

warning level: **CAUTION**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 461



General Situation during February 2017
Forecast until mid-April 2017

(2.3.2017)

The Desert Locust situation improved during February. Intensive control operations reduced infestations along the Red Sea coast in Saudi Arabia and locusts declined on the coast of Sudan as vegetation dried out. In Northwest Africa, limited control was undertaken against a few residual adult groups in northwest Mauritania. During the forecast period, adults will shift from winter to spring breeding areas. This may be most noticeable in Saudi Arabia where adult groups and perhaps a few small swarms could form on the coast and move inland. Small-scale breeding is likely to occur in northern Mauritania, along the southern side of the Atlas Mountains in Morocco and Algeria, in the Nile Valley of northern Sudan and in southeast Iran but locust numbers are expected to remain below threatening levels in all areas.

Western Region. The situation remained generally calm in the region during February. Limited control operations (227 ha) were carried out against a few remaining adult groups in northwest Mauritania while scattered adults persisted in the north. Small-scale breeding took place in parts of the Western Sahara in southern Morocco but locust numbers remained low. During the forecast period, small-scale breeding is likely to occur in northern Mauritania and along the southern side of the Atlas Mountains in Morocco and Algeria, causing locust numbers to increase slightly. In the northern Sahel, isolated solitarious adults were seen in southeast Niger.

Central Region. Ground and aerial control operations (4,243 ha) continued in Saudi Arabia against hopper groups, bands and a few adult groups on the central and southern Red Sea coast. By the end of the month, locust infestations had declined. As vegetation dried out, locust numbers declined on the Red Sea coast in Sudan where limited control (85 ha) was undertaken against groups of adults. The situation remained unclear in Yemen where surveys were not possible in winter breeding areas. During the forecast period, any remaining adults that escaped detection and control on the Red Sea coast in Saudi Arabia may form a few adult groups or perhaps a small swarm or two that are likely to move inland and breed during the spring in areas of recent rainfall. Limited breeding may occur near crops in the Nile Valley of northern Sudan. In the Horn of Africa, a few adult groups from January breeding may form on the northwest coast of Somalia and move into adjacent areas of eastern Ethiopia. Elsewhere, no locusts were reported in the region.

Eastern Region. No locusts were reported and the situation remained calm in the region during February. Small-scale breeding is likely to occur in southeast Iran and perhaps southwest Pakistan in areas where good rains fell during January and February. Consequently, locust numbers will increase slightly but remain below threatening levels.

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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Area Treated

Mauritania	227 ha (February)
Saudi Arabia	4,243 ha (February)
Somalia	85 ha (January)
Sudan	85 ha (February)



Weather & Ecological Conditions in February 2017

Breeding conditions remained favourable on the Red Sea coast of Saudi Arabia but dried out on the coasts of Sudan and Eritrea. Good rains fell in parts of the spring breeding areas in the interior of Saudi Arabia, northern Oman and southeast Iran.

In the **Western Region**, no significant rain fell during February. Nevertheless, ecological conditions remained favourable for locust survival and breeding in southwest Adrar and northwest Tiris Zemmour of Mauritania. Vegetation began to dry out in parts of the adjacent areas of Western Sahara and southern Morocco. Green vegetation persisted along the southern side of the Atlas Mountains in the Draa, Ziz and Ghris valleys of Morocco. Ecological conditions improved in parts of the northern and central Sahara in Algeria. In the northern Sahel, small areas remained green in some wadis of the Adrar des Iforas in northern Mali and in the Air Mountains of northern Niger.

In the **Central Region**, very little rain fell in winter breeding areas along both sides of the Red Sea during February. Consequently, vegetation began drying out especially on the coast of Egypt, Sudan and Eritrea. In Saudi Arabia, breeding conditions remained favourable on the coast between Lith and Jizan, and light rains may have fallen at times during the second decade. Good rains fell in the spring breeding areas of the interior between Hail and Tabuk. In Yemen, breeding conditions were probably still favourable in some areas where vegetation remained green, and light rain fell at times during the second decade on the northern coast. In Oman, good rains fell in northern coastal and interior areas during the second and third decades of February that should allow breeding conditions to improve in some areas. In the Horn of Africa, very little rain except in parts of the Rift Valley in Ethiopia where good rains fell in Afar region.

In the **Eastern Region**, good rains fell in spring breeding areas along the southeastern coast of Iran between Jask and Bandar Abbas, extending inland to the Jaz Murian Basin during the first decade of



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During the first decade of February, *transiens* adults formed a few small immature and mature groups at densities up to 4,500 adults/ha at five places in Dakhlet Nouadhibou and at one location in southwest Adrar south of Oujeft. Ground teams treated 227 ha. During the remainder of the month, isolated immature and mature solitarious adults persisted between Akjoujt (1945N/1421W) and Oujeft (2003N/1301W), north of Zouerate and near Bir Moghreïn (2510N/1135W). A few solitarious hoppers were seen near Bir Moghreïn.

• FORECAST

Low numbers of adults are expected to persist and mature between Zouerate and Bir Moghreïn and in southwest Adrar. Small-scale breeding is likely to be in progress and will continue during the forecast period in some areas, causing a slight increase in locust numbers. Once vegetation dries out, there is an increased risk of a few small groups forming.

Mali

• SITUATION

No locust activity was reported during February.

• FORECAST

Low numbers of adults may be present and will persist in parts of the Adrar des Iforas.

Niger

• SITUATION

During February, isolated mature solitarious adults were seen at two places along the eastern edge of Termit Massif (1602N/1120E) in the southeast.

• FORECAST

Low numbers of adults may be present in the Air Mountains.

Chad

- SITUATION

No locust activity was reported during February.

- FORECAST

No significant developments are likely.

Senegal

- SITUATION

No locust activity was reported 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 in the northwest near Bechar (3135N/0217W), in the west near Tindouf (2741N/0811W), in the central Sahara near Adrar (2753N/0017W) and in the southern Sahara near Tamanrasset (2250N/0528E).

- FORECAST

Low numbers of adults are likely to appear south of the Atlas Mountains between Tindouf, Adrar and Illizi and breed on a small scale with hatching during the forecast period.

Morocco

- SITUATION

During February, isolated solitary adults were maturing and copulating in the Western Sahara between Guelta Zemmur (2508N/1222W) and Oum Dreyga (2406N/1316W). Low numbers of fifth instar solitary hoppers were seen, indicating that undetected egg-laying and hatching occurred in January. No locusts were seen in the extreme southwest near Bir Gandouz and the Mauritanian border.

- FORECAST

Small-scale breeding will cause locust numbers to increase in the Western Sahara between Guelta Zemmur and Oum Dreyga. Small-scale breeding will also commence along the southern side of the Atlas Mountains.

Libya

- SITUATION

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

- FORECAST

Low numbers of adults may appear in the southwest and breed on a small scale if rainfall occurs.

Tunisia

- SITUATION

No locust activity was reported during February.

- FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

- SITUATION

During February, scattered immature and mature solitary adults were present on the Red Sea coast in the Tokar Delta (1827N/3741E) and near Aiterba (1753N/3819E) in the first three weeks of the month; no locusts were seen thereafter. Ground teams treated 85 ha including an immature adult group near Aiterba. In the northeast, scattered immature solitary adults were present at one place northwest of Tomala (2002N/3551E). In the Nile Valley, mature solitary adults were present at a few places near Abu Hamed (1932N/3320E).

- FORECAST

Scattered adults may appear in the Nile Valley between Atbara and Dongola where small-scale breeding could occur near cropping areas.

Eritrea

- SITUATION

During the first decade of February, no locusts were seen on the central Red Sea coast near the Akbanazouf Plains (1555N/3910E) and on the northern coast between Mehimet (1723N/3833E) and the Sudanese border.

- FORECAST

No significant developments are likely.

Ethiopia

- SITUATION

No reports were received in February.

