

warning level: **THREAT**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 424



**General Situation during January 2014
Forecast until mid-March 2014**

(3 Feb 2014)

The Desert Locust situation remained serious along both sides of the Red Sea during January where breeding continued in Eritrea, Yemen, Saudi Arabia and, to a lesser extent, in Sudan, causing hopper bands and swarms to form. Although control operations continued in all countries, more hopper bands and swarms are likely to form during February and March. There is a risk that groups and small swarms could move into spring breeding areas of the interior of Saudi Arabia. A few groups and small swarms invaded Djibouti from northwest Somalia, and may move into Ethiopia. Elsewhere, small infestations were treated in Mauritania, Niger and Algeria. During the forecast period, small-scale breeding may occur in northwest and northern Mauritania, and scattered adults are likely to appear in the spring breeding areas of Northwest Africa and South-West Asia.

Western Region. The situation remained calm during January. Limited control operations were carried out in northwest Mauritania against an immature swarm and an immature adult group early in the month, and against adult groups in the Ténéré Desert in Niger. In Northwest Africa, a group of mature adults was treated in irrigated crops in the central Sahara in Algeria. During the forecast period, low numbers of adults will persist and may breed on a small scale in northwest and northern Mauritania and in adjacent areas of Western Sahara. From March onwards, low numbers of adults are likely to appear in the spring breeding areas south of the Atlas Mountains

in Morocco and Algeria as well as in southwest Libya and breed on a small scale occur once temperatures increase and rains fall.

Central Region. Locust infestations continued to increase in January for the third consecutive month along both sides of the Red Sea. The situation was most serious in Eritrea and Yemen where another generation of breeding occurred, causing more hopper bands to form as well as swarms in Eritrea. Both countries were facing pesticide shortages. Aerial and ground control operations continued against hopper bands and swarms in Saudi Arabia and Sudan. Some of the swarms were laying eggs. During the forecast period, more hopper bands and swarms could form, mainly in Eritrea and Yemen but also in parts of Saudi Arabia and Sudan. Adult groups and a few small swarms could move into the spring breeding areas of the interior of Saudi Arabia. In the Horn of Africa, small adult groups and swarms from adjacent areas of northwest Somalia invaded Djibouti and dispersed throughout the country. There is a risk that groups and a few small swarms could move to eastern Ethiopia.

Eastern Region. No locusts were reported and the situation remained calm in January. During the forecast period, low numbers of adults are likely to appear in coastal areas of southeast Iran and southwest Pakistan and breed on a small scale in areas of recent rainfall.

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

Internet: www.fao.org/ag/locusts

Facebook: www.facebook.com/faolocust

Twitter: twitter.com/faolocust



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Weather & Ecological Conditions in January 2014

Only limited rain fell during January in the winter breeding areas along both sides of the Red Sea. Nevertheless, ecological conditions remained favourable for breeding in some areas. Conditions were also favourable in parts of northwest and northern Mauritania, and rain fell in parts of the spring breeding area in southeast Iran and southwest Pakistan.

In the **Western Region**, very little rain fell during January. In Algeria, light rain fell at times in the northern part of the Sahara where vegetation was starting to become green in a few areas. In southwest Libya, green vegetation was present in a few wadis northwest of Ghat near the Algerian border. In Mauritania, ecological conditions remained favourable for breeding in parts of the northwest and north. Dry conditions prevailed in the northern Sahel of West Africa.

In the **Central Region**, only limited rainfall occurred at times along both sides of the Red Sea during January. Light rain fell on the Red Sea coastal plains in Saudi Arabia between Jeddah and Jizan, in parts of the Tihama coast in Yemen, and along the southern coast in Sudan. Light to moderate showers fell at mid-month along parts of the Gulf of Aden coastal plains in Yemen. Ecological conditions remained favourable for breeding in these areas as well as along the coast of Eritrea but were drying out in northeast Sudan and remained dry in southeast Egypt. In the Horn of Africa, ecological conditions remained favourable for breeding along the coast in northwest Somalia between Bulhar and Silil but were dry in Djibouti and eastern Ethiopia. Good rains fell in the eastern part of the spring breeding areas in the interior of Saudi Arabia where adult groups and perhaps a few small swarms could appear in March.

In the **Eastern Region**, light rains fell at times during January in parts of the spring breeding areas in southeast Iran and southwest Pakistan. However, more rainfall will be needed before ecological conditions become favourable for breeding.



Area Treated

Control operations declined in January, treating about 51,000 ha compared to 93,000 ha in December.

