



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 200



GENERAL SITUATION DURING APRIL 1995 FORECAST UNTIL MID-JUNE 1995

Significant improvements of the Desert Locust situation were reported from North-West Africa and the Red Sea region with infestations substantially declining in most areas. However, during the forecast period, any escapees from previous control operations are expected to migrate towards the summer breeding areas where there were already some indications of early rainfall.

Some small and loose swarms, sometimes mixed with hoppers, were persisting south of the Atlas mountains in Morocco and Algeria, and in western Libya. In these countries, survey and control operations continued on a small scale against the remaining infestations whereas the campaign in northern Mauritania was concluded. Nevertheless, an unconfirmed report suggested that some adults may have already moved from northern to southern Mauritania.

In southern and central Algeria, control operations were also in progress directed primarily against hoppers west of the Hoggar Mountains. High densities of hoppers and adults were reported from adjacent areas of northern Mali and northern Niger.

In the Red Sea trench, infestations were declining in Egypt, Sudan and Saudi Arabia. There were no indications that locusts have moved towards the interior and the east of the Arabian Peninsula where unusually heavy rains occurred last month.

Isolated and scattered adults were reported from Pakistan and, to a lesser extent, from Iran. There were also indications that seasonal migration of adults towards the summer breeding areas of the Indo-Pakistan desert has started.

The FAO Desert Locust Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, e-mail, FAO pouch and airmail by the Emergency Centre for Locust Operations, AGP Division, FAO, 00100 Rome, Italy.

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WEATHER & ECOLOGICAL CONDITIONS DURING APRIL 1995

Based on field reports, METEOSAT and ARTEMIS satellite imagery, and Météo-France synoptic and rain data. Rainfall terms: light = less than 20 mm of rain; moderate = 20 - 50 mm; heavy = more than 50 mm.

During April, several Mediterranean depressions moved eastward, whereas the ITCZ gradually moved north and was located near 15°N over West Africa at the end of the month and reached at times as far north as 19°N over northern Tamesna of Niger. As a result, north to north-easterly winds were at times present over North-West Africa, as well as south-westerlies, both of which are likely to have favoured adult dispersion throughout the spring breeding areas. Cloud masses were at times associated to these depressions and some rainfall occurred at several places.

In North-West Africa, light to moderate rains occurred several times, primarily in Ouarzazate in Morocco and some other locations south of the Atlas Mountains where Wadi Draa was flooded. Favourable ecological conditions were persisting in infested areas of western Libya where additional rains occurred. A similar situation may have persisted in some areas of southern Tunisia.

Ecological conditions were reported to be drying out in northern Mauritania and Tamesna of Niger. However, light showers were recorded for the first time this year in south-eastern Mauritania in Nema, in eastern Mali and in central northern Niger where Bilma unexpectedly received 9 mm.

In Sudan, favourable conditions were persisting in some parts of the Wadi Diib area, whereas conditions were drying out in the southern Red Sea coastal areas. Some areas of green vegetation are expected to persist south of Massawa in Eritrea. Some light rains occurred early in the month on the northern coast of Somalia where favourable breeding conditions were persisting in some locations. In Ethiopia, good rains were received at Dire Dawa and conditions are expected to be favourable in the Railway area.

In the Arabian Peninsula, clouds were present throughout the month along the western range of mountains and at times over the Red sea coast; these may have produced some rains and breeding conditions may be favourable in some parts of these areas. In southern Oman, additional unusual heavy rains fell again in the Dofhar area where Marmul received 51 mm.

By the end of the month, light rains fell in Iran on the coastal areas of Baluchistan where some wadis were flooded as a result of heavier rains further north in the interior, and vegetation was reported to green up in some places. Light rains fell also in the interior of Baluchistan in Pakistan, primarily near Khuzdar, where breeding conditions are expected to be favourable. No rains were reported from Rajasthan in India.



AREA TREATED IN APRIL 1995

Algeria	10,144 ha	(1-30 April)
Egypt	180 ha	(3-6 April)
Eritrea	8 ha	(29 March)
Libya	970 ha	(29 March - 24 April)
Mauritania	22,722 ha	(21-31 March)
	40,883 ha	(1-20 April)
Morocco	6,816 ha	(21-31 March)
	2,141 ha	(1-24 April)
Niger	7,700 ha	(25 March - 7 April)
Sudan	165 ha	(25-29 March)
	101 ha	(2-6 April)



DESERT LOCUST SITUATION

Please see the last section of this Bulletin for a definition of terms used in reporting the current locust situation.

WEST AFRICA

MAURITANIA

During the last decade of March, hopper infestations persisted in northern Mauritania in the El Hank area (ca. 2400N/0800W). All instars were present and a few new immature adults appeared early in the decade. First to third instar hoppers were also reported further north from the Oued El Hamra area (ca. 2630N/0830W) where hatchlings continued to appear. During this period, aerial and ground operations treated 22,722 ha in both areas.

During the first two decades of April, hopper infestations were present mainly in the south-western part of El Hank. These began to decline as a result of control operations and due to development into adults. A few small immature swarms, ranging in size from 50-150 ha, started to form by mid-April and were treated. In the Oued El Hamra area, several hopper infestations of all instars persisted. A total of 40,883 ha was treated in both areas during the first two decades of April. By the end of this period, the overall situation was reported to be improving substantially, with only patches of late instar hoppers and immature adults persisting, and survey and control operations had concluded.

In southern Mauritania, there was an unconfirmed report of groups of adults seen by nomads between Oualata (1718N/0702W) and Nema (1637N/0715W), suggesting an early migration from the north.

MALI

Substantial adult and hopper infestations were reported in the Timetrine and Tamesna areas during March-April. Further details are awaited.

NIGER

Late instar hoppers were reported from Tamesna primarily in the In Afer area (1748N/0538E) between 25 March - 7 April. New immature adults started to appear and some swarms were seen moving north-west. Aerial and ground operations treated 7,700 ha during the above period.

No locust information has been received from other countries in the region up to 30 April.

NORTH-WEST AFRICA

MOROCCO

During the last decade of March, reports were received stating that there were additional mature swarms on the southern side of the Atlas Mountains between Goulmine (2858N/1004W) and Bouarfa (3232N/0158W) throughout the month. A total of 6,816 ha were treated by air and by ground between 21-31 March.

During April, several small groups of mature adults and low density swarms were reported within the same area, primarily near Goulmine. Small hopper infestations were reported for the first time in the Tata area and to a lesser extent near Goulmine during the second half of the month. However, the overall infestation was declining and the situation substantially improved. Control operations were reduced as 2,141 ha were treated between 1-24 April.

ALGERIA

During April, additional hopper infestations continued to appear primarily west of the Hoggar mountains near Silet (2239N/0435E) and south of Bechar (3136N/0212W), and to a lesser extent in the In Salah (2711N/0229E), Adrar (2753N/0017W) and Tindouf (2741N/0808W) areas. In addition, immature and mature adults, sometimes in groups of low to moderate densities, were reported from a total of about 70 locations in southern and western Algeria throughout the month. A few groups of adults and hoppers were also present near Djanet (2326N/0904E). A total of 3,500 ha were reported to be infested during each of the first two decades and infestations of nearly 5,800 ha were reported during the last decade. A total of 10,144 ha was treated during April.

TUNISIA

Scattered immature and mature gregarious adults were reported from Tamaghza (3422N/0752E) and Hazoua (3345N/0736E) between 17-18 March.

LIBYA

Mature swarms were first reported in late March in the west at several places near Ghat (2458N/1011E) where control operations were immediately undertaