

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 358

(1 August 2008)



## General Situation during July 2008 Forecast until mid-September 2008

The Desert Locust situation remained calm during July. Low numbers of solitary adults were reported in southern Mauritania, Niger, northern Somalia, Yemen, Pakistan and India. Scattered adults are also likely to be present in northern Mali and Niger, eastern Chad, western Sudan and in eastern Ethiopia but surveys could not be conducted in these areas due to insecurity. Higher numbers of locusts were present in the central Sahara in Algeria where ground teams treated adults that were forming small groups and laying eggs. Breeding conditions improved in the northern Sahel in West Africa and Sudan, and along both sides of the Indo-Pakistan border. Consequently, small-scale breeding will occur in these areas during August and September and cause locust numbers to increase slightly. No significant developments are expected.

**Western Region.** The locust situation continued to be calm during July. Seasonal rains fell sporadically in the summer breeding areas where low numbers of adults were reported or are thought to be present in southern Mauritania, the Adrar des Iforas in northern Mali, the Tamesna Plains in Mali and Niger, the southern Air Mountains and Tenere Desert in Niger, and in northeast Chad. Solitary adults persisted along the edges of irrigated areas in the central Sahara in Algeria where small-scale breeding may occur and low numbers of locusts could move towards

the border of Mali and Niger. Only limited surveys are likely to be possible this summer in some of these areas due to insecurity.

**Central Region.** The situation remained calm during July. There were no further signs of previously reported locust populations in Ethiopia except for one swarm that was seen in northern Somalia flying over Hargeisa on 1 July. Nevertheless, there remains a moderate risk that some locusts may be present in the Ogaden but surveys could not be carried out due to insecurity. A few adults were seen on the Red Sea coast in Yemen, and low numbers of adults are probably present in the summer breeding areas in the interior of Sudan and in western Eritrea. As ecological conditions improved in these areas from rains that fell in July, small-scale breeding is expected to occur during August that will cause locust numbers to increase slightly. No locusts were seen during surveys carried out in Egypt, Oman and Saudi Arabia.

**Eastern Region.** Monsoon rains fell periodically during July in the summer breeding areas along both sides of the Indo-Pakistan border. Nevertheless, ecological conditions were favourable for breeding mainly in Rajasthan, India and in adjacent border areas in the Cholistan Desert in Pakistan. Small-scale breeding was in progress in Pakistan and low numbers of adults were present in India. Breeding is expected to continue during the forecast period, causing a slight increase in locust numbers.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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### Weather & Ecological Conditions in July 2008

**Seasonal rains fell sporadically during July in the summer breeding areas in the Sahel in West Africa and Sudan, in western Eritrea and along the Indo/Pakistan border. Nevertheless, enough rain fell for ecological conditions to become favourable for breeding in some areas.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated between 15N and 20N during July, with occasional surges northwards to southern Algeria and northwest Mali. Consequently, low to moderate rains fell in parts of the summer breeding areas in the northern Sahel in Mauritania, Mali and Niger while less rain fell in Chad. This caused ecological conditions to improve for breeding, mainly in southeastern Mauritania (the two Hodhs), in central and northern Mali (Araouane, Adrar des Iforas, Tamesna), and in northern Niger (southern Tamesna, southern Air Mountains). Good rains fell at mid-month in northwestern Mali (Kidal to Taoudenni), in northern Chad (Tibesti, Ennedi) and during the last half of July in western Mauritania, reaching nearly Zouerate and the southeastern corner of the Western Sahara, and light rains fell in the southern Tenere Desert in Niger. More rains are probably needed in all of these areas before breeding can occur. In Northwest Africa, ecological conditions remained dry except for parts of the Ziz and Ghris valleys in southeastern Morocco near the Algerian border where small patches of green vegetation were present.

In the **Central Region**, seasonal rains fell sporadically during July in the summer breeding areas of the interior of Sudan and in western Eritrea. At mid-month, light to moderate rains fell as far north as Abu Uruq in North Kordofan but rainfall remained mostly south of 15N. Consequently, ecological conditions are likely to have improved sufficiently in some areas of Darfur and Kordofan and perhaps in the western lowlands of Eritrea to allow breeding. Light to moderate rain fell at times on the Red Sea coast in Eritrea between Shieb and Gheleb-Sagla, near Jizan in Saudi Arabia, and on the Tihama in Yemen. Moderate rains were reported on the southern coast of Yemen near Zinjibar. Ecological conditions were

favourable for breeding in eastern Ethiopia between Jijiga and the border of northern Somalia.

In the **Eastern Region**, monsoon rains fell during the first half of July in the summer breeding areas along both sides of the Indo-Pakistan border. Rains were heaviest in central Rajasthan, India between Barmer (75 mm), Jodhpur (63 mm) and Churu (75 mm). Good rains also fell along the border near the Rajasthan Canal and in nearby Cholistan Desert in Pakistan. Consequently, breeding conditions were favourable in these areas. Very little rain fell during the second half of the month although good rains fell at the end of July in the Tharparkar Desert in Pakistan that should allow breeding conditions to improve.



### Area Treated

Algeria 54 ha (July)



### Desert Locust Situation and Forecast

( see also the summary on page 1 )

#### WESTERN REGION

##### **Mauritania**

###### • SITUATION

During July, a few isolated mature solitarious adults were present in the south and southeast from east of Nema (1636N/0715W) in Hodh El Charghi to Tamchekket (1714N/1040W) in Hodh El Gharbi.

###### • FORECAST

*Small-scale breeding will cause locust numbers to increase slightly in the south. Breeding could occur in central areas (Tidjikja) if more rains fall during the forecast period.*

##### **Mali**

###### • SITUATION

No reports were received during July.

###### • FORECAST

*Scattered locusts are likely to be present in parts of the Adrar des Iforas. Small-scale breeding will occur in areas that receive rainfall.*

##### **Niger**

###### • SITUATION

During July, an isolated mature solitarious adult was seen about 50 km northwest of Agadez (1700N/0756E) on the 21<sup>st</sup>.

###### • FORECAST

*Low numbers of locusts are likely to be present in the southern parts of the Air Mountains, Tenere and*

*Tamesna* as well as in the northern Sahelian zone. Small-scale breeding will occur in areas of recent rainfall, causing locust numbers to increase slightly.

#### **Chad**

- **SITUATION**

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

- **FORECAST**

*Low numbers of locusts are likely to be present in the east and northeast between Abeche and Fada where they will breed on a small scale in areas of recent rainfall.*

#### **Senegal**

- **SITUATION**

No locusts were reported in July.

- **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 July, scattered mature solitary adults at densities of 800-1,500 adults/ha persisted in parts of the central Sahara where they were concentrated along the edges of irrigated areas near Adrar (2753N/0017W). Some of the adults formed groups and were seen laying eggs. Ground teams treated 54 ha during the month.

- **FORECAST**

*Limited breeding could continue in parts of the central Sahara near Adrar and perhaps near Djanet and Tamanrasset. Locust numbers are likely to increase south of Tamanrasset as adults move from the central to the southern Sahara where they will breed on a small scale if rainfall occurs.*

#### **Morocco**

- **SITUATION**

No locusts were seen during July south of the Atlas Mountains near Erfoud (3128N/0410W) and the Algerian border.

- **FORECAST**

*No significant developments are likely.*

#### **Libyan Arab Jamahiriya**

- **SITUATION**

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

- **FORECAST**

*No significant developments are likely.*

#### **Tunisia**

- **SITUATION**

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

- **FORECAST**

*No significant developments are likely.*

### **CENTRAL REGION**

#### **Sudan**

- **SITUATION**

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

- **Forecast**

*Low numbers of locusts are likely to be present and breeding on a small scale in crops in the Nile Valley in the north. Scattered adults are likely to be present in Darfur, Kordofan, White Nile and Kassala states where small-scale breeding will occur in areas of recent rainfall, causing locust numbers to increase slightly.*

#### **Eritrea**

- **SITUATION**

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

- **FORECAST**

*Low numbers of adults are likely to be present and breeding on a small scale in the northern part of the western lowlands. Small-scale breeding is expected to continue during the forecast period causing locust numbers to increase slightly.*

#### **Ethiopia**

- **SITUATION**

No locusts were seen during surveys carried out in July between Jijiga (0922N/4250E) and the border of northern Somalia, and from Dire Dawa (0935N/4150E) to Djibouti. No locusts were reported from the southeastern part of the Somali region.

- **FORECAST**

*Low numbers of locusts may be present in the Ogaden but breeding will be limited unless further rains fall.*



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### Djibouti

- SITUATION

A late report indicated that no locusts were reported during June. No surveys were carried out and no locusts were reported during July.

- FORECAST

*No significant developments are likely.*

### Somalia

- SITUATION

On 1 July, a swarm was reportedly seen at Hargeisa (0931N/4402E) coming from Ethiopia and flying from the southwest to the northeast. There were no further details or subsequent reports. A few solitarious immature adults were seen in the Ruqi Valley (0958N/4325E) during surveys carried out on 5-11 July.