Algeria	20 ha (January)
Eritrea	16,545 ha (January)
Mauritania	300 ha (January)
Niger	541 ha (January)
Saudi Arabia	23,676 ha (January)
Sudan	9,475 ha (1-25 January)
Yemen	678 ha (January)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During January, a 2 km² immature swarm was treated near the *Parc National du Banc d'Arguin* in the northwest on the 1st and a 100 ha group of immature adults at a density of 10,000 adults/ha were treated on the 10th. During the remainder of the month, locust infestations continued to decline and, by the end of the month, only scattered adults persisted near the coast from north of Nouakchott (1809N/1558W) to Tasiast (2034N/1531W) where they were maturing. In the north, scattered immature and mature solitarious adults were present near Zouerate (2244N/1221W) and Bir Moghreïn (2510N/1135W).

• FORECAST

Small-scale breeding may take place in the northwest and north, causing locust numbers to increase slightly.

Mali

• SITUATION

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

• FORECAST

Low numbers of locusts are likely to be present and will persist in parts of the Adrar des Iforas.

Niger

• SITUATION

During January, solitarious hoppers mixed with immature and mature solitarious and *transiens* adults persisted in the Ténéré Desert northwest of Fachi (1806N/1134E). Adults formed a few small groups and some adults were copulating. By mid-month, hoppers had reached fifth instar and adult densities were nearly 4,000 adults/ha. Ground teams treated 541 ha.

- **FORECAST**

Scattered adults are likely to move from the Ténéré to the southeastern Air Mountains where they will persist during the forecast period.

Chad

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Senegal

- **SITUATION**

No reports were received during January.

- **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 January, a group of mature adults were seen copulating in irrigated cropping areas near Adrar (2753N/0017W). Ground teams treated 20 ha.

- **FORECAST**

Scattered adults may persist and breed on a small scale in irrigated areas near Adrar. Low numbers of adults may appear near Tindouf, Bechar and Illizi where small-scale breeding may occur once temperatures increase.

Morocco

- **SITUATION**

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

- **FORECAST**

Scattered adults are likely to appear in southern parts of the Western Sahara and breed on a small scale in areas where conditions are favourable.

Libya

- **SITUATION**

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

- **FORECAST**

Low numbers of adults are likely to appear in the southwest near Ghat and breed on a small scale if rainfall occurs.

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During January, breeding continued on the Red Sea coast. In the Tokar Delta, mainly groups of immature and mature adults mixed with a few late instar hoppers were present. Some of the adults were laying eggs. Hatching occurred at mid-month on the coast south of Tokar (1827N/3741E) to the Eritrean border where a few swarms arrived from Eritrea and laid eggs in late December and early January. Numerous small patches of first and second instar gregarious hoppers were forming near Aqiq (1813N/3811E) and Aiterba (1753N/3819E). Scattered mature solitary adults were present north of Tokar to Port Sudan (1938N/3713E), and a 4 km² swarm laid eggs between Port Sudan and Eit (2009N/3706E) on the 22nd. In the northeast subcoastal areas, late instar hopper bands and immature adult groups were present in Wadi Oko/Diib north of Tomala (2002N/3551E). A few small immature swarms formed during the third week. From 1 to 25 January, control operations treated 8,675 ha of which 3,305 ha were by air.

In the summer breeding areas, ground teams treated 800 ha of immature adult in the Nile Valley near Shendi (1641N/3322E) and Abu Hamed (1932N/3320E).

- **FORECAST**

Further hatching on the southern coast will cause locust numbers to increase. Hoppers will form small bands that will fledge from mid-February onwards, and new adults will form groups and perhaps a few small swarms. Small-scale breeding may occur north of Port Sudan. Unless more rains fall, further breeding is not expected in the Tokar Delta or Wadi Oko/Diib. There is a moderate risk that adult groups and a few swarms may appear on the southern coastal plains from Eritrea.



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Eritrea

• SITUATION

During January, a third generation of breeding commenced on the Red Sea coastal plains. Small adult groups and swarms laid eggs that hatched and hoppers were forming early instar groups and bands in the north near Mehimet (1723N/3833E) and the Sudanese border, in central areas, and south of Massawa (1537N/3928E) to Ghelaelo (1507N/4004E). Ground control operations treated 16,545 ha in January.

• FORECAST

Locust numbers are expected to increase further on the Red Sea coast as hatching and hopper band formation continue. New adult groups and small swarms could start to form by the end of February and during March.

Ethiopia

• SITUATION

During January, scattered mature gregarious adults mixed with a few solitary adults were seen near Ayasha (1045N/4234E) and the border of northern Somalia.

• FORECAST

Locust adults, including a few groups and perhaps a few small swarms may appear between Dire Dawa and the Djibouti and Somali borders early in the forecast period and move into the Harar Highlands. Small-scale breeding could occur in areas that receive rainfall.

