations be maintained. Meanwhile, Sahelian countries should prepare themselves for any swarms that could arrive from Northwest Africa at the beginning of the summer. In addition, intensive monitoring is required in the coming weeks along the Red Sea coasts.

Western Region. The number of immature swarms continued to decline in Morocco and Algeria for the second consecutive month because of control operations. As breeding did not occur in northern Mauritania this year, a swarm invasion of Northwest Africa will not take place this spring. Therefore, spring breeding will be on a much smaller scale

than in 2004. As temperatures warm up, adults will become more active and easier to find. Consequently, more locusts will be reported but this should not be confused with an invasion in the region. The swarms that are currently present in Northwest Africa will mature and lay eggs during March, primarily in the northern Sahara in Algeria and, to a lesser extent in southeast Morocco, southern Tunisia, and perhaps in western Libya. Hatching is likely to start in early April, followed by band formation during April and May. Any infestations that are not controlled will form small swarms in June that could invade the Sahel. In West Africa, a few immature swarms persisted in southern Senegal and in Guinea. These swarms are likely to remain immature and eventually move to central Mali from about late March onwards on winds associated with the northern movement of the Inter-Tropical Convergence Zone (ITCZ).

Central Region. Hopper bands continued to form along both sides of the border in northeast Sudan and southeast Egypt. Small swarms could form from any infestations that are not controlled and move across the Red Sea to the coastal plains and interior of Saudi Arabia or move inland towards the summer breeding areas in Sudan. As a result of undetected local breeding, gregarious hoppers formed a few very small groups on the coast of northern Somalia. The situation requires careful monitoring in the above-mentioned countries. Elsewhere, isolated locusts were present on the Red Sea coastal plains in Yemen.

Eastern Region. Scattered adults were reported in the spring breeding areas in Baluchistan, western Pakistan, where unusually heavy rain in February caused severe flooding in many places. Consequently, ecological conditions will become favourable for breeding and locust numbers will increase during the next few months. The situation requires careful monitoring during the spring. The Iran/Pakistan joint-border survey in April will provide a good basis for this.

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 February 2005

Unusually cold weather persisted for a second consecutive month in Northwest Africa. Rainfall was reported in some places in the region as well as in Mauritania where ecological conditions are starting to improve. Rain also fell along parts of the Red Sea coastal plains. Unusually heavy rains and flooding occurred in the spring breeding areas in western Pakistan.

In the **Western Region**, unusually cold weather persisted in locust-infested areas in Northwest Africa during February. By the end of the month, temperatures started to warm up slightly in Libya and in a few places in the northern Sahara in Algeria. Light to moderate rain fell in parts of the northern and central Sahara in Algeria near Bechar and Adrar, and near Bouarfa, Morocco. Moderate rainfall in northwest Libya caused some wadis to flood. Light rainfall occurred along the Algerian/Libyan border near Ghadames and Ghat, and along the Atlantic coast in Western Sahara and southwest Morocco between Dakhla and Tiznit but locusts were not reported in these areas. Dry conditions prevailed in the central and southern Algerian Sahara except for small patches of green vegetation north of Tamanrasset, particularly in the Timiaouine, Ahnet and Mouydir regions. Ecological conditions were more favourable north of Tademaït in southern Ouargla province and were improving in the northern Sahara where most of the locust infestations were present. Conditions remained cold and unfavourable in southern Tunisia. Light to moderate rain fell in central and southern Mauritania where ecological conditions were favourable in only a few places.

In the **Central Region**, moderate rains fell during February along the Red Sea coastal plains in southeast Egypt, southern Eritrea and Yemen. Heavy rain fell in the Western Desert in Egypt near Bahariya and Farafra oases on the 21st. Conditions were favourable for breeding in Wadi Diib in northeast Sudan and in adjacent areas of southeast Egypt. Despite scattered showers in northern Oman and the rainfall in Yemen, breeding conditions continued to remain unfavourable in both countries. Although

light to moderate rain fell on the escarpment and coastal plains in northwest Somalia and adjacent areas in Djibouti, breeding conditions were generally unfavourable except for a few places on the northern Somali coast near Berbera.

In the **Eastern Region**, unusually heavy rains fell during February in the spring breeding areas in Baluchistan, western Pakistan, primarily in the interior (Turbat 414 mm, Panjgur 137 mm, Khuzdar 105 mm, Nushki 159 mm, Dalbandin 54 mm, Kharan 32 mm) and, to a lesser extent, along the coast (Jiwani 35 mm, Pasni 12 mm). Rainfall during the first half of the month extended to Lasbela (Uthal 80 mm) and the Cholistan Desert (Bahawalpur 42 mm) in Pakistan and to northern Rajasthan (Bikaner 35 mm) in India. Severe flooding was reported in many places. Light rain fell on the southeastern coastal plains in Iran near Jask and in the interior near Iranshahr.



Area Treated

About 350,000 ha were treated in February, bringing the total area treated since the beginning of the upsurge (October 2003) to 12.7 million ha.

	Current month	Winter campaign cumulative
Algeria	316,921 ha (Feb)	1,751,354 ha
Egypt	11,054 ha (Feb)	
Gambia	6,037 ha (Jan)	
Guinea	2,500 ha (1-10 Feb)	
Guinea Bissau	7,368 ha (1-20 Feb)	
Morocco	6,110 ha (Feb)	1,990,406 ha
Senegal	4,200 ha (Feb)	
Sudan	2,610 ha (Feb)	

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

No significant locust infestations were seen during surveys undertaken throughout most of the country in February. Residual populations from last summer's breeding persisted in the centre and southeast

where individual mature adults were seen north of Moudjeria (1752N/1219W) and immature individuals were present southwest of Nema (1636N/0715W), respectively.

- **FORECAST**

Small residual non-gregarious populations are expected to persist and mature in a few places in the south and centre of the country. Scattered adults may be present in the northwest in Inchiri and near Zouerate where small-scale breeding could occur in areas of recent rainfall but may be difficult to detect. Any swarms that could arrive from spring breeding in Northwest Africa are not expected until late June or July.

Senegal

- **SITUATION**

During February, a few immature swarms were present in the southwest near Sedihou (1251N/1535W) and the Guinea Bissau border. Aerial control operations treated 4,200 ha.

- **FORECAST**

A limited number of small immature swarms are expected to persist in the south during March and slowly drift towards the eastern part of the country. By the end of the forecast period, these swarms could start moving into western Mali.

Mali

- **SITUATION**

No locusts were reported during February.

- **FORECAST**

Low numbers of adults are likely to be present in parts of the Adrar des Iforas, the Tilemsi Valley and in the Timetrine and will start to mature once temperatures increase. Small-scale breeding could occur if rains fall. A few immature swarms from Guinea and Senegal are likely to arrive in the southwest from about late March onwards and move towards the centre of the country as the ITCZ moves northward. Any swarms that could arrive from spring breeding in Northwest Africa are not expected until late June or July.

Niger

- **SITUATION**

A late report indicated that surveys were not carried out during January. No reports were received in February.

- **FORECAST**

Low numbers of adults are likely to be present in parts of the Air Mountains. As temperatures increase, the adults will mature and, if conditions are favourable, small-scale breeding is expected to occur that could lead to the formation of a few hopper groups. Any swarms that could arrive from spring breeding in

Northwest Africa are not expected until late June or July.

Chad

- **SITUATION**

No reports were received during February.

- **FORECAST**

No significant developments are likely.

Cape Verde Islands

- **SITUATION**

No reports were received during February.

- **FORECAST**

Low numbers of locusts may persist on a few islands but no significant developments are likely.

Gambia

- **SITUATION**

A late report indicated that aerial control operations treated 6,037 ha in the North Bank, Lower River and Western divisions during January. No reports were received during February.

- **FORECAST**

There is a low risk that a few small residual immature swarms may appear at times from neighbouring areas of southern Senegal; otherwise, no significant developments are likely.

Guinea Bissau

- **SITUATION**

During February, several immature swarms persisted in the north and centre of the country. Control operations, assisted by Senegalese and Libyan teams, treated about 7,000 ha. By the end of the month, no further infestations were reported.

- **FORECAST**

There is a low risk that a few small residual immature swarms may appear at times from neighbouring areas of southern Senegal; otherwise, no significant developments are likely.

Guinea

- **SITUATION**

During the first decade of February, there were new reports of immature swarms arriving in the north from neighbouring areas of Guinea Bissau and southern Senegal. The swarms subsequently moved to the central highlands between Labe (1119N/1217W) and Mamou (1024N/1205W) and a few swarms reached



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the coast near Conakry. Ground control operations treated 2,500 ha on 1-10 February.

