

warning level: **CAUTION (Saudi Arabia)**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 380

(2 June 2010)



General Situation during May 2010 Forecast until mid-July 2010

The Desert Locust situation remained generally calm during May. Small-scale breeding occurred in Northwest Africa and ground control operations were undertaken in Morocco, Algeria and Libya. Control operations against hopper bands ended by mid-month on the Red Sea coast in Saudi Arabia. Small-scale breeding occurred in northeastern Oman. During the forecast period, locust numbers will decline in Northwest Africa and the Arabian Peninsula as conditions dry out. Some adults could move across the Red Sea from Saudi Arabia to the interior of Sudan. Small-scale breeding will occur in the northern Sahel of West Africa and Sudan and along the Indo-Pakistan border once seasonal rains commence. Breeding this summer is expected to be on a small scale and locust numbers are likely to remain below threatening levels. No significant developments are expected during the forecast period.

Western Region. In the spring breeding areas of Northwest Africa, ground control operations treated nearly 1,500 ha of solitarious and *transiens* hoppers and adults south of the Atlas Mountains in **Morocco** where small-scale breeding occurred in March and April. Nearly 350 ha of hoppers were treated in central **Algeria** and 40 ha of hoppers were controlled in southwest **Libya**. Locust numbers will decline as no further breeding is expected. Dry and unfavourable conditions persisted in the northern Sahel of West Africa. Low numbers of adults are likely

to appear in southern **Mauritania**, northern **Mali** and **Niger** and breed on a small scale once seasonal rains commence. Locust numbers are expected to remain below threatening levels and no significant developments are likely.

Central Region. Ground control operations continued in early May and treated nearly 2,700 ha of small hopper bands and groups of fledglings in one area on the Red Sea coast in **Saudi Arabia**. Any escapees could move south along the coastal plains or perhaps across the Red Sea to the summer breeding areas in the interior of Sudan where small-scale breeding is expected to commence with the onset of the seasonal rains. Scattered adults were present on the Red Sea coast of **Sudan** in the Tokar Delta. Undetected breeding occurred in northeastern **Oman** in April, causing hoppers to concentrate and form small groups in May as vegetation dried out. Control operations were not required. No locusts were reported elsewhere in the region. Low numbers of adults may appear in June on the northern **Somalia** plateau and in nearby eastern **Ethiopia** and breed on a small-scale in areas of recent rainfall.

Eastern Region. No locusts were reported during May in the spring breeding areas of western **Pakistan** and southeastern **Iran** due to prevailing dry conditions. Low numbers of solitarious adults are expected to appear in the summer breeding areas along the Indo-Pakistan border in June. Small-scale breeding will commence with the onset of the seasonal monsoon rains but locust numbers will remain low.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and made available on the Internet.

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Weather & Ecological Conditions in May 2010

Very little rain fell in the recession area during May. Consequently, ecological conditions remained generally unfavourable for breeding.

In the **Western Region**, light rain fell in parts of the spring breeding areas in Northwest Africa at times during May. In Algeria, light rain fell in the central Sahara south of Adrar and in the southeast near Djanel. Ecological conditions were favourable for breeding in both areas. In Libya, light rain fell in parts of the northwest. Ecological conditions remained dry and unfavourable throughout the country except in the central north near Mizda and in the southwest near Ghat. In Morocco, vegetation continued to dry out south of the Atlas Mountains in the Draa and Ziz-Ghris valleys near the Algerian border. Dry conditions persisted in the summer breeding areas in the northern Sahel where no significant rain fell except for light showers in early May in parts of northern Niger between Agadez, Arlit and In Abangharit.

In the **Central Region**, no significant rain fell during May. Only light showers fell in parts of the spring breeding areas of the interior of Saudi Arabia during the first few days of the month. By mid-month, the seasonal southwesterly winds associated with the Southwest Asia monsoon had become established over the Horn of Africa. Light rain fell at times from the Harar Highlands and the Ogaden in eastern Ethiopia to the Somalia plateau in northern Somalia. As a result, ecological conditions are likely to improve in these areas and allow limited breeding. In northeastern Oman, unusually good rains fell in the Sharqiya region in late April and again during the first and third weeks of May. Consequently, ecological conditions were favourable for small-scale breeding. At the end of the month, light rain fell on the central and southern parts of the Red Sea coast in Yemen.