Djibouti

• SITUATION

On 26 January, at least one mature swarm reportedly arrived in the southeast from adjacent areas in northwest Somalia near Ali Sabieh (1109N/4242E) in W. Beyadde. On the 28th, a swarm was seen west of the capital near Arta (1132N/4251E). On the 30th, there were reports in the south in W. Harrou (1105N/4223E) near Dikhil (1106N/4222E) and the Gobad Valley near the Ethiopian border as well as from the Day Mountains and the Tadjourah (1147N/4253E) area in the north.

• FORECAST

Small adult groups and perhaps a few small swarms may continue to appear from northwest Somalia early in the forecast period and disperse throughout the

country. Unless further rains fall, significant breeding is unlikely.

Somalia

• SITUATION

During January, there were unconfirmed reports from locals of late instar hopper bands, and groups of immature and mature adults on the northwest coastal plains between Lughaye (1041N/4356E) and Siliil (1058N/4326E).

• FORECAST

Hoppers and adults are likely to be present in some coastal, escarpment and plateau areas as far east as Las Koreh. If so, small groups, bands and a few small swarms could form as vegetation dries out. Unless further rains fall, significant breeding is unlikely.

Egypt

• SITUATION

No locusts were seen in January during surveys carried out on the Red Sea coast and in subcoastal areas between Berenice (2359N/3524E) and the Sudan border, along both sides of Lake Nasser in the Allaqi, Garf Husein (2317N/3252E), Tushka (2247N/3126E) and Abu Simbel (2219N/3138E) areas, near Aswan (2405N/3256E), and in the northwest near Siwa (2912N/2531E) and Salum (3131N/2509E).

• FORECAST

Scattered adults may be present on the Red Sea coast between Shalatyn and the Sudanese border. No significant developments are likely.

Saudi Arabia

• SITUATION

During January, second generation breeding continued along the Red Sea coastal plains between Lith (2008N/4016E) and Jizan (1656N/4233E) where hopper groups and bands were present. Adults were maturing and forming groups between Lith and Qunfidah (1909N/4107E) but remained in low numbers and scattered south of Qunfidah. Egg-laying was in progress in both areas. A few immature and mature swarms formed and moved north along the coast between Taif (2115N/4021E) and Rabigh (2247N/3901E). No locusts were seen in the interior between Khaybar (2542N/3917E) and Hail (2731N/4141E). Control operations treated 23,676 ha, mainly near Qunfidah, of which 1,800 ha were by air.

• FORECAST

Second-generation breeding, mainly between Lith and Jizan but possibly extending north to Yenbo, will cause locust numbers to continue to increase as groups, bands and small swarms form. Groups and perhaps a few small swarms could appear in the spring breeding areas of the interior by the end of the forecast period.

Yemen

• SITUATION

During January, a limited second-generation hatching occurred on the northern Red Sea coast, causing small hopper bands to form in a few places between Al Zuhrah (1541N/4300E) and Midi (1619N/4248E). Surveys recommenced after mid-month and found more than 150 bands, at densities up to 200 hoppers/m² and up to one hectare in size. Some hoppers had reached third instar by the 18th. Scattered immature and mature solitary and *transiens* adults were also present in a few wadis. Ground teams treated 678 ha but control operations were limited due to beekeepers. On the Gulf of Aden coastal plains, low numbers of immature and mature adults and one hopper band were reported at mid-month near Am Rija (1302N/4434E).

• FORECAST

Locust numbers may increase further on the northern Red Sea coast as second-generation hatching continues, causing small hopper groups and bands to form. Fledging will commence in mid-February, and the new adults will form groups and perhaps a few small swarms. Locust numbers will also increase on the Gulf of Aden coast west of Aden from a second generation of breeding, giving rise to hopper groups and small bands.

Oman

• SITUATION

No locusts were seen during surveys carried out in January on the Musandam Peninsula, the Batinah coast near Jamma (2333N/5733E), and in the northern interior between Nizwa (2255N/5731E) and Adam (2223N/5731E) except for an isolated fledgling on the northern edge of the Wahiba Sands southeast of Ibra (2243N/5831E).

• FORECAST

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

No locusts were seen during surveys carried out on the southeastern coastal plains near Jask (2540N/5746E) and Chabahar (2517N/6036E) in January.

• FORECAST

Low numbers of adults are likely to appear along the southeast coast and breed on a small scale in areas of recent rainfall.

Pakistan

• SITUATION

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

• FORECAST

Low numbers of adults are likely to appear along the Baluchistan coast and breed on a small scale in areas of recent rainfall.