• FORECAST

A limited number of small immature swarms are expected to persist during March, slowly drift towards the eastern part of the country, and eventually move into southwest Mali.

Burkina Faso

• FORECAST

There is a very low risk that a few Southern Circuit immature swarms from Guinea could appear in the northwest and continue to move further north with the ITCZ in April or May.

Sierra Leone

• FORECAST

There is a very low risk that a few Southern Circuit immature swarms from Guinea could appear in the north and continue to move towards the northeast with the ITCZ in March or April.

Benin, Cameroon, Cote d'Ivoire, Ghana, Liberia, Nigeria and Togo

• FORECAST

No significant developments are likely.

Algeria

• SITUATION

During February, the situation continued to improve as locust infestations declined due to intensive control operations. Nevertheless, low numbers of small immature groups and swarms persisted in the northern Sahara south of the Atlas Mountains between El Bayadh (3341N/0102E) and El Oued (3323N/0649E). Smaller infestations were present in the northwest near Tlemcen (3452N/0115W) and in the northeast south of Khenchela (3526N/0706E). By the end of the month, some of the adults had become mature and were seen copulating. No locusts were seen during surveys in the central and southern Sahara as well as in the east along the border with Libya. Aerial and ground control operations treated 316,921 ha during February, mainly in El Oued province.

• FORECAST

As temperatures increase in March and April, locusts will continue to mature and lay eggs in the

northern Sahara where ecological conditions are favourable. Hatching should start in about late March or early April, hopper bands will form during April and May, and low numbers of new swarms could start to form in early June. The scale of the breeding and eventual swarm formation will be much smaller than in 2004.

Morocco

• SITUATION

During February, the situation continued to improve as locust infestations declined due to control operations. Consequently, only a limited number of small immature swarms persisted in the northeast near Oujda (3441N/0145W) and Bouarfa (3232N/0159W), close to the Algerian border. The situation was reported to be calm in other regions of the country. Aerial and ground control operations treated 6,110 ha during February.

• FORECAST

As temperatures increase in March and April, locusts will mature and lay eggs along the southern side of the Atlas Mountains where ecological conditions are favourable. Although the scale of the breeding will be much smaller than in 2004, hatching and band formation will occur during April and May, and low numbers of new swarms could start to form in early June.

Libyan Arab Jamahiriya

• SITUATION

No locusts were seen during surveys carried out in the northwest and southwest of the country in February.

• FORECAST

Once temperatures increase, small-scale breeding could take place in the northwest between Ghadames and Nalut and in the southwest near Ghat. If so, hatching and band formation will occur during April and May, albeit on a much smaller scale than in 2004, and a few swarms could start to form in early June.

Tunisia

• SITUATION

During the last decade of January, control operations treated 630 ha of immature swarms in the Tozeur and Kebili regions in the south.

During February, operations continued in both regions, treating 350 ha. On the 21st, several small swarm fragments of immature adults were reported between the Algerian border and Kebili (3342N/0858E).

• FORECAST

As temperatures increase in March and April, locusts will mature and lay eggs in the south where ecological conditions are favourable. Although the

scale of the breeding will be much smaller than in 2004, hatching and band formation will occur during April and May, and low numbers of new swarms could start to form in early June.

CENTRAL REGION

Sudan

• SITUATION

During February, hatching and band formation continued in Wadi Diib in the northern Red Sea Hills just south of the Egyptian border. Numerous small hopper patches, each about 100 m² in size and containing up to 400 hoppers/m², formed within a limited area northwest of Sufiya (2119N/3613E). By the 20th, most of the hoppers were third instar while a few had reached the fifth instar stage. A 200 ha band was reported, presumably from numerous patches fusing together. Control operations treated 2,610 ha during February.

In the Tokar Delta, a few isolated maturing adults were seen during the month.

• FORECAST

Several small adult groups and perhaps a few swarms are expected to form in Wadi Diib during March. Unless additional rain falls, these are likely to move eventually towards the Red Sea or further inland.

Eritrea

• SITUATION

No locusts were seen on the central Red Sea coastal plains between Mersa Gulbub (1633N/3908E) and Tio (1441N/4057E) on 21-25 February.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

In early February, gregarious mature locusts were seen on the coast east of Berbera (1028N/4502E). These are most likely of local origin. Nomads indicated that these adults laid eggs in about mid January. By 25 February, eight groups of third and fourth instar hoppers had formed at densities of 120-200 hoppers/m² in one area of 0.5 ha. Isolated immature and mature adults were seen nearby. No locusts were found elsewhere along the coast or on the escarpment.