In the **Eastern Region**, dry conditions prevailed throughout May in all areas. In the absence of rainfall, vegetation continued to dry out in the spring breeding areas of western Pakistan and southeastern Iran. Although pre-monsoon rains fell during the first decade of May in the summer breeding areas along



Area Treated

Algeria	348 ha (May)
Libya	40 ha (May)
Morocco	1,495 ha (May)
Saudi Arabia	2,695 ha (May)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Low numbers of solitary adults are expected to appear in parts of the centre, south and southeast. Small-scale breeding will occur after seasonal rains commence but locust numbers will remain low.

Mali

• SITUATION

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

• FORECAST

Isolated adults may be present and will persist in parts of the Adrar des Iforas. Small-scale breeding will occur after seasonal rains commence but locust numbers will remain low.

Niger

• SITUATION

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

• Forecast

Isolated adults may be present in areas of recent rainfall in parts of the Air Mountains. Low numbers of solitary adults are expected to appear in the Tamesna and breed on a small scale once seasonal rains commence.

Chad

• SITUATION

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

- **FORECAST**

No significant developments are likely.

Senegal

- **SITUATION**

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

- **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 May, ground teams treated 348 ha of solitary hoppers of all instars and adults at densities of 800-4,000 locusts/ha southeast of Beni Abbes (3011N/0214W) and Adrar (2753N/0017W), and adults northeast of In Salah (2712N/0229E) as a result of small-scale breeding that occurred from mid-April onwards. A few *transiens* hoppers were seen in crops near Adrar. No locusts were seen in the west and along the Moroccan border between Tindouf (2741N/0811W) and Beni Abbes, or in the south and southeast near Tamanrasset (2250N/0528E) and Djanet (2434N/0930E).

- **FORECAST**

Locust numbers will decline in the central Sahara as conditions dry out and low numbers of adults move towards the southern Sahara. Small infestations could persist near agricultural areas in Adrar.

Morocco

- **SITUATION**

During May, ground teams treated 1,495 ha of solitary and *transiens* hoppers and adults at 27 places south of the Atlas Mountains in the Draa Valley near the Algerian border between Assa (2836N/0926W) and Zagora (3019N/0550W) where small-scale breeding occurred in March and April. Most of the hoppers were third to fifth instar at densities of 3-12 hoppers/m² and some hoppers were forming small groups. Adult densities reached as high as 6,000 adults/ha in the Guelmim region. In the northeast, isolated mature solitary adults persisted between Erfoud (3128N/0410W) and Figuig (3207N/0113W).

- **FORECAST**

Low numbers of adults are expected to concentrate and form small groups in any vegetation that remains green in the Draa Valley and along the Algerian border. No further breeding is expected.

Libyan Arab Jamahiriya

- **SITUATION**

During May, ground teams treated 40 ha of low-density gregarious fifth instar hoppers and fledglings in crops southwest of Sabha (2704N/1425E) at Alqraya (2638N/1321E). Isolated solitary adults were present northwest of Ghat (2459N/1011E) near the Algerian border. No locusts were seen during surveys near Kufra (2411N/2315E), Mizda (3127N/1259E), Ghadames (3010N/0930E) and Al Hamada Al Hamra (ca. 3000N/1200E).

- **FORECAST**

Low numbers of solitary adults are likely to persist in parts of the southwest near Ghat, Ghadames and Sabha.

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

A late report indicated that no surveys were carried out and no locusts were reported during April.

During the first decade of May, scattered mature solitary adults were present on the Red Sea coast in the Tokar Delta. No locusts were seen during surveys carried out on the northern coast and adjacent subcoastal areas.

- **FORECAST**

Low numbers of solitary adults are likely to appear in the summer breeding areas of West and North Darfur, West and North Kordofan, and White Nile and breed on a small scale once the summer rains start. There is a low to moderate risk that a few adult groups arriving from the eastern side of the Red Sea could supplement local populations. Consequently, locust numbers are expected to increase slightly but will remain below threatening levels.

Eritrea

- **SITUATION**

No reports were received during May.



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• FORECAST

Low numbers of solitary adults may appear in the summer breeding areas in the western lowlands and breed on a small scale with the onset of the summer rains.

Ethiopia

• SITUATION

No locusts were seen during a survey on 14 May near Dire Dawa (0935N/4150E). At the end of the month, there was an unconfirmed report of locusts near Aysha (1045N/4234E) and the borders of Djibouti and northern Somalia.