India

• SITUATION

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

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Announcements

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

Locust reporting. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week



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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 (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 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.Ideo.columbia.edu/maproom/.Food_Security/Locusts/Regional/MODIS/index.html)
- **MODIS.** Daily rainfall imagery in real time (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **RFE.** Rainfall estimates every day, decade and month (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **Greenness maps.** Dynamic maps of green vegetation evolution every decade (http://iridl.Ideo.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>)
- **FAOLOCAST 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>)

Greenness maps. Dynamic maps of green vegetation evolution every decade can now be downloaded from Columbia University's IRI (USA)

website: http://iridl.Ideo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html

2014 events. The following activities are scheduled or planned:

- **DLCC.** Desert Locust Control Financing System meeting, FAO Rome (11-13 March)
- **CLCPRO/CRC/SWAC.** Inter-regional Locust Information Officers workshop, Agadir, Morocco (19-23 May tbc)



Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

NON-GREGARIOUS ADULTS AND HOPPERS

ISOLATED (FEW)

- very few present and no mutual reaction occurring;
- 0 - 1 adult/400 m foot transect (or less than 25/ha).

SCATTERED (SOME, LOW NUMBERS)

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1 - 20 adults/400 m foot transect (or 25 - 500/ha).

GROUP

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

ADULT SWARM AND HOPPER BAND SIZES

VERY SMALL

- swarm: less than 1 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • band: 50+ ha

RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.

OTHER REPORTING TERMS

BREEDING

- the process of reproduction from copulation to fledging.

SUMMER RAINS AND BREEDING

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

DECLINE

- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.

OUTBREAK

- a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.

UPSURGE

- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to- gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.

PLAGUE

- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

- period of deep recession marked by the complete absence of gregarious populations.

WARNING LEVELS

GREEN

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

YELLOW

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

ORANGE

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

RED

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

REGIONS

WESTERN

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

CENTRAL

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

EASTERN

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

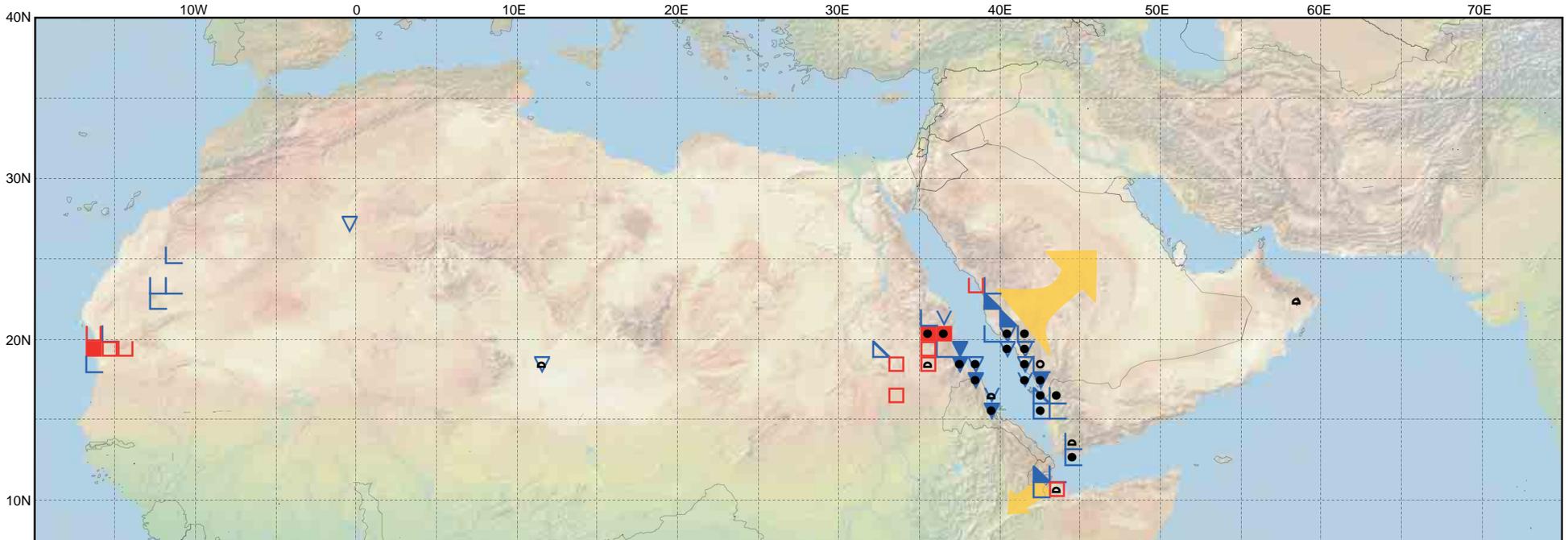


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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	15.03.14	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: Jan 2014 jan 2014	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)			