

warning level: **CAUTION**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 403



**General Situation during April 2012
Forecast until mid-June 2012**

(3 May 2012)

The Desert Locust outbreak that developed in early February along the Algerian-Libyan border continued during April. Locust numbers increased in both countries as a result of hatching and the formation of small but dense hopper bands. Although control operations were in progress, an increasing number of immature swarms are expected to form in May, most of which will probably remain in the outbreak area, mature and lay eggs, giving rise to another generation of hopper bands from about mid-June onwards. The situation is potentially very dangerous because swarms could eventually invade the northern Sahel of West Africa at the beginning of the rainy season when farmers are planting. Therefore, all efforts are required to monitor the situation now and undertake the necessary control operations to reduce population levels. Elsewhere, the situation remains calm.

Western Region. Egg laying and hatching occurred in southwest **Libya** and southeast **Algeria** during April, causing small but dense hopper bands to form. Many areas are inaccessible in both countries due to insecurity and remoteness. Ground teams in Algeria have been able to survey about 15 percent of the potentially infested areas. Immature adult groups and swarms will form in May. Adults could be ready to lay another generation of eggs in late May that would hatch by mid-June. Most of the adults are expected to remain in the outbreak area in May but could start

to move southwards in June. Control teams treated 3,360 ha in Algeria and 3,535 ha in Libya. Elsewhere, a few mature solitarious adults were present in northeast **Morocco**, and good rains fell in northern **Mauritania** and **Western Sahara** where small-scale breeding could occur during the forecast period.

Central Region. No locusts were reported in the region during April except for a few solitarious hoppers and adults in central **Oman** as a result of local breeding. The adults may move into parts of northern Oman and breed on a small scale during May in areas of recent rainfall. No significant developments are likely.

Eastern Region. Despite light rainfall at times in April, ecological conditions remained generally unfavourable in the spring breeding areas in western **Pakistan** and southeastern **Iran**. Scattered mature adults were present in the northern interior of Baluchistan in Pakistan while no locusts were reported in adjacent areas of southeast Iran. Although there is a low possibility of small-scale breeding during the forecast period, locust numbers will remain low and below threatening levels. No locusts were seen during routine surveys in western **India**.

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 April 2012

Good rains fell in northern Mauritania, Western Sahara, northern Oman and, to a lesser extent, in the Horn of Africa and in the spring breeding areas in southeast Iran and western Pakistan. Consequently, ecological conditions will improve in most of these areas.

In the **Western Region**, light to moderate rain fell over parts of Western Sahara on 9-11 April, extending into adjacent areas of northern Mauritania (Bir Moghreïn (75 mm), Zouerate (6 mm), and El Hank) and, to a lesser extent in the northwest near Nouadhibou (6 mm). Showers fell again in the Western Sahara at the end of the month. Light rain may have fallen in parts of southwest Libya in early April. As a result of the rainfall, vegetation was becoming green over large areas of northern Mauritania by the end of the month. Ecological conditions are also likely to improve in adjacent areas of Western Sahara while conditions remained favourable for locust breeding and survival along both sides of the Algerian-Libyan border.

In the **Central Region**, local showers fell on the Red Sea coast in Eritrea at the end of April. Light to moderate rains fell in the highlands of Yemen and run-off may have occurred onto the Red Sea coastal plains as well as into the western portion of the interior. Light to moderate rains also fell in parts of the southwest and central interior in Saudi Arabia where vegetation was green in the spring breeding areas. In northern Oman, good rains fell during the second decade in the interior and on the Batinah coast. Vegetation was drying out in central areas that received good rains in mid-March. In northern Somalia, scattered showers fell in early April on the northwest coastal plains and at times during the remainder of the month on the plateau, extending into parts of eastern Ethiopia. Nevertheless, vegetation remained dry due to the prolonged drought.

In the **Eastern Region**, light rain fell in southeast Iran and parts of western Pakistan during the second decade of April. Nevertheless, vegetation was drying out in most places of the spring breeding areas except



Area Treated

Algeria 3,360 ha (1-24 April)
Libya 3,535 ha (2-25 April)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Scattered adults are likely to be present in parts of Inehiri and Tiris Zemmour. Small-scale breeding is expected to occur in areas that received recent rainfall, causing locust numbers to increase slightly but remain below threatening levels.

