

warning level: **CAUTION** (Yemen)

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 419



**General Situation during August 2013
Forecast until mid-October 2013**

(3 Sep 2013)

The Desert Locust situation remained generally calm during August except in Yemen where hopper and adult groups and at least one swarm were reported in the interior. Although breeding conditions remain favourable for the formation of small hopper bands and swarms in Yemen, survey and control operations are not possible due to insecurity. So far, very little breeding has been detected in the summer breeding areas of the Sahel from Mauritania to western Eritrea, and along both sides of the Indo-Pakistan border. Nevertheless, small-scale breeding is expected throughout these areas due to unusually good rains in August. Consequently, locust numbers will increase during the forecast period and, once vegetation starts to dry out, small groups may form. Therefore, regular surveys should be carried out in all countries to monitor the situation closely.

Western Region. The locust situation remained calm in the Region during August. Despite above average rainfall further north than usual in the Sahel, locust numbers remained low in the summer breeding areas of **Mauritania**, **Niger** and **Chad** except in the Air Mountains of Niger where control operations were carried out against groups of hoppers and adults from earlier breeding. The situation is less clear in northern **Mali** where surveys could not be conducted due to persistent insecurity. During the forecast period, small-scale breeding will cause locust numbers to increase and, once vegetation starts to dry out,

locusts could concentrate and perhaps form small groups. In Northwest Africa, limited control operations were carried out against adults that were present near cropping areas in the central Sahara of **Algeria**.

Central Region. The situation remained generally calm in the Region during August. Only low numbers of solitarious adults were reported in the northern and eastern parts of the summer breeding areas in **Sudan**. Unusually good rains that fell during August will allow small-scale breeding to occur in September. Consequently, locust numbers are expected to increase and once vegetation starts to dry out, locusts could concentrate and form small groups in October. A similar situation is expected in the western lowlands of **Eritrea** but surveys have not been undertaken there so far. In **Yemen**, hopper and adult groups and at least one small swarm were reported in the interior as a result of local breeding. The situation is worrisome because breeding is continuing and small hopper bands and swarms are expected to form but survey and control operations are not possible due to insecurity and beekeepers. In **Saudi Arabia**, local breeding was underway on the central Red Sea coast that will cause locust numbers to increase slightly during the forecast period.

Eastern Region. The situation remained calm during August. Despite good monsoon rains, only low numbers of solitarious adults were present in a few places of the summer breeding areas along both sides of the Indo-Pakistan border. During the forecast period, small-scale breeding will cause locust numbers to increase slightly in **India** and **Pakistan**.

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



No. 419

DESERT LOCUST BULLETIN



Weather & Ecological Conditions in August 2013

The ITCZ was unusually far north during August, causing good rains to fall throughout the summer breeding areas in the Sahel of West Africa and Sudan. Good rains also fell in Yemen and along both sides of the Indo-Pakistan border. Unusually heavy rains fell in central Sudan, southeast Iran, and western Pakistan.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) advanced significantly northward over the Sahel in West Africa during August. It was about 1 degree above its climatological mean position, causing rain to fall further north than usual in the summer breeding areas in Mauritania, Mali, Niger and Chad. Rainfall reached as far north as the Ouarane in Mauritania, Tessalit in northern Mali, north of Arlit in Niger, and Fada in northeast Chad. Good rains also fell in northwest Mauritania between Dakhlet Nouadhibou and southern Tiris Zemmour. Light rains fell in southern Algeria between Tamanrasset and the Malian border, in the Ténéré Desert of Niger, and southwest of Tibesti on the Chad/Niger border. Heavy rains and flooding occurred at the end of the month in Bamako, Mali. Less rain fell in northern Tamesna of Mali and adjacent areas of Niger. Ecological conditions were favourable for breeding in Mauritania (Aguilal Faye – Tidjikja - Oualata), Mali (Adrar des Iforas, southern Tamesna), Niger (southeast Air, southern Tamesna, central pasture areas), and Chad (central and northeast), and were improving in southern Algeria along the borders of Mali and Niger. In Northwest Africa, breeding conditions remained favourable near irrigated agricultural schemes in the central Sahara near Adrar, Algeria.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) advanced significantly northward over northern Sudan in the first decade of August, some 3 degrees higher than its position in late July, and nearly reached Wadi Halfa. It was 2.5 degrees above its climatological mean position and was the highest in the last five years. Consequently, southerly winds persisted throughout the entire decade and heavy rain fell across central Sudan, causing widespread flooding and destruction in many

