

warning level: **CAUTION**

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 429



**General Situation during June 2014  
Forecast until mid-August 2014**

(3.7.2014)

The Desert Locust situation remained calm during June except in parts of the Central Region. Although control operations continued against infestations in the spring breeding areas of Saudi Arabia, a few small swarms may form and move to Yemen and Sudan in July where breeding will occur in areas that receive summer rains. Locust infestations declined in the Horn of Africa and a few swarms moved to northern Ethiopia and Eritrea. In Iran, control operations were carried out against hopper and adult groups that formed in the spring breeding areas. During the forecast period, small-scale breeding will commence with the onset of the seasonal rains in the summer breeding areas of the northern Sahel in West Africa and along the Indo-Pakistan border, causing locust numbers to increase slightly but remain below threatening levels.

**Western Region.** The situation remained calm during June. A few groups of mature adults were present and laying eggs in irrigated areas in the central Sahara of **Algeria** and 22 ha were treated. Elsewhere, dry conditions prevailed, and no surveys were carried out and no locusts were reported. During the forecast period, low numbers of adults are expected to appear in southeast and central **Mauritania**, northern **Mali**, in the Tamesna and Air Mountains of northern **Niger**, and in central and eastern **Chad**. Small-scale breeding will occur in those areas that receive rainfall, causing locust numbers to increase slightly.

**Central Region.** The situation remained generally calm during June except in **Saudi Arabia** where spring breeding continued in the interior, giving rise to additional hopper groups and bands, and adult groups. Groups of mature adults moved south while a few immature swarms arrived in northern **Yemen** and dispersed in the interior and central highlands. Aerial and ground control operations treated 17,800 ha in Saudi Arabia. A few swarms were seen on the plateau in northern **Somalia** in early June and small swarms moved to northern **Ethiopia** and adjacent highland areas in **Eritrea**. Aircraft treated nearly 1,200 ha in northern Ethiopia. Control operations concluded in **Oman** and only scattered adults remained. In northern **Sudan**, adults formed a few groups in the Nile Valley that were treated. During the forecast period, a few small swarms may form in the spring breeding areas of the interior in Saudi Arabia and move to the summer breeding areas in Sudan and Yemen where breeding will cause locust numbers to increase in those areas that receive rainfall. A few small swarms from northern Ethiopia could appear in Eritrea and move to Sudan in July.

**Eastern Region.** Groups of hoppers and adults formed in the spring breeding areas of southeastern **Iran**, and 18,000 ha were treated during the first half of June. Thereafter, the situation improved. No locusts were reported elsewhere in the region. During the forecast period, low numbers of adults are expected to appear on both sides of the **Indo-Pakistan** border where small-scale breeding will occur with the arrival of the southwest monsoon rains, causing locust numbers to increase slightly.

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 are available on the Internet.

**Telephone:** +39 06 570 52420 (7 days/week, 24 hr)

**Facsimile:** +39 06 570 55271

**E-mail:** [eclo@fao.org](mailto:eclo@fao.org)

**Internet:** [www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)

**Facebook:** [www.facebook.com/faolocust](http://www.facebook.com/faolocust)

**Twitter:** [twitter.com/faolocust](http://twitter.com/faolocust)



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### Weather & Ecological Conditions in June 2014

**Despite a few showers, seasonal rains did not yet commence in the summer breeding areas of the northern Sahel in West Africa and Sudan. Mainly dry conditions prevailed along the Indo-Pakistan border due to a delay in the arrival of the southwest monsoon.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement northwards over the Sahel in West Africa in June. During the first two decades, it was positioned further north than usual over Mali and Niger, almost reaching In Abangharit in Niger, resulting in light rainfall in central Mali and Niger between Gao and Agadez. By the end of the month, the ITCZ had reached Tintane and Oualata in southern Mauritania, but remained south of Kidal in Mali, south of In Abangharit in Niger and south of Arada in Chad. Its position during the third decade was slightly further south than usual. Nevertheless, light rains fell in northern Mali in Timetrine and the northern Adrar des Iforas. Ecological conditions are expected to improve in these areas while conditions remained dry and unfavourable for breeding in other parts of the northern Sahel. In Northwest Africa, no significant rainfall occurred and dry conditions prevailed except for a few places along the Ziz-Ghris Valley in Morocco south of the Atlas Mountains.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) retreated slightly southwards in Sudan during the first two decades of June but then moved north again during the last decade of June, reaching Hamrat Esh Sheikh and south of Khartoum. Consequently, only light showers fell in the southern portion of the summer breeding areas south of El Fasher and near Sodiri and Kassala. More rainfall will be required before ecological conditions become favourable for breeding in the interior of Sudan and western Eritrea. Good rains fell in northwest Ethiopia and to a lesser extent at times on parts of the plateau in northwest Somalia and adjacent areas of the Ogaden in eastern Ethiopia. Good rains also fell in parts of the central highlands in Yemen. As a result of these rains and associated