- FORECAST

Low numbers of adults and perhaps a few small groups may appear along the railway area between Dire Dawa and Ayasha, and in the Somali region near Jijiga.

Djibouti

- SITUATION

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



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• FORECAST

No significant developments are likely.

Somalia

• SITUATION

A late report indicated that a few small late instar hopper groups and bands were present on the northwest coast between Bulhar (1023N/4425E) and Lughaye (1041N/4356E) during January. Fledging occurred at one location and at least one immature adult group formed. Ground teams treated 85 ha using Green Muscle™.

In February, no locusts were seen during surveys carried out in Puntland between Gardo (0930N/4905E) and Garowe (0824N/4829E).

• FORECAST

As vegetation dries out, a few adult groups may form on the northwest coast and move into the escarpment and towards the plateau.

Egypt

• SITUATION

During February, no locusts were seen during surveys on the Red Sea coast between the Sudanese border and Berenice (2359N/3524E), in subcoastal areas near El Sheikh El Shazly (2412N/3438E), and near Lake Nasser in the Abu Simbel (2219N/3138E) and Tushka (2247N/3126E) areas.

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During February, mainly late instar hopper groups persisted on the Red Sea coast at a few places near Lith (2008N/4016E), Qunfidah (1909N/4107E) and north of Jizan (1656N/4233E) in the first half of the month while fifth instar hopper bands were present north of Jizan until the 19th. Fledging was underway and immature adults were present, some of which formed immature groups in a few areas while others were maturing. Control operations continued until 10 February, treating 4,243 ha of which 500 ha were by air. No locusts were seen on the northern coast between Jeddah (2130N/3910E) and Rabigh (2247N/3901E).

• FORECAST

A limited number of adult groups and perhaps a few small swarms could form on the Red Sea coast between Lith and Jizan and move north and inland to the spring breeding areas between Dawasir, Gassim and Tabuk and lay eggs.

Yemen

• SITUATION

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

• FORECAST

Small-scale breeding may be in progress on the Red Sea and southern coastal plains near Aden.

Oman

• SITUATION

During February, no locusts were seen during surveys carried out on the Musandam Peninsula, the Batinah coast, in the northern interior near Buraimi (2415N/5547E), Nizwa (2255N/5731E) and the Wahiba Sands and in the south between Thumrait (1736N/5401E) and the Yemen border.

• FORECAST

Low numbers of adults are likely to appear in areas of recent rainfall in coastal and interior areas of the north and breed on a small scale.

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

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

During February, no locusts were seen on the southeast coastal plains near Jask (2540N/5746E) and Chabahar (2517N/6036E).

• FORECAST

Low numbers of adults are expected to appear in areas of recent rainfall in the Jaz Murian Basin and on the southeastern coastal plains, and breed on a small scale, causing a slight increase in locust numbers.

Pakistan

• SITUATION

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

• FORECAST

Low numbers of adults are likely to appear in coastal areas of Baluchistan and breed on a small scale in areas that receive rainfall.

India

• SITUATION

No locusts were seen during February 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 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.

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)
- **eLocust3 training videos.** A set of 15 introductory training videos are available on YouTube: <https://www.youtube.com/playlist?list=PLf7Fc-oGpFHEdv1jAPaF02TCfpcnYoFQT>
- **RAMSESV4 training videos.** A set of basic training videos are available on YouTube: <https://www.youtube.com/playlist?list=PLf7Fc-oGpFHGyzXqE22j8-mPDhhGNq5So>
- **RAMSESV4 and eLocust3 updates.** Updates can be downloaded from <https://sites.google.com/site/rv4elocust3updates/home>
- **FAOLOCUST 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:

- **Eritrea, Saudi Arabia, Sudan and Yemen outbreaks.** Archives – Outbreaks 2016
- **WMO/FAO Weather and Desert Locusts booklet.** Publications – Documents

2017 events. The following activities are scheduled or planned:

- **CLCPRO.** Desert Locust Information Officer workshop, Oran, Algeria (19–23 March)
- **CLCPRO/CRC.** Interregional training on Pesticide Stock Management System (PSMS) database, Agadir, Morocco (27–31 March)
- **CRC/SWAC.** Desert Locust Information Officer workshop, Egypt (7–11 May)



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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 AREAS

- July - September/October
(Sahel of West Africa, Sudan, western Eritrea; Indo-Pakistan border)

WINTER RAINS AND BREEDING AREAS

- October - January/February
(Red Sea and Gulf of Aden coasts; northwest Mauritania, Western Sahara)

SPRING RAINS AND BREEDING AREAS

- February - June/July
(Northwest Africa, Arabian Peninsula interior, Somali plateau, Iran/Pakistan border)

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

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

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.

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.

WARNING LEVELS

GREEN

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

YELLOW

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

ORANGE

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

RED

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

REGIONS

WESTERN

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

CENTRAL

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

EASTERN

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



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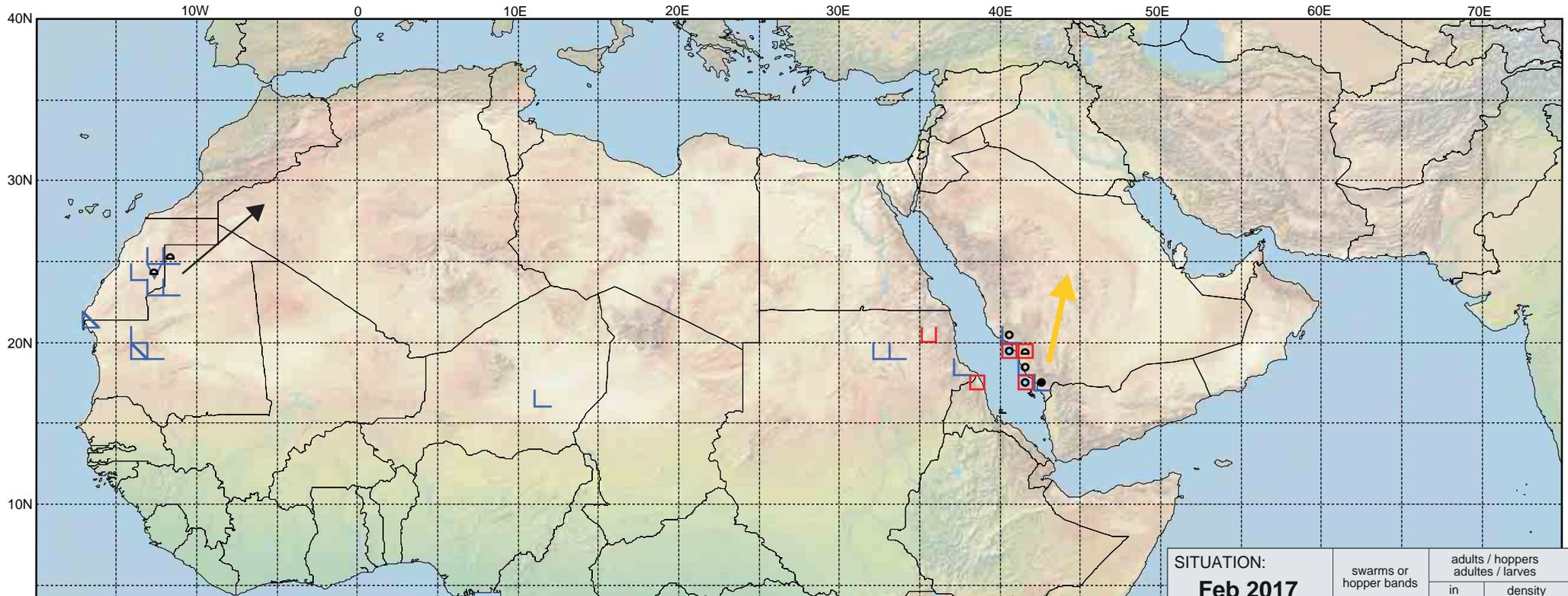
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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	15.4.17	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: Feb 2017 fév 2017	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)			