areas including Khartoum. Light rain fell as far north as Abu Hamed and Wadi Diib. Although the ITCZ retreated southwards during the second decade, it remained higher than normal and good rains continued in the summer breeding areas of Sudan and western Eritrea. Vegetation was becoming green throughout North Darfur and Kordofan, Wadi Milk and Muqaddam, between the Nile River, Kassala and Derudeb, and in the western lowlands of Eritrea. In Yemen, good rains fell in the summer breeding areas of the interior, extending to southern Oman. Vegetation was becoming green in several wadis in Shabwah, Hadhramaut, Minwakh and Hazar areas. Good rains also fell on the Red Sea coast and parts of the southern coast in Yemen as well as in a few places of southern, central and northern Oman, on the plateau and escarpment in northwest Somalia, and in adjacent areas of eastern Ethiopia.

In the **Eastern Region**, good rains associated with the monsoon continued to fall in the summer breeding areas along both sides of the Indo-Pakistan border during the first two decades of August. Above average rains continued for the second month in a row in Rajasthan, India. Good rains also fell in adjacent areas of Pakistan in Cholistan and Tharparkar deserts. Even though rains did not fall in the last decade, ecological conditions remained favourable for breeding in both countries. In southeast Iran and western Pakistan, unusually heavy rains fell during the first decade of August.



Area Treated

Algeria	10 ha (August)
Niger	695 ha (August)
Yemen	120 ha (August)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During August, there was an increase in isolated mature solitarious adults reported in the southeast, centre and southwest of the country. Low numbers of first to third instar hoppers were present between Aioun El Atrous (1639N/0936W) and Nema (1636N/0715W), and between Moudjeria (1752N/1219W) and Aguilal Faye (1827N/1444W) as a result of egg-laying in July.

• **FORECAST**

Small-scale breeding will cause locust numbers to increase in the south and centre. As vegetation dries out, some locusts could concentrate and perhaps form small groups while others will move towards the west and northwest.

Mali

• **SITUATION**

During August, no locusts were seen by surveys carried out in central and western areas between Niore (1512N/0935W) and Hombori (1516N/0140W).

• **FORECAST**

Small-scale breeding will cause locust numbers to increase in the Adrar des Iforas, Tilemsi Valley and Tamesna. By the end of the forecast period, locusts could concentrate and perhaps form small groups as vegetation dries out.

Niger

• **SITUATION**

During August, solitary hoppers and adults mixed with a few late instar hopper groups persisted in the Air Mountains southeast of Timia (1809N/0846E). By mid-month, some of the immature adults formed a few groups at densities up to 2,500 adults/ha. During the second half of the month, isolated mature solitary adults appeared in the Tamesna near Tassara (1650N/0550E) and in the west near Filingué (1421N/0319E). No locusts were seen in central Tamesna near In Abangharit (1754N/0559E) or in the southern Air Mountains. Ground teams treated 695 ha during August.

• **FORECAST**

Small-scale breeding will cause locust numbers to increase in Tamesna and in the pasture areas between Tahoua and Tanout, and perhaps near Filingué. Small infestations may persist in the southeast Air. By the end of the forecast period, locusts could concentrate and perhaps form small groups as vegetation dries out.

Chad

• **SITUATION**

During August, isolated immature and mature solitary adults were present in the centre and northeast between Salal (1448N/1712E) and Fada (1714N/2132E).

• **FORECAST**

Small-scale breeding will cause locust numbers to increase in the northern parts of Kanem and Batha, in Biltine and in the northeast.

Senegal

• **SITUATION**

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

• **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 August, immature adults persisted near irrigated crops in the Adrar (2753N/0017W) area of the central Sahara, and ground teams treated 10 ha. No locusts were seen in the northwest near Bechar (3135N/0217W) or in the south between Tamanrasset (2250N/0528E), In Guezzam (1937N/0552E) and the Niger border.

• **FORECAST**

Small-scale breeding may cause locust numbers to increase in the extreme south along the borders of Mali and Niger. Low numbers of locusts are likely to persist in the Adrar area.

Morocco

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Libya

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Tunisia

• **SITUATION**

No reports were received during August.

• **FORECAST**

No significant developments are likely.



No. 419



No. 419

DESERT LOCUST BULLETIN

CENTRAL REGION

Sudan

• SITUATION

During August, the situation remained calm and only scattered mature solitary adults were present in the eastern part of the summer breeding area between Kassala (1527N/3623E) and Sinkat (1855N/3648E). A few immature and mature solitary adults persisted in the Nile Valley near Ed Damer (1734N/3358E), Abu Hamed (1932N/3320E), Merowe (1830N/3149E) and Dongola (1910N/3027E). Small-scale breeding continued in the Libyan Desert near Egypt to the southeast of Selima Oasis (2122N/2119E). No locusts were seen in White Nile and North Kordofan states.

• FORECAST

Small-scale breeding will cause locust numbers to increase in North Darfur, North Kordofan, White Nile, Khartoum and Kassala states. By the end of the forecast period, locusts could concentrate and form small groups as vegetation dries out.

Eritrea

• SITUATION

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

• FORECAST

Small-scale breeding is likely to be in progress and will continue, causing locust numbers to increase in the western lowlands north of Teseney. Surveys are recommended.

Ethiopia

• SITUATION

During August, no locusts were seen during a survey in the Tigray region of the northwest near Akwi (1350N/3653E) and the Sudanese border.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

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

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

During August, no locusts were seen during a survey on the plateau and escarpment between Hargeisa (0931N/4402E), Berbera (1028N/4502E) and Burao (0931N/4533E).

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

During August, no locusts were seen during surveys carried out on the Red Sea coast between Shalatyn (2308N/3535E) and Halaib (2213N/3638E), and near Lake Nasser in the Allaqi area, Tushka (2247N/3126E), and Aswan (2405N/3256E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During August, low numbers of mature solitary adults were present and breeding on the central Red Sea coast near Lith (2008N/4016E). No locusts were seen in the Asir Mountains near Abha (1813N/4230E).

• FORECAST

Small-scale breeding will cause locust numbers to increase slightly on the central Red Sea coastal plains near Lith.

Yemen

• SITUATION

No surveys were carried out during August. Nevertheless, there were reports of late instar hopper and mature gregarious adult groups near the Saudi Arabian border southeast of Al Buqa (1720N/4436E) where breeding occurred after immature swarms arrived in mid-June and matured. Control was undertaken on a few farms and 120 ha were treated. On the 22nd, a very small mature swarm was seen copulating on the western edge of Wadi Hadhramaut in the Al Wahad (1548N/4752E) area. Numerous hoppers and adults, including copulating adults, were reported between Ataq (1435N/4649E) and Bayhan (1452N/4545E).

• FORECAST

Locust numbers will continue to increase in Al Jawf, Marib, Shabwah and Hadhramaut, including the Thamud plateau, where small groups of hoppers and adults and a few bands and swarms are likely to form.

Oman

• SITUATION

During August, an individual immature solitary adult was seen on the Batinah coast at Al Faleij

(2334N/5800E). No locusts were present in the northern interior near Adam (2223N/5731E).

- **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 along the southeast coast near Jask (2540N/5746E) during the first half of August.

- **FORECAST**

No significant developments are likely.

Pakistan

- **SITUATION**

During the first two decades of August, no surveys were carried out. During the last decade, isolated mature solitary adults were seen in the Cholistan Desert where they persisted along the Indian border southeast of Rahimyar Khan (2822N/7020E). Low numbers of mature adults were also present west of Karachi near Uthal (2548N/6637E). No locusts were seen in the Tharparkar Desert.

- **Forecast**

Small-scale breeding will cause locust numbers to increase in Cholistan and Uthal, and to a lesser extent in Tharparkar.

India

- **SITUATION**

During August, isolated solitary adults persisted in Rajasthan where they were maturing along the Pakistan border west of Bikaner (2801N/7322E) and west of Jaisalmer (2652N/7055E).

- **FORECAST**

Small-scale breeding will cause locust numbers to increase in Rajasthan and Gujarat.

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.