runoff, ecological conditions could become favourable for limited breeding on the Somali plateau near Burao, in parts of the Ogaden, and in wadis that drain the eastern side of the central highlands in Yemen.

In the **Eastern Region**, light rain fell at times in the summer breeding areas of Pakistan and India during June. In Pakistan, showers fell in the Lasbela area during the first two decades and in northern Cholistan during the last decade. In India, light rain fell in eastern Rajasthan during the first decade and northern Rajasthan in the last decade. Nevertheless, generally dry conditions prevailed due to the delayed arrival of the southwest monsoon.



### Area Treated

Control operations treated nearly 37,300 ha in June, compared to 29,500 ha in May.

Algeria	22 ha (May)
Ethiopia	1,180 ha (June)
Iran	11,500 ha (May, updated) 18,000 ha (1-15 June)
Oman	56 ha (June)
Saudi Arabia	17,800 ha (June)
Sudan	125 ha (June)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### Mauritania

##### • SITUATION

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

##### • FORECAST

*Scattered adults are likely to appear in the southeast and centre, and breed on a small scale with the onset of the summer rains, causing locust numbers to increase slightly.*

#### Mali

##### • SITUATION

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

##### • FORECAST

*Scattered adults are likely to appear in parts of Timetrine, the Adrar des Iforas, and Tamesna and breed on a small scale as ecological conditions improve in areas of recent rainfall, causing locust numbers to increase slightly.*

## Niger

### • SITUATION

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

### • FORECAST

*Scattered adults are likely to appear in parts of Tamesna and the Air Mountains, and breed on a small scale as ecological conditions improve in areas of recent rainfall, causing locust numbers to increase slightly.*

## Chad

### • SITUATION

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

### • FORECAST

*Scattered adults are likely to appear in the northern Sahel and breed on a small scale with the onset of the summer rains, causing locust numbers to increase slightly.*

## Senegal

### • SITUATION

No reports were received during June.

### • 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 June, groups of mature adults were present and laying eggs in irrigated areas in the central Sahara near Adrar (2753N/0017W), and control teams treated 22 ha.

### • FORECAST

*Low numbers of adults are likely to persist near crops in the Adrar area where limited breeding could continue. Scattered adults may appear in the extreme south if rainfall occurs.*

## Morocco

### • SITUATION

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

### • FORECAST

*No significant developments are likely.*

## Libya

### • SITUATION

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

### • FORECAST

*No significant developments are likely.*

## Tunisia

### • SITUATION

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

### • FORECAST

*No significant developments are likely.*

## CENTRAL REGION

### Sudan

### • SITUATION

During June, scattered immature and mature solitary adults including a few small groups persisted in the Nile Valley between Abu Hamed (1932N/3320E) and Wadi Halfa (2147N/3122E). Isolated mature adults were seen in Wadi Muqaddam in the Bayuda Desert northwest of Khartoum. Control teams treated 125 ha during June.

### • FORECAST

*Small-scale breeding will continue in the Nile Valley of Northern and River Nile States. An increasing number of adults will appear in summer breeding areas between Darfur and the Red Sea Hills, perhaps supplemented by a few small swarms from Saudi Arabia and Ethiopia. Small-scale breeding will cause locust numbers to increase slightly in areas of rainfall.*

### Eritrea

### • SITUATION

On 28 June, a small swarm crossed from the Ethiopian border south of Adi Kula (1438N/3850E) and moved north in the highlands towards Areza (1454N/3845E). No surveys were conducted during the month.

### • FORECAST

*In early July, a few small swarms may appear in the highlands south of Asmara and move towards the western lowlands where breeding will occur with the onset of the summer rains.*

### Ethiopia

### • SITUATION

During the first week of June, a few immature and mature swarms moved back and forth across the border with northern Somalia near Jijiga (0922N/4250E), and at least one medium-sized mature swarm reached the Afar region in the northeast



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and continued to the northern region of Tigray where it dispersed between Mekele (1329N/3928E) and Axum (1407N/3843E), about 60 km south of the Eritrea border. Aerial control operations treated 1,180 ha. In the eastern region, there were no further reports of locusts after the first week of June.

- **FORECAST**

*A few small swarms may persist in the northern highlands early in the forecast period. Unless further rainfall occurs, no significant developments are likely in the eastern region.*

### **Djibouti**

- **SITUATION**

No reports were received during June.

- **FORECAST**

*No significant developments are likely.*

### **Somalia**

- **SITUATION**

During June, a few immature and mature swarms were seen in the first decade moving on the plateau between Boroma (0956N/4313E) and Burao (0931N/4533E) as well as in the northeast near Iskushuban (1017N/5014E). No locusts were reported after 10 June.

- **FORECAST**

*Small adult groups and swarms could continue to move on the plateau early in the forecast period. Limited breeding may occur in areas of recent rainfall.*

### **Egypt**

- **SITUATION**

No locusts were seen in June during surveys carried out on the Red Sea coast between Abu Ramad (2224N/3624E) and the Sudan border, and near Lake Nasser between Abu Simbel (2219N/3138E) and Tushka (2247N/3126E).

- **FORECAST**

*No significant developments are likely.*

### **Saudi Arabia**

- **SITUATION**

During June, hatching continued during the first week in the interior, causing hopper groups and bands to form from east of Khaybar (2542N/3917E) to Hail (2731N/4141E) and Gassim (2621N/4358E). Groups of immature and mature adults were also present in

the same area. At the end of the month, a few mature adult groups were seen further south near Rawdah (2115N/4252E) and in the Asir Mountains near Taif (2115N/4021E) and Abha (1813N/4230E). One aircraft and 15 ground teams treated 17,800 ha in June, of which 2,700 were by air.

- **FORECAST**

*A few small adult groups and swarms may form in the interior during July and move to summer breeding areas in Sudan and Yemen.*

### **Yemen**

- **SITUATION**

During June, a few immature swarms from the spring breeding areas appeared in the north. On the 13<sup>th</sup>, at least one immature swarm was reported near Sada'a (1656N/4345E), followed by a swarm in the interior near Al Hazm (1609N/4447E) and unconfirmed reports of small swarms or groups north of Wadi Hadhramaut on the plateau between Al Abr (1608N/4714E) and Thamud (1717N/4955E) on the 17<sup>th</sup>. There were also unconfirmed reports of similar populations in the Shabwah region on the same day. On the 22<sup>nd</sup>, an immature swarm was seen in the central highlands about 150 km south of Sana'a near Al Radmah (1413N/4435E). There were further reports of adult groups and swarms in the highlands at the end of the month. Surveys could not be carried out during June.

- **FORECAST**

*A limited number of adult groups and small swarms are likely to concentrate in areas of green vegetation in Marib, Shabwah and the northern plateau of Hadhramaut where they will mature and lay eggs. If conditions remain favourable, hatching and band formation could occur. There is also a moderate risk that a few small groups or swarms could appear in the highlands and interior from spring breeding areas in Saudi Arabia during July.*

### **Oman**

- **SITUATION**

During the first half of June, the situation improved in Dhahera and Buraimi regions due to previous control operations and drying conditions. Only isolated late instar hoppers and adults were seen north of Ibri (2314N/5630E) and along the UAE border near Buraimi (2415N/5547E). No locusts were reported after mid-month. Small-scale breeding occurred in the Musandam Peninsula where scattered third to fifth instar hoppers and immature *transiens* adults were present in crops near Rodha (2551N/5616E). *Transiens* adults were also seen in crops in Sharqiya region southeast of Adam (2223N/5731E) and there were unconfirmed reports of hoppers. In the south, scattered immature and mature adults appeared in

irrigated cropping areas on the edge of the Rub Al Khali between Thumrait (1736N/5401E) and the Saudi Arabian border. Ground teams treated 56 ha in June.

• **FORECAST**

*Isolated adults may persist in a few irrigated cropping areas in Sharqiya and Dhofar where they could breed on a small scale. No significant developments are likely.*

**UAE**

• **SITUATION**

No reports were received during June.

• **FORECAST**

*Small residual populations may be present in a few farms near the Oman border. No significant developments are likely.*

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

• **FORECAST**

*No significant developments are likely.*

**EASTERN REGION**

**Iran**

• **SITUATION**

During the first half of June, immature and mature adult groups formed on the southeast coast near Jask (2540N/5746E) and Chabahar (2517N/6036E) as well as in the interior near Bampur (2711N/6028E). Some adults were seen copulating. Groups of late instar hoppers at densities of 200-300 hoppers/bush mixed with scattered solitary and *transiens* adults were present in the western part of the Jaz Murian Basin. Control teams treated 18,000 ha during the first half of June. The situation improved after mid-month.

• **FORECAST**

*As vegetation dries out, a few small groups may form and move east to the Indo-Pakistan summer breeding areas.*

**Pakistan**

• **SITUATION**

A late report indicated that no locusts were reported during May.

During June, no locusts were seen during surveys carried out in Tharparkar, Khairpur and Cholistan deserts, and in the Lasbela area.

• **FORECAST**

*Small-scale breeding will commence with the onset of the monsoon rains, causing locust numbers to increase slightly in Lasbela, Tharparkar, Khairpur and Cholistan.*

**India**

• **SITUATION**

During June, no locusts were seen during surveys carried out in Rajasthan and Gujarat.

• **FORECAST**

*Low numbers of adults may be present in parts of Rajasthan where small-scale breeding is expected to occur 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/ECLo Desert Locust Information Service (ecl@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.



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**Locust tools and resources.** FAO has developed a number of tools that National locust information officers and other interested individuals can use for Desert Locust early warning and management:

- **MODIS.** Vegetation imagery every 16 days ([http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/Locusts/Regional/MODIS/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/Locusts/Regional/MODIS/index.html))
- **MODIS.** Daily rainfall imagery in real time ([http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/Locusts/index.html))
- **RFE.** Rainfall estimates every day, decade and month ([http://iridl.ldeo.columbia.edu/maproom/.Food\\_Security/Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/.Food_Security/Locusts/index.html))
- **Greenness maps.** Dynamic maps of green vegetation evolution every decade ([http://iridl.ldeo.columbia.edu/maproom/Food\\_Security/Locusts/Regional/greenness.html](http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html))
- **FAODLIS Google site.** A platform for sharing problems, solutions, tips and files for eLocust2, eLocust2Mapper, RAMSES and remote sensing (<https://sites.google.com/site/faodlis>)
- **FAOLOLUST Twitter.** The very latest updates are posted on Twitter (<http://www.twitter.com/faolocust>)
- **FAOLocust Facebook.** A social means of information exchange using Facebook (<http://www.facebook.com/faolocust>)
- **Slideshare.** Locust presentations and photos available for viewing and download (<http://www.slideshare.net/faolocust>)
- **eLERT.** A dynamic and interactive online database of resources for locust emergencies (<http://sites.google.com/site/elertsite>)

**New information on Locust Watch.** Recent additions to the web site ([www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)) are:

- **Desert Locust situation updates.** Archives
- **Current threats updates.** Information

**eLocust3.** The final version of eLocust3 has been released and units are currently being dispatched to countries. Master trainers should conduct training courses for all field staff. A set of 15 introductory training videos are available on YouTube: [https://www.youtube.com/playlist?list=PLjxRk5CAwvG\\_0iFjZ5C2fLByF3jvhvHOx](https://www.youtube.com/playlist?list=PLjxRk5CAwvG_0iFjZ5C2fLByF3jvhvHOx)

**DLIO workshop.** The presentation made at the recent CLCPRO/CRC/SWAC Locust Information Officer workshop (Agadir, Morocco 19-23 May) is available on Slideshare:

<http://www.slideshare.net/FAOLocust/2014-clcprocrswac-desert-locust-information-officer-workshop>

**2014 events.** The following activities are scheduled or planned:

- **CRC.** 29<sup>th</sup> Session of the Commission, Abu Dhabi, UAE (23-27 November)
- **SWAC.** 29<sup>th</sup> Session (50<sup>th</sup> anniversary) of the Commission, Tehran, Iran (15-18 December)



## 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 km<sup>2</sup>      • band: 1 - 25 m<sup>2</sup>

#### **SMALL**

- swarm: 1 - 10 km<sup>2</sup>      • band: 25 - 2,500 m<sup>2</sup>

#### **MEDIUM**

- swarm: 10 - 100 km<sup>2</sup>      • band: 2,500 m<sup>2</sup> - 10 ha

#### **LARGE**

- swarm: 100 - 500 km<sup>2</sup>      • band: 10 - 50 ha

#### **VERY LARGE**

- swarm: 500+ km<sup>2</sup>      • 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.



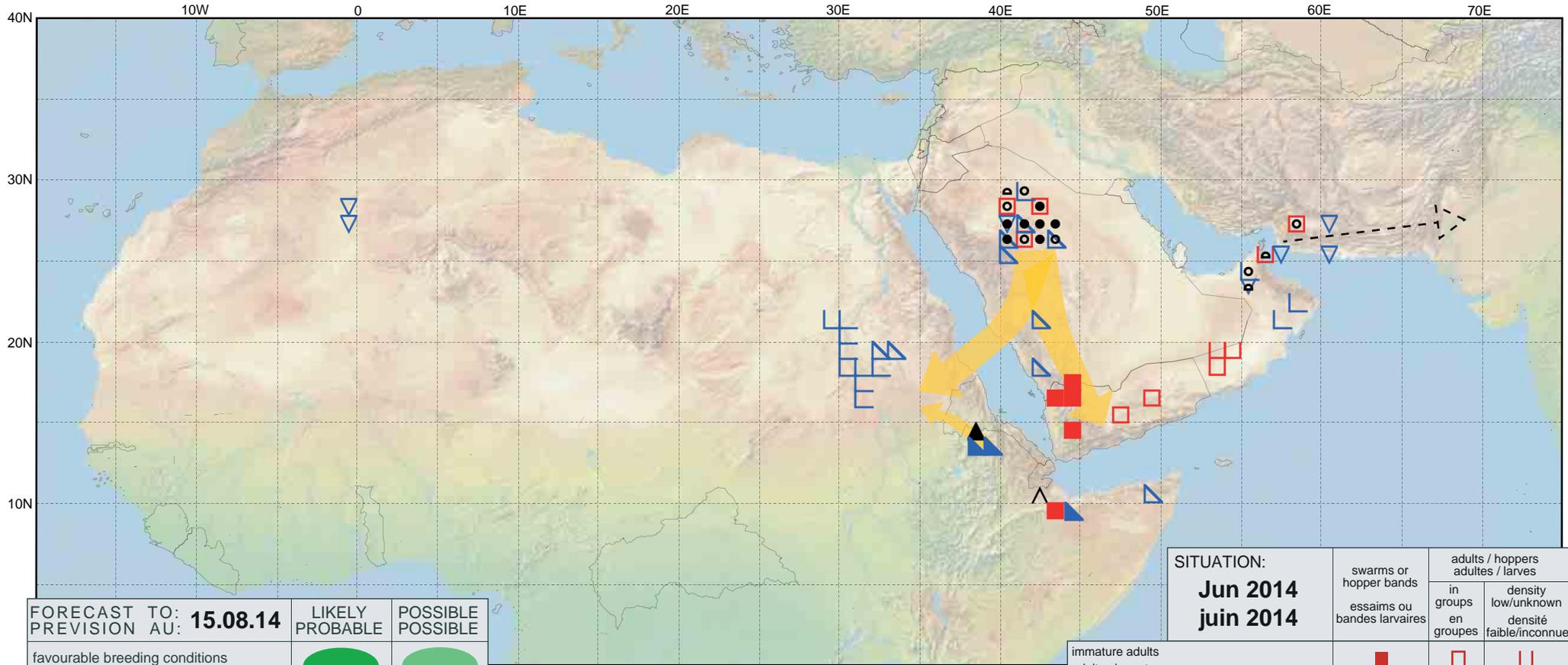
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# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO:  
PREVISION AU: **15.08.14**

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:

**Jun 2014**  
**juin 2014**

swarms or  
hopper bands  
essaims ou  
bandes larvaires

adults / hoppers  
adultes / larves  
in  
groups  
en  
groupes  
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)	◼	◼	◼