Mali

• SITUATION

No surveys were carried out and no locusts were reported in April.

• FORECAST

Low numbers of adults may be present in parts of the Adrar des Iforas. No significant developments are likely.

Niger

• SITUATION

No surveys were carried out and no locusts were reported in April.

• FORECAST

Isolated adults may be present in parts of the Air Mountains. No significant developments are likely.

Chad

• SITUATION

No surveys were carried out and no locusts were reported in April.

• FORECAST

No significant developments are likely.

Senegal

• SITUATION

No surveys were carried out and no locusts were reported in April.

- **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**

Hatching commenced in early April near the Libyan border in Wadi Tarat (2618N/0919E) and occurred during the rest of the month north of the Tassili-Ajjer Mountains near Illizi (2630N/0825E) and south of the mountains near Bordj El Haoues (2452N/0826E) west of Djanet. *Transiens* and gregarious hoppers formed small groups and bands at densities of more than 5,000 hoppers/m². By the last week of April, mainly second to fourth instar hoppers were present. Groups of *transiens* and gregarious adults continued to lay eggs north of the Tassili until the 19th. Ground teams were able to survey about 15% of an estimated area of about 102,000 ha that may be green and potentially infested according to high resolution satellite imagery analysis. Control teams treated 3,360 ha on 1-24 April. No locusts were seen during surveys between Adrar (2753N/0017W) and Tamanrasset (2250N/0528E).

- **FORECAST**

Hatching is expected to continue to about mid-May north of Tassili and hopper bands will continue to form throughout the month. Fledging should commence in early May and last for about one month during which an increasing number of immature groups and swarms are expected to form. By the end of May, adults could be ready to lay another generation of eggs that would hatch about the second week of June if conditions remain favourable. Adult groups and swarms are likely to remain in the current outbreak area during May but could start to move southwards in June.

Morocco

- **SITUATION**

During April, a few mature solitary adults were seen at two places in the northeast near the Algerian border southwest of Bouarfa (3232N/0159W).

- **FORECAST**

Low numbers of adults may appear south of the Atlas Mountains in the Draa and adjacent valleys and breed on a small scale if rainfall occurs. No significant developments are likely. Scattered adults may be present in parts of the Western Sahara and breed on a small scale in areas of recent rainfall.

Libya

- **SITUATION**

During April, small patches of first and second instar *transiens* and gregarious hoppers were first reported on the 5th in the valley north of Ghat (2459N/1011E) from egg laying that occurred in late February and throughout March. Groups of mature gregarious adults were seen copulating northwest of Ghat up until 9 April and, thereafter, medium to high density hopper groups and bands formed. By the last week of the month, hoppers of all instars were present. No locusts were seen further north in the Al Hamada Al Hamra plateau on 21-23 April except at one place in the south where scattered mature adults were present on the northern edge of the Awbari Sand Sea. These adults probably moved during the first week of the month on warm southwesterly winds. Ground teams treated 3,535 ha on 2-25 April.

- **FORECAST**

Hopper bands will continue to form in the southwest during May. Fledging will commence at the beginning of the month and last until the end of May during which an increasing number of immature groups and swarms are expected to form. By the end of May, adults could be ready to lay another generation of eggs that would hatch about the second week of June if conditions remain favourable. Adult groups and swarms are likely to remain in the current outbreak area during May but could start to move southwards in June. Additional infestations are likely to be present in other parts of the west between Sabha and Ghadames where egg laying, hatching and band formation are expected.

Tunisia

- **SITUATION**

No surveys were carried out and no locusts were reported in April.

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

No surveys were carried out and no locusts were reported in April.

- **FORECAST**

No significant developments are likely.



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Eritrea

- SITUATION

No surveys were carried out and no locusts were reported in April.

- FORECAST

No significant developments are likely.

Ethiopia

- SITUATION

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

- FORECAST

No significant developments are likely.