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)
- **MODIS.** Daily rainfall imagery in real time (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)
- **Greenness maps.** Dynamic maps of green vegetation evolution every decade (http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html)



No. 419

DESERT LOCUST BULLETIN

page 5 of 8



No. 419

DESERT LOCUST BULLETIN



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

- **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) are:

- **Current threats.** Information section

eLocust3. A demonstration version is available for viewing and downloading at Slideshare in:

English: <http://www.slideshare.net/FAOLocust/elocust3-apreviewenglishversion>

French: <http://www.slideshare.net/FAOLocust/elocust3-a-preview-french-version>

Arabic: <http://www.slideshare.net/FAOLocust/elocust3-apreview-arabicversion>

Greenness maps. Dynamic maps of green vegetation evolution every decade can now be downloaded from Columbia University's IRI (USA) website: http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html

2013 events. The following activities are scheduled or planned:

- **CLCPRO.** Health and Environmental Standards regional workshop, 2-6 September, Dakar (Senegal)
- **CRC.** 8th sub-regional training course on Desert Locust control operations, 8-12 September, Oman
- **CLCPRO.** Regional training on monitoring/evaluation system of Desert Locust activities, 16-20 September, Niamey (Niger)
- **SWAC.** Desert Locust Contingency Planning regional workshop, 13-15 October, Tehran (Iran)

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.



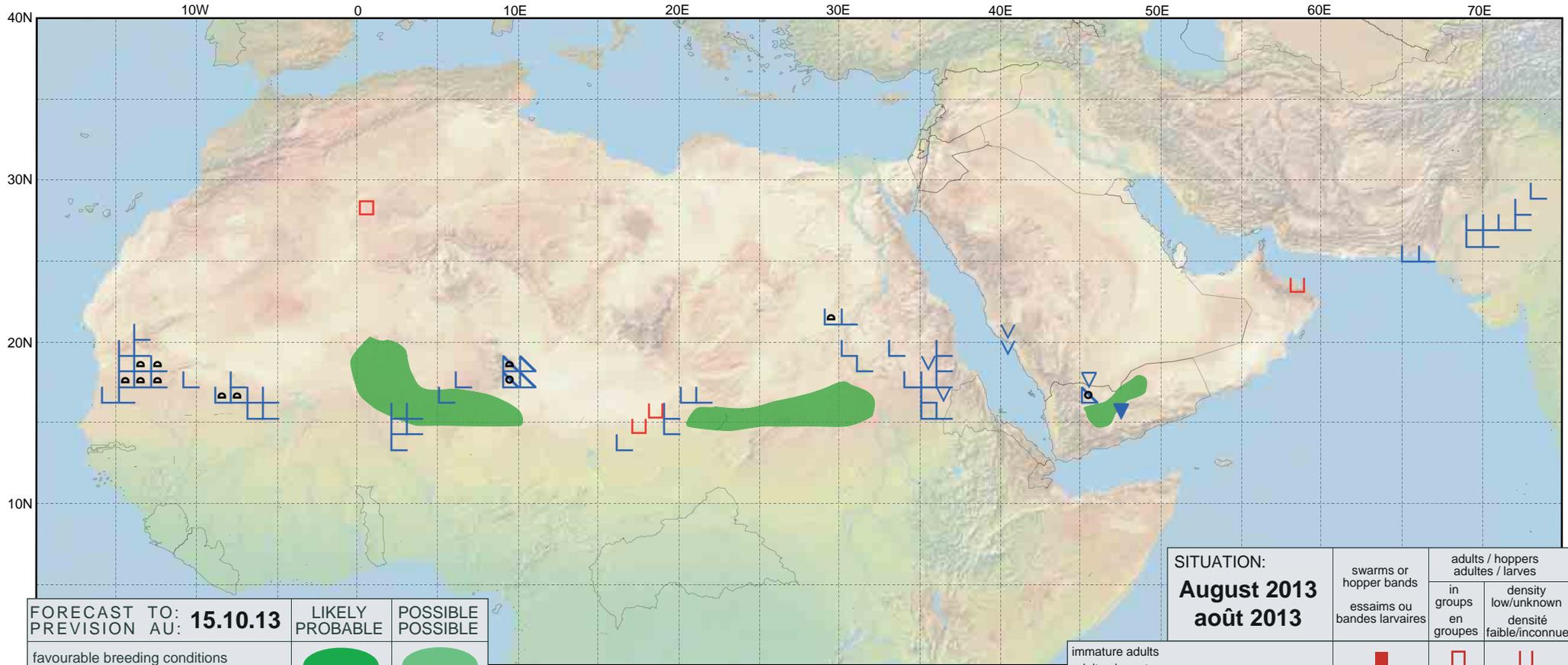
No. 419



Desert Locust Summary

Criquet pèlerin - Situation résumée

419



FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.10.13		
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: August 2013 août 2013	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)		