

warning level: **THREAT**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 425



**General Situation during February 2014
Forecast until mid-April 2014**

(3 Mar 2014)

The Desert Locust situation remained serious along both sides of the Red Sea during February as outbreaks continued in Eritrea, Yemen, Saudi Arabia and, to a lesser extent, in Sudan and northern Somalia, where hopper bands, groups and swarms formed. Although locust infestations should decline in the winter breeding areas due to control operations and drying conditions, there is a risk that adult groups and small swarms will form and move into spring breeding areas of the interior in Saudi Arabia, northern Sudan, and perhaps parts of northern Somalia and eastern Ethiopia. Small to moderate scale breeding is likely in those areas that receive rainfall. In Northwest Africa, low numbers of adults are expected to appear south of the Atlas Mountains and breed on a small scale. A similar situation is also likely in southeast Iran and western Pakistan, causing locust numbers to increase slightly.

Western Region. The situation remained calm during February. Only scattered adults were present in parts of northern Mauritania and in the Air Mountains in Niger. During the forecast period, 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 in areas that receive rainfall. No significant developments are expected.

Central Region. The situation remained critical during February as outbreaks continued and important infestations persisted in the winter breeding areas of Sudan, Eritrea, Saudi Arabia, Yemen and northern Somalia. Additional breeding caused more hopper bands to form in all countries. At least one swarm formed in northeast Sudan and a few swarms moved from the Red Sea coastal plains in Saudi Arabia and Yemen to the nearby mountains. One swarm may have crossed the Red Sea from Eritrea to Yemen. Aerial and ground control operations were undertaken in Saudi Arabia and Sudan, including the Nile Valley, while ground operations were carried out in Yemen and Eritrea. Limited control operations were mounted in northwest Somalia using biopesticides. A limited number of groups and small swarms could form during the forecast period and move from the coastal plains to the interior of Saudi Arabia, Sudan, and perhaps to the plateau in northern Somalia and adjacent areas of eastern Ethiopia. Breeding will occur in these areas if rains fall.

Eastern Region. No locusts were reported and the situation remained calm in February. 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.

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Weather & Ecological Conditions in February 2014

Very little fell during February, causing vegetation to start to dry out in parts of the winter breeding areas along both sides of the Red Sea. Conditions were improving in the spring breeding areas of Northwest Africa, the interior of Saudi Arabia and in Southwest Asia as a result of light showers.

In the **Western Region**, no significant rain fell during February. In northern Mauritania, conditions were favourable for locust survival and small-scale breeding near Bir Moghreïn where light rain fell but vegetation was drying out further south near Zouerate. In Morocco, small areas of green vegetation persisted in the Western Sahara near Guelta Zemmur and Aousserd, and ecological conditions improved slightly south of the Atlas Mountains in the Ziz-Ghris Valley. In Algeria, ecological conditions were improving for breeding in the northwestern Sahara between Beni Abbes and Ain Sefra while conditions remained favourable near irrigated areas in the central Sahara near Adrar. Elsewhere, dry conditions prevailed.

In the **Central Region**, light rain fell at times in parts of the winter breeding areas along both sides of the Red Sea during February. In Yemen, light to moderate rain fell on the coastal plains of the Red Sea and Gulf of Aden during the first two decades of February. Vegetation remained green on the northern Red Sea coastal plains but started to dry out in a few places at the end of the month. In Saudi Arabia, ecological conditions remained favourable for breeding on the Red Sea coastal plains from Al Wajh to Jizan. Conditions were improving in the spring breeding areas of the interior near Gassim, and light to moderate showers fell between Hail and Al Jawf. In Sudan, vegetation was drying out along the Red Sea coastal plains as well as in subcoastal areas of the northeast. In southern Egypt, ecological conditions were favourable in a few places on the Red Sea coast and in subcoastal areas between Berenice and the Sudanese border. Vegetation remained green along both sides of Lake Nasser in the Garf Hussein and Abu Simbel areas.



Area Treated

Control operations in February treated nearly the same amount of area as January operations.