• FORECAST

A few small groups or perhaps a swarm or two are likely to form on the coast east of Berbera in March and probably disperse along the escarpment.

Ethiopia

• SITUATION

During the first decade of February, no locusts were

seen during surveys carried out between Dire Dawa and the Somali border.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No locusts were seen during surveys carried out in February along the Gulf of Tadjourah coast to Obock (1157N/4317E) and in the interior between Djibouti and Ali Sabieh (1109N/4242E).

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

During February, high densities of mature adults and first to fourth instar hoppers were present in the southeast in Wadi Diib near the Sudanese border and the Red Sea coast. Hopper bands were also reported on the coastal plains near Shalatyn (2308N/3535E), Abu Ramad (2224N/3624E) and Marsa Alam (2504N/3454E), and in the Red Sea Hills between Allaqi (2240N/3255E), Wadi Abraq (2322N/3451E) and Hamat (2410N/3510E). Control operations treated 11,054 ha during February.

• FORECAST

Several small adult groups and perhaps a few swarms are expected to form in the southeast during March. Unless additional rain falls, these are likely to eventually move to the Red Sea or towards the interior of Sudan.

Saudi Arabia

• SITUATION

No locusts were seen during surveys carried out in along the Red Sea coast and in the interior during February.

• FORECAST

Low numbers of adults may be present in some places along the Red Sea coastal plains. Unless additional rainfall occurs, numbers will decline. If swarms form on the western side of the Red Sea, there is a risk that some of them could cross the Red Sea and appear on the coastal plains between Al Wajh and Qunfidah from about mid-March onwards and perhaps continue further inland.



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Yemen

• SITUATION

Isolated immature and mature solitarious adults were present at a few places on the Red Sea coastal plains near Hodeidah (1450N/4258E) on 20-23 February.

• FORECAST

Low numbers of adults are expected to persist on the Red Sea coastal plains and breed if additional rainfall occurs.

Oman

• SITUATION

No locusts were seen during surveys carried out on the Batinah coast in the north and in Sharqiya region in the northeast during February.

• 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 on the southern coast near Bandar Abbas, on the southeastern coastal plains between Jask and Chabahar, and further inland near Iranshahr on 21-22 February.

• FORECAST

Low numbers of adults may appear on the southeastern coastal plains and breed on a small scale if additional rainfall occurs.

Pakistan

• SITUATION

No locusts were reported during the second half of January. During February, scattered immature solitarious adults were present in coastal areas near Turbat (2600N/6303E) and west of Karachi near Lasbela (2612N/6620E).

• FORECAST

Locust numbers could increase significantly in Baluchistan as a result of breeding in coastal and interior areas during the spring. Consequently,

hoppers are likely to appear during March and April. Given the unusually heavy rainfall, the situation requires close monitoring in the coming months.

India

• SITUATION

No locusts were seen during the second half of January and first half of February.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Announcements

Locust reporting. During locust emergencies, 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.

Locust archives. Desert Locust reports received by FAO from affected countries from 1952 to the present are available on a series of four CDs in PDF. Please contact the Locust Group for more details.

Upsurge photos. Pictures of the current upsurge are available on the Internet at: www.fao.org/news/global/locusts/outbreakpix04.htm

Desert Locust booklet. FAO has produced a booklet for the general public and donor community entitled *Hunger in their wake: Inside the battle against the Desert Locust*, available for download at: www.fao.org/news/global/locusts/pubs1.htm

Publications on the Internet. New FAO publications and meeting reports are available for downloading at www.fao.org/news/global/locusts/publist.htm:

- 38th session of the Desert Locust Control Committee meeting report (English)

- Guidelines on minimum requirements for ground-based locust and grasshopper sprayers (English)
- Contingency planning spreadsheets and simulations for outbreaks, upsurges and plagues (English, French)
- FAO Desert Locust Standard Operating Procedures (SOP) for survey, control and aerial operations (English, Arabic)
- FAO Desert Locust Guidelines – Arabic version

Assistance provided. Details of assistance provided by donors to the current locust campaign are available on the Internet at: www.fao.org/news/global/locusts/donor/donor.htm.

Vacancy announcement. Applications for a three-year post in the Locust Group at FAO Headquarters for a Locust Control Officer must be received before 31 March. More details are available on the Internet at: http://www.fao.org/VA/vac_en.htm.