Djibouti

- SITUATION

No reports were received during April.

- FORECAST

No significant developments are likely.

Somalia

- SITUATION

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

- FORECAST

Isolated adults may appear on the plateau in areas of recent rainfall. No significant developments are likely.

Egypt

- SITUATION

No locusts were seen during surveys carried out in April on the Red Sea coast between Shalatyn (2308N/3535E) and Abu Ramad (2224N/3624E), in the nearby Red Sea Hills and along both sides of Lake Nasser.

- FORECAST

No significant developments are likely.

Saudi Arabia

- SITUATION

During April, no locusts were seen during surveys in the Asir Mountains and in the interior.

- FORECAST

No significant developments are likely.

Yemen

- SITUATION

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

- FORECAST

Low numbers of adults are likely to be present in a few places along the central Tihama. Unless further rains fall, breeding is not expected to occur.

Oman

- SITUATION

During April, isolated third to sixth instar solitary hoppers mixed with isolated fledglings and immature solitary adults were seen at three places in the central Wusta Region between Hayma (1957N/5616E) and the coast at Duqm (1939N/5743E) where local breeding occurred in March. Isolated immature solitary adults were also seen nearby on the coast at Al Jazer (1833N/5634E). No locusts were seen during surveys carried out in the Musandam Peninsula.

- FORECAST

Adults on the central eastern coast are likely to move north into parts of Sharqiya, Dhahira, Dakhliya, and the Batinah coast where good rains fell recently, mature and breed on a small scale. If so, hatching is expected to occur by the end of May, causing locust numbers to increase slightly but remain below threatening levels.

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 the first two decades in April, no locusts were seen during a joint national survey in the southeast along the coast from Chabahar (2517N/6036E) to Bandar Abbas (2711N/5619E) and in the interior of Kerman and Sistan-Baluchistan.

- FORECAST

Isolated adults could appear and breed on a small scale in areas of recent rainfall along parts of the coast and interior of the southeast. No significant developments are likely.

Pakistan

- SITUATION

No reports were received during the second half of March.

During the first two decades of April, scattered mature solitary adults were seen during a joint

national survey at several places in the Kharan (2832N/6526E) Valley and at one place west of Nushki (2933N/6601E). No locusts were reported during the remainder of the month.

- **Forecast**

Low numbers of locusts will persist in the Kharan Valley and could breed on a small scale in areas of recent rainfall. Isolated adults could appear in other parts of Baluchistan and breed on a limited scale in those areas that received rain during April.

India

- **SITUATION**

No locusts were seen during surveys carried out in Rajasthan and Gujarat in April.

- **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://www.devocast.eu/user/images/dl/Form.do>)
- **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>)
- **FAOLOCUST Twitter.** The very latest updates are posted on Twitter (<http://twitter.com/faolocust>)
- **FAOLocust Facebook.** A social means of information exchange using Facebook (<http://www.facebook.com/pages/FAOLocust/314165595289302>)
- **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>)

SWAC website. A new website for the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC) is now available at <http://www.fao.org/ag/locusts/SWAC>. Comments are welcome.

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

- **Desert Locust situation updates.** Archives Section – Briefs
- **Libya outbreak.** Information Section
- **Desert Locust Information Officer Workshop reports.** Publications Section – Reports



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- **Desert Locust Information Officer Workshops.** Activities Section – DLIS
- **DLIS Questionnaire.** Activities Section – DLIS
- **Iran/Pakistan 2012 Joint Survey report.** Publications Section – Reports

2012 events. The following activities are scheduled or planned:

- **CRC.** 7th Sub-regional training course, Amman, Jordan (6-15 May)
- **DLCC.** 40th Session, Rome (18-22 June)
- **SWAC.** 28th Session, New Delhi, India (December, tbc)



Glossary of terms

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

NON-GREGARIOUS ADULTS AND HOPPERS

ISOLATED (FEW)

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

SCATTERED (SOME, LOW NUMBERS)

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

GROUP

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

ADULT SWARM AND HOPPER BAND SIZES

VERY SMALL

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

SMALL

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

MEDIUM

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

LARGE

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

VERY LARGE

- swarm: 500+ km² • band: 50+ ha

RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.