Eritrea	5,380 ha (February)
Saudi Arabia	37,283 ha (February)
Somalia	76 ha (25-26 February)
Sudan	11,381 ha (January, revised) 4,166 ha (February)
Yemen	3,150 ha (1-16 February)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During February, a few scattered immature and mature solitarious adults were present in the north between Bir Moghreïn (2510N/1135W) and Tamreiket (2518N/1102W), and to a lesser extent near Zouerate (2244N/1221W).

• FORECAST

Low numbers of adults will persist in parts of Tiris Zemmour where small-scale breeding could occur in some places, causing locust numbers to increase slightly.

Mali

• SITUATION

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

• FORECAST

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

Niger

• SITUATION

During February, isolated mature solitarious and *transiens* adults were present at a few places in the Air Mountains south of Iferouane (1905N/0824E) as well as on the western edge of the mountains between Agadez (1658N/0759E) and Arlit (1843N/0721E).

• **FORECAST**

Scattered adults are likely to persist in a few places in the Air Mountains where small-scale breeding could occur in areas that receive rainfall or runoff.

Chad

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Senegal

• **SITUATION**

No reports were received during February.

• **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 February, no locusts were seen during surveys carried out near Tindouf (2741N/0811W), Beni Abbes (3011N/0214W), Ain Sefra (3245N/0035W), Adrar (2753N/0017W) and Tamanrasset (2250N/0528E).

• **FORECAST**

Scattered adults may appear and breed on a small scale south of the Atlas Mountains between Beni Abbes and Ain Sefra, in the west near Tindouf, in central Sahara irrigated areas near Adrar, and in the east near Illizi and Djanet.

Morocco

• **SITUATION**

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

• **FORECAST**

Low numbers of adults may be present in parts of the Western Sahara and breed on a small-scale in areas that receive rainfall. Scattered adults are likely to appear south of the Atlas Mountains in the Draa and Ziz-Ghris valleys where small-scale breed will cause locust numbers to increase slightly.

Libya

• **SITUATION**

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

• **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 February.

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

During February, breeding continued on the central Red Sea coast where egg-laying, hatching and band formation occurred north of Port Sudan in Khor Arbaat (1946N/3710E), and hopper bands persisted on the southern coast near Adobana (1810N/3816E). In both areas, some hoppers had reached fifth instar by the end of the month. Low numbers of solitary and gregarious adults persisted in the Tokar Delta. In the northeast, fifth instar hopper bands fledged and immature adults formed small groups in Wadi Oko/Diib north of Tomala (2002N/3551E). A 500 ha immature swarm was seen on the 21st and adult groups were laying eggs in a few places. Control operations treated 1,816 ha of which 900 ha were by air in February.

In the Nile Valley, dense groups of egg-laying gregarious adults were present in irrigated wheat schemes near Abu Hamed (1932N/3320E) during the second week of February. Low numbers of scattered mature adults were present near Merowe and Dongola. Control operations treated 2,350 ha of which 2,075 ha were by air.

• **FORECAST**

Breeding will decline on the Red Sea coast except for some limited hatching in Wadi Oko/Diib where small hopper groups may form. Groups and a few small swarms may form in areas of previous breeding on the central and southern coastal plains and move towards the Nile Valley, perhaps supplemented by adult groups and a few swarms from Eritrea. Locust numbers are likely to increase in the Nile Valley where hatching will cause hoppers to form groups and perhaps a few small bands near irrigated areas.



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Eritrea

• SITUATION

During February, egg-laying by adult groups, hatching, hopper band formation and fledging were in progress on the coast south of Massawa between Inghel (1528N/3953E) and Tio (1441N/4057E). New hatching and band formation occurred on the northern coast near Embere (1628N/3856E). Control operations treated 5,380 ha in February.

• FORECAST

Locust numbers are expected to increase further on the Red Sea coast south of Massawa as hatching and hopper band formation continue. New adult groups and small swarms could form in March.

Ethiopia

• SITUATION

During February, isolated mature gregarious adults were seen in a few places 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 and move into the Harar Highlands. Small-scale breeding could occur in areas that receive rainfall.