2005-06 events. The following meetings are tentatively scheduled:

- **Train-the-Trainers workshop.** Niamey (Niger), 14 March – 5 April
- **Contingency Planning.** 1st workshop sponsored by World Bank, Bamako (Mali), 25-29 April
- **Donor meeting.** sponsored by the World Bank, Niamey (Niger), Bamako (Mali), 2-4 May
- **CLCPRO.** 3rd session, Tripoli (Libya), 12-16 June
- **CRC.** 27th session of the Executive Committee, Khartoum (Sudan), 24-28 July
- **EMPRES/CR.** 6th Consultative Committee, Cairo (Egypt), 13-15 November
- **DLCC.** 39th Session, Rome, 12-16 December
- **EMPRES/CR.** 13th Liaison Officers meeting, Yemen, January 2006
- **EMPRES/WR.** 4th Liaison Officers meeting, Algiers, January/February 2006

Press release. Several press releases on the current Desert Locust emergency have been recently issued by FAO. These are available at: <http://www.fao.org/newsroom/en/index.html>.



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



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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

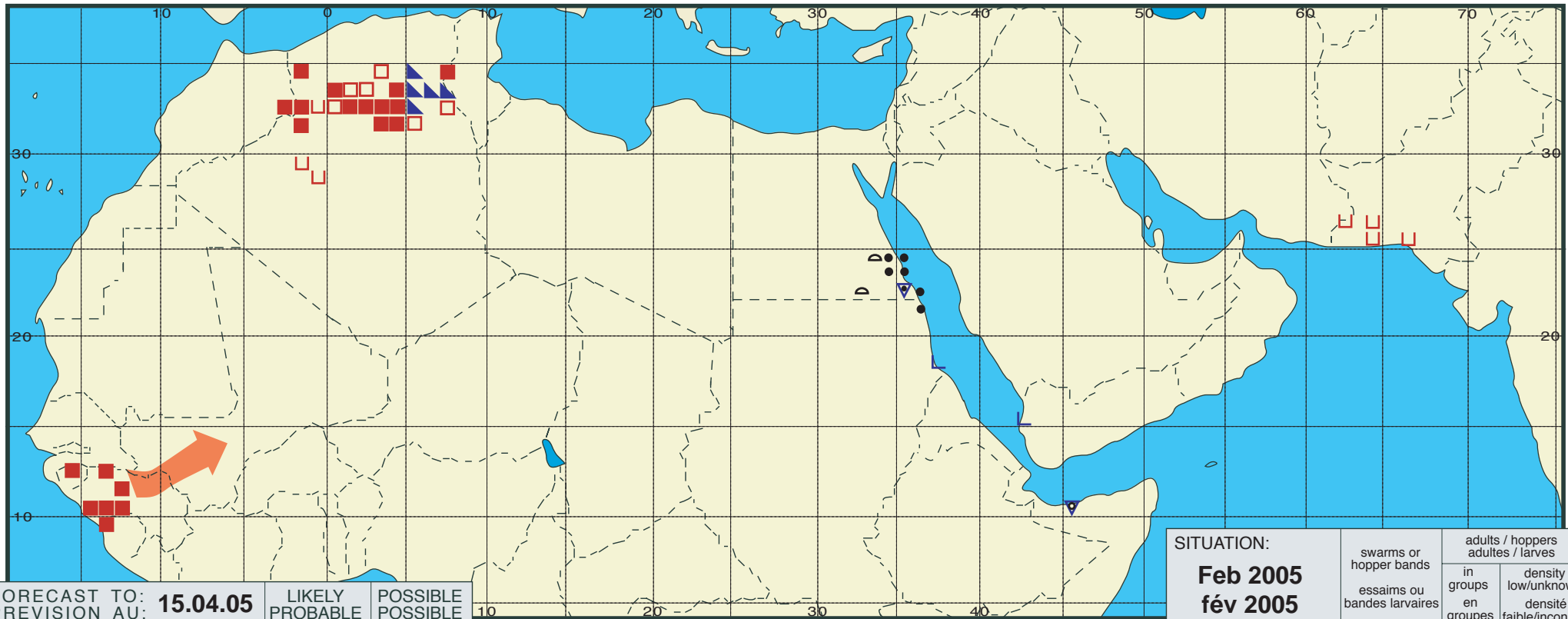
- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.04.05	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 2005 fév 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)			