OTHER REPORTING TERMS

BREEDING

- the process of reproduction from copulation to fledging.

SUMMER RAINS AND BREEDING

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

DECLINE

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

OUTBREAK

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

UPSURGE

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

PLAGUE

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

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

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

WARNING LEVELS

GREEN

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

YELLOW

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

ORANGE

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

RED

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

REGIONS

WESTERN

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

CENTRAL

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

EASTERN

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



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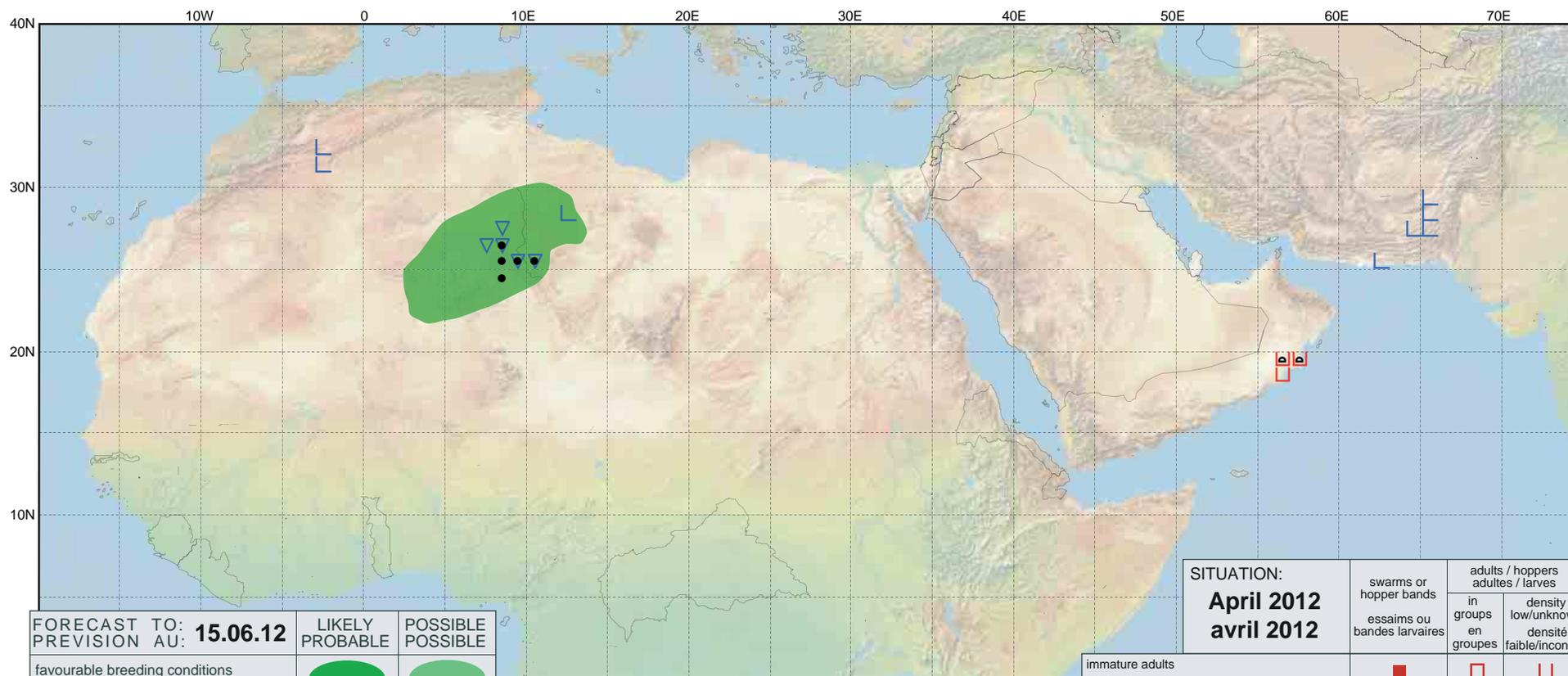
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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	15.06.12	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: April 2012 avril 2012	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)			