• FORECAST

Low numbers of solitary adults may appear in the Aysha area near the borders of Djibouti and northern Somalia where small-scale breeding could take place during the forecast period.

Djibouti

• SITUATION

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

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No reports were received during May.

• FORECAST

Low numbers of solitary adults may be present in parts of the plateau between Boroma and Burao where small-scale breeding could occur in areas of recent rainfall.

Egypt

• SITUATION

During May, no locusts were seen during surveys carried out on the Red Sea coast between Abu Ramad (2224N/3624E) and the Sudanese border, on the western side of Lake Nasser near Tushka (2247N/3126E) and Abu Simbel (2219N/3138E), and in the Western Desert near Sh. Oweinat (2219N/2845E), Abu Mingar (2630N/2740E), Farafra (2710N/2818E) and Siwa (2912N/2531E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During the first half of May, ground control operations continued and increased against numerous small late instar hopper bands and groups of fledglings and immature adults on the Red Sea coast near Rabigh (2247N/3901E). Limited control was carried out against a group of immature adults near Jeddah. In all, 2,695 ha were treated. No locusts were seen elsewhere on the coast or in the spring breeding areas of the interior.

• FORECAST

Scattered adults and perhaps a few adult groups that form on the Red Sea near Rabigh could eventually move south along the coastal plains or possibly west across the Red Sea towards the interior of Sudan.

Yemen

• SITUATION

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

• FORECAST

Low numbers of solitary adults could appear in areas of recent rainfall in Shabwah and Hadhramaut.

Oman

• SITUATION

Undetected breeding occurred in April along a 25 km stretch of the northeastern edge of the Wahiba Sands southeast of Ibra (2243N/5831E) in Sharqiya where rains had fallen in February and mid-April. By the first week of May, vegetation dried out and third to fifth instar hoppers concentrated and formed small groups at densities of up to 5 hoppers/m² in 2 ha. Isolated solitary hoppers and immature adults were seen nearby. By the last decade of the month, the hoppers had fledged and low numbers of immature adults were maturing along Wadi Bath and Wadi Al Hamir. No locusts were seen during surveys in Muscat, Dakhliya and Dhahera regions.

• FORECAST

Locust numbers will decline in Sharqiya as vegetation continues to dry out. No significant developments are likely.

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

During the second half of April, no locusts were

seen during the annual joint survey carried out on the coast and in interior areas of the southeast.

During May, no locusts were seen on the southeastern coast near Jask (2540N/5746E).

- **FORECAST**

No significant developments are likely.

Pakistan

- **SITUATION**

During the second half of April, isolated mature solitary adults were seen at one place on the coast near Uthal (2548N/6637E).

No locusts were seen during surveys carried out in the spring breeding areas of Baluchistan during the first half of May.

- **Forecast**

Low numbers of adults are expected to appear in parts of the summer breeding areas in Cholistan and Tharparkar and breed on a small scale with the onset of the monsoon rains.

India

- **SITUATION**

No locusts were seen during intensive surveys carried out during the first half of May in the summer breeding areas in Rajasthan and Gujarat.

- **FORECAST**

Low numbers of solitary adults are expected to appear in the summer breeding areas in Rajasthan and Gujarat and breed on a small scale with the onset of the monsoon rains.

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/ECLC Desert Locust Information Service (eclc@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, eLocust2Mapper and satellite imagery. Interested information officers should contact DLIS (eclc@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 (www.fao.org/ag/locusts) are:

- **2010 Iran/Pakistan Joint Survey report.** Publications Section – Reports
- **Desert Locust situation updates.** Archives Section – Briefs
- **Desert Locust risk map update.** Archives Section – Risk maps

Locust Watch in Caucasus and Central Asia. The second regional monthly bulletin has been issued and is available on the website (www.fao.org/ag/locusts-CCA/en/index.html). The bilingual bulletin (English/Russian) summarizes the regional locust situation in the previous month and includes a forecast for the



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coming month for Italian, Moroccan and Migratory locusts. It will be issued by the 15th of each month.

2010 events. The following activities are scheduled or planned:

- **CLCPRO.** 6th session of Executive Committee, Ouagadougou, Burkina Faso (28-30 June)
- **CRC training.** 3rd regional aerial Desert Locust training course, Moshi, Tanzania (2-6 Aug)
- **CRC.** 31st session of Executive Committee and 27th session of Commission, Beirut, Lebanon (20-24 Sep)
- **EMPRES/WR.** Desert Locust Master Trainers (Survey) regional workshop, Mauritania (Oct)
- **SWAC.** 27th session, Islamabad, Pakistan (Dec)
- **EMPRES/WR.** 6th Steering Committee meeting and 9th EMPRES Liaison Officers meeting, Tripoli, Libya (Dec)



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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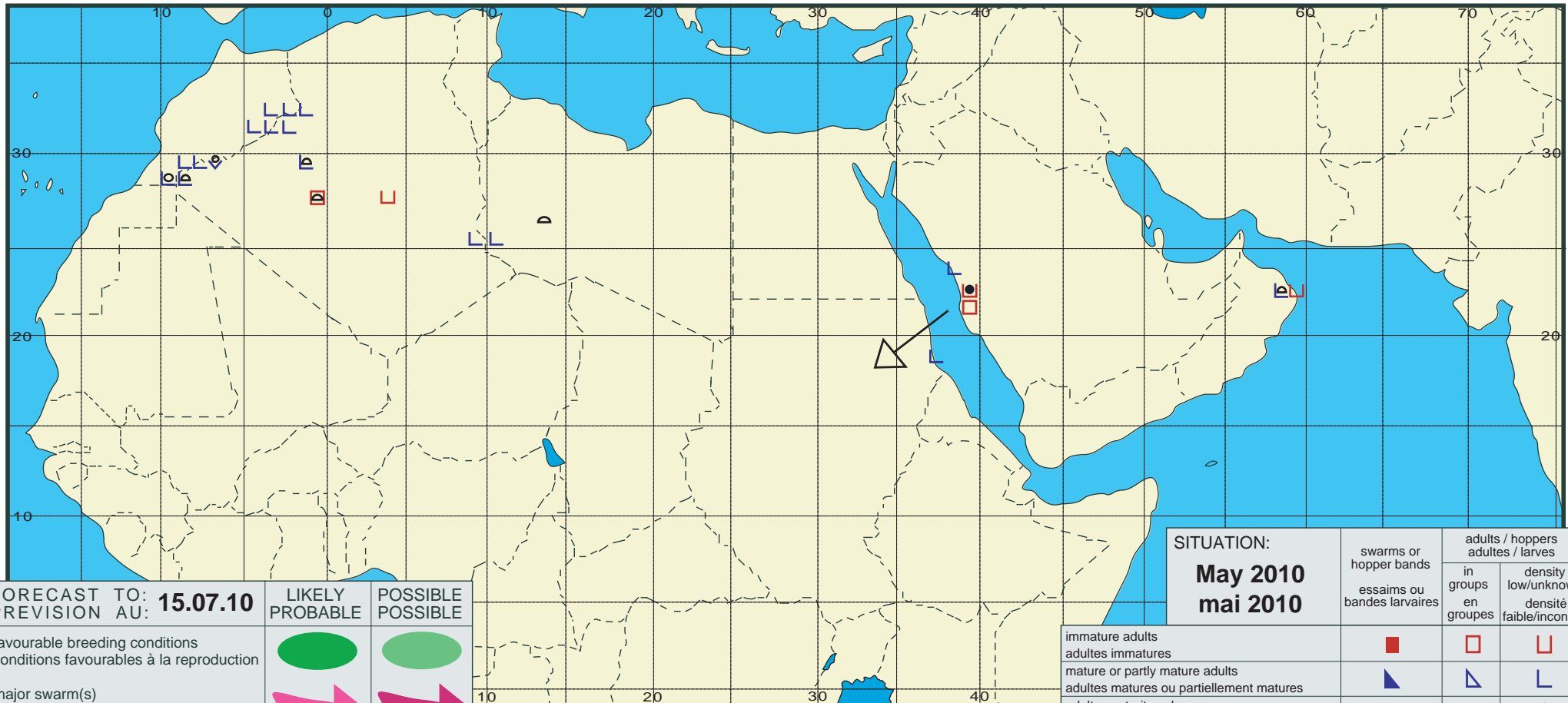
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.07.10	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: May 2010 mai 2010	swarms or hopper bands	adults / hoppers adultes / larves	
	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)			