- FORECAST

*Scattered adults are likely to persist on the plateau between Boroma and Hargeisa and breed on a small-scale if rainfall occurs.*

### Egypt

- SITUATION

During July, no locusts were seen during surveys carried out near Aswan (2405N/3256E) and south of Abu Simbel (2219N/3138E) near the Sudanese border.

- FORECAST

*No significant developments are likely.*

### Saudi Arabia

- SITUATION

No locusts were seen during surveys carried out on the Red Sea coast and in the interior during July.

- FORECAST

*No significant developments are likely.*

### Yemen

- SITUATION

During the first week of July, isolated immature and mature solitarious adults were seen on the central Tihama between Zabid (1410N/4318E) and Bajil (1458N/4314E). No locusts were seen elsewhere on the Red Sea coast or along the coastal plains of Aden up to 5 July.

- FORECAST

*Small-scale breeding could occur in areas of recent rainfall on the central Red Sea coast, causing locust numbers to increase slightly.*

### Oman

- SITUATION

No locusts were seen during surveys carried out in the north during June and July.

- 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 reports received.

- FORECAST

*No significant developments are likely.*

#### Pakistan

- SITUATION

During the second half of June, small-scale breeding continued in Cholistan southeast of Bahawalpur (2924N/7147E) where scattered third to sixth solitarious instar hoppers were present near the Indian border. Isolated mature solitarious adults were also reported. No locusts were seen during surveys in the Tharparkar Desert or in Baluchistan near Khuzdar (2749N/6639E).

No locust reports were received during July.

- FORECAST

*Small-scale breeding will continue in the Cholistan Desert near the Indian border and is likely to commence in areas of recent rainfall in the Tharparkar Desert, causing locust numbers to increase slightly.*

#### India

- SITUATION

During July, isolated immature solitarious adults at densities less than 60 adults/ha were present in Rajasthan between Jodhpur (2618N/7308E), Jaisalmer (2652N/7055E) and Bikaner (2801N/7322E). No locusts were seen elsewhere in Rajasthan or Gujarat.

- FORECAST

*Small-scale breeding in Rajasthan will cause locust numbers to increase slightly during the forecast period.*

## Afghanistan

### • SITUATION

No reports received.

### • FORECAST

*No significant developments are likely.*



## Announcements

**Locust reporting.** During recession periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow) and threat (orange) periods, locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the last 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.

**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.

**Climate change.** Potential impacts of climate change on Desert Locust are under discussion. More details can be found on Locust Watch in the Activities section (<http://www.fao.org/ag/locusts/en/activ/index.html>).

**Google group.** FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding data management and analysis, GIS, eLocust2 and satellite imagery. Interested information officers should contact DLIS (ecl@fao.org) for details.

**MODIS imagery.** Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can

be downloaded in different formats suitable for GIS at: [http://iridl.ldeo.columbia.edu/maproom/Food\\_Security/Locusts/index.html](http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/index.html). Comments and questions can be addressed to Pietro Ceccato (pceccato@iri.columbia.edu).

**New information on Locust Watch.** Recent additions to the web site are:

- **Locust risk.** The current risk map was updated (home page)
- **Master Trainers Manual.** The sessions and overheads for eLocust2 were updated (Publications – Documents section)

Links to the above information can be found in the *Latest Additions* section on Locust Watch.

**2008 events.** The following activities are scheduled:

- **CLCPRO.** 5<sup>th</sup> Executive Committee meeting, Ouagadougou (20-22 October, to be confirmed)
- **EMPRES/WR.** 7<sup>th</sup> Liaison Officers meeting, Niamey (24-28 November, to be confirmed)
- **EMPRES/WR.** 4<sup>th</sup> Steering Committee meeting, Niamey (1-3 December, to be confirmed)
- **SWAC.** 26<sup>th</sup> Session, Kabul (15-17 December)



## Glossary of terms

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

### **NON-GREGARIOUS ADULTS AND HOPPERS**

#### **ISOLATED (FEW)**

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

#### **SCATTERED (SOME, LOW NUMBERS)**

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

#### **GROUP**

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

### **ADULT SWARM AND HOPPER BAND SIZES**

#### **VERY SMALL**

- swarm: less than 1 km<sup>2</sup> • band: 1 - 25 m<sup>2</sup>



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### SMALL

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

### MEDIUM

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

### LARGE

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

### VERY LARGE

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

### RAINFALL

#### LIGHT

- 1 - 20 mm of rainfall.

#### MODERATE

- 21 - 50 mm of rainfall.

#### HEAVY

- more than 50 mm of rainfall.

### OTHER REPORTING TERMS

#### BREEDING

- the process of reproduction from copulation to fledging.

#### SUMMER RAINS AND BREEDING

- July - September/October

#### WINTER RAINS AND BREEDING

- October - January/February

#### SPRING RAINS AND BREEDING

- February - June/July

#### DECLINE

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

#### OUTBREAK

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

#### UPSURGE

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

#### PLAGUE

- a period of one or more years of widespread and heavy infestations, the majority of which occur as

bands or swarms. A major plague exists when two or more regions are affected simultaneously.

#### RECESSION

- period without widespread and heavy infestations by swarms.

#### REMISSION

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

### WARNING LEVELS

#### GREEN

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

#### YELLOW

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

#### 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

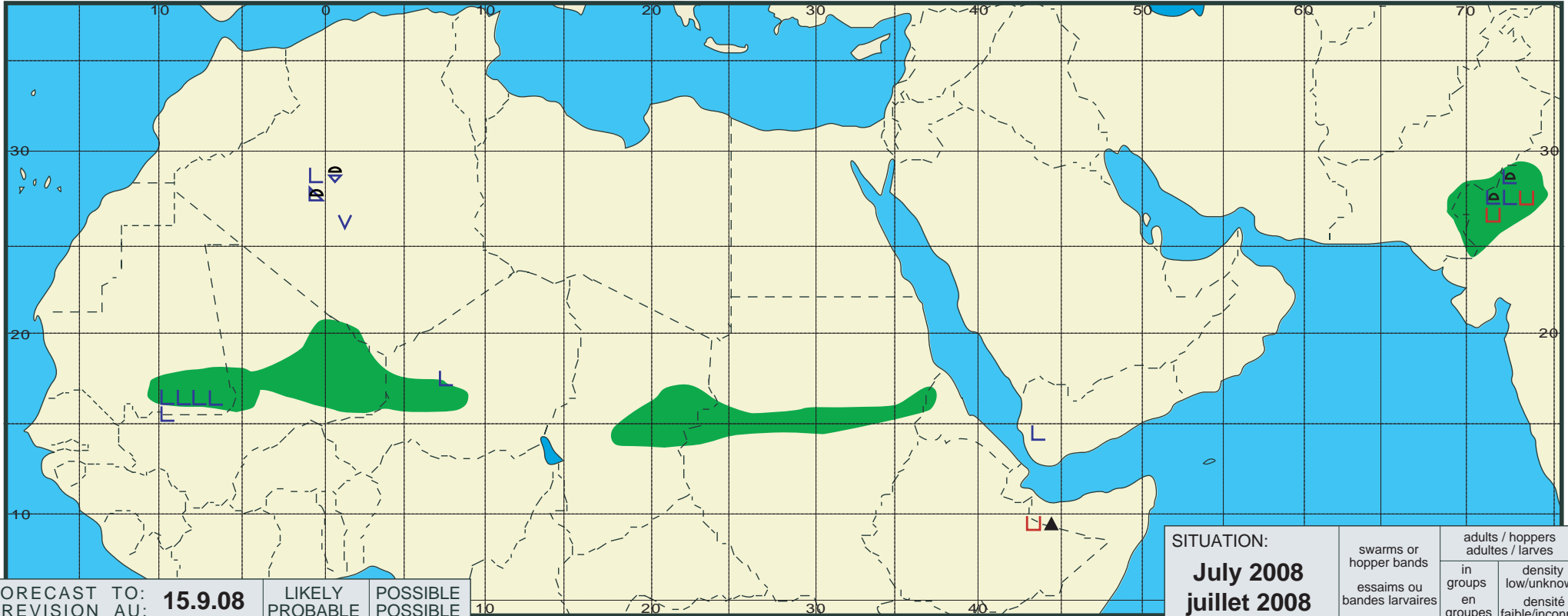
- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



# Desert Locust Summary

## Criquet pèlerin - Situation résumée

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FORECAST TO:  
PREVISION AU: **15.9.08**

LIKELY  
PROBABLE

POSSIBLE  
POSSIBLE

favourable breeding conditions  
conditions favorables à la reproduction



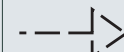
major swarm(s)  
essaim(s) important(s)



minor swarm(s)  
essaim(s) limité(s)



non swarming adults  
adultes non essaimant



SITUATION:  
**July 2008**  
**juillet 2008**

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)	◼	◼	◼