Djibouti

• SITUATION

In early February, scattered mature gregarious adults were reported in the south near As Ela (1100N/4206E) and the Ethiopian border, and groups were seen in the north on the coast between Tadjourah (1147N/4253E) and Obock (1157N/4317E) at Orobar (1154N/4308E). On the 12th, scattered mature adults were seen on the eastern coast near the border of northern Somalia.

• FORECAST

Small adult groups and perhaps a few small swarms may continue to appear from northwest Somalia and disperse throughout the country. Unless further rains fall, significant breeding is unlikely.

Somalia

• SITUATION

In early February, small late instar hopper groups and bands mixed with scattered immature and mature gregarious adults were present on the northwest

coast between Lughaye (1041N/4356E) and Sillil (1058N/4326E). Hatching was in progress and first instar hopper bands were forming. An adult group was seen laying eggs near Lughaye on the 9th. A few small hopper bands mixed with immature and mature gregarious adults were present on the escarpment north of Burao (0931N/4533E). Ground control teams treated 76 ha using biopesticides on 25-26 February.

• FORECAST

Hopper and adult groups as well as small bands and perhaps a few small swarms are likely to form on the northwest coast in March. There is a risk that the adults may move to the plateau where they could disperse between Boroma and Burao, mature and lay eggs in areas that receive rainfall.

Egypt

• SITUATION

No locusts were seen in February 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), and Abu Simbel (2219N/3138E) areas.

• FORECAST

Scattered adults may be present on the Red Sea coast between Shalatyn and the Sudanese border where limited breeding could occur in areas that remain favourable. No significant developments are likely.

Saudi Arabia

• SITUATION

During February, new hatching occurred on the Red Sea coastal plains between Lith (2008N/4016E) and Jizan (1656N/4233E) mainly during the first half of the month, followed by hatching on the northern coast near Yenbo (2405N/3802E) late in the month. Consequently, hopper groups and bands of all instars mixed with fledglings and groups of immature and mature adults were present south of Lith while a few first and second instar bands were present near Yenbo and Bader (2346N/3847E). Groups of mature adults were also present on the northern coast between Bader and Al Wajh (2615N/3627E), and some of these were laying eggs near Umm Lajj (2501N/3716E). A few mature swarms formed and were reported in the Asir Mountains near Taif (2115N/4021E) and near Al Wajh. Control operations treated 37,283 ha, mainly near Qunfidah, of which 6,650 ha were by air.

• FORECAST

An increasing number of adult groups and small swarms are expected to form on the Red Sea coast as hopper groups and bands fledge during March. There is a moderate to high risk that some of the adult groups and small swarms will remain while others

will move to the spring breeding areas of the interior, mature and lay eggs in areas that receive rainfall, causing locust numbers to increase as hatching and band formation occurs.

Yemen

• SITUATION

During the first half of February, numerous small third to fifth instar hopper bands at densities up to 500 hoppers/m² were present on the northern Red Sea coast between Al Zuhrah (1541N/4300E) and Suq Abs (1600N/4312E). After mid-month, the bands decreased due to control operations. Hoppers that were not treated fledged and formed groups of immature adults that matured during the remainder of the month. Scattered solitairous hoppers and adults were also present in the same area. On the 12th, a small immature swarm reportedly arrived on the coast at Port Al Luhayyah (1542N/4241E). On the 19th, a small mature swarm was seen east of Suq Abs. On the following day, an immature swarm was seen in the highlands south of Taiz (1335N/4401E). Numerous adults were reported in the highlands between Ibb (1358N/4411E) and Sana'a during the second half of the month. Ground teams treated 3,150 ha from 1 to 16 February. On the southern coast, scattered immature and mature solitairous adults were present west of Aden (1250N/4503E) at the end of the month.

• FORECAST

Adults will continue to form groups and small swarms on the northern Red Sea coast. Some of the populations may persist, mature and lay eggs again in areas that remain favourable while others could move north along the coastal plains of the Red Sea or into the highlands and eventually reach the spring breeding areas of the interior. Small groups may form on the southern coastal plains near Aden.

Oman

• SITUATION

During February, isolated immature solitairous adults were seen at one place on the Batinah coast west of Muscat (2337N/5833E). No locusts were seen during surveys carried out on the Musandam Peninsula and near Nizwa (2255N/5731E) in the Dakhiliya region of the northern interior.

• FORECAST

Low numbers of adults may appear in coastal and interior areas of the north and breed on a small scale in areas that receive rainfall.

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 February, no locusts were seen during surveys carried out on the southeastern coastal plains near Jask (2540N/5746E) and in the interior near Ghale Ganj (2731N/5752E) and Bampur (2711N/6028E).

• 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 February.

• 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 February, 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.



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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 (ecllo@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>)

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

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

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)
- **CLCPRO.** 9th Executive Committee meeting and 7th Session of the Commission, Nouakchott, Mauritania (22-26 June)
- **CRC.** 29th Session of the Commission, UAE (November)
- **SWAC.** 29th Session (50th anniversary) of the Commission, Tehran, Iran (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 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.

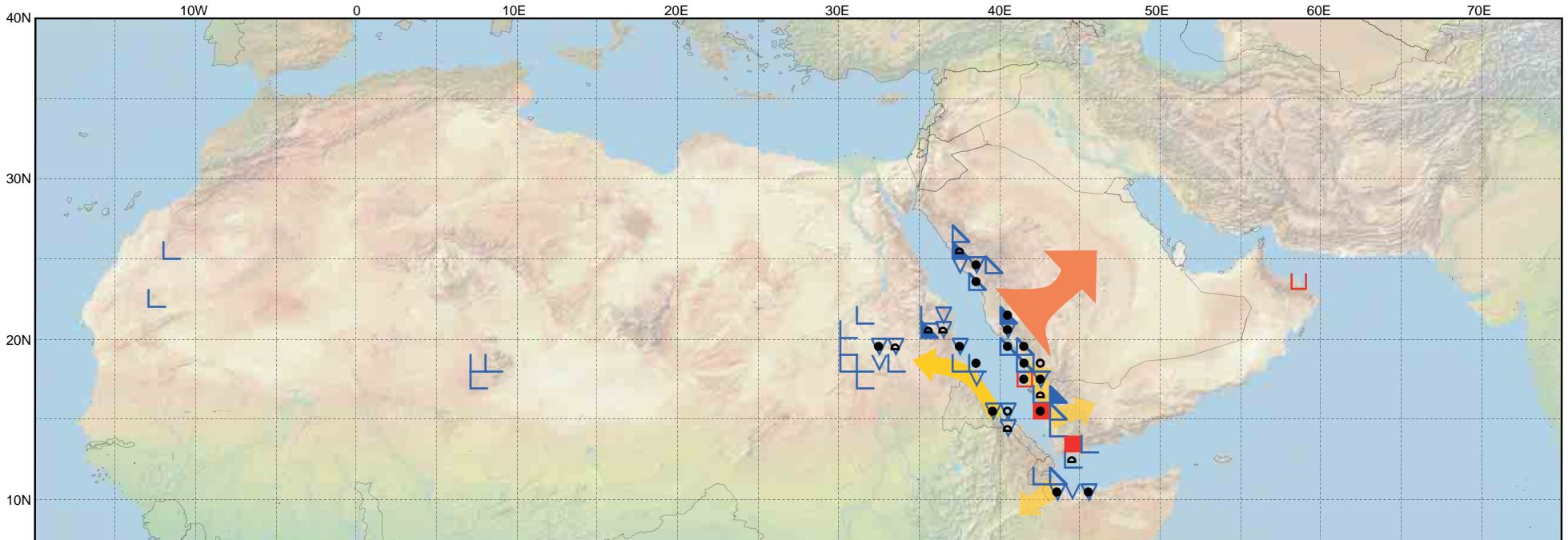


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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.04.14		
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 2014 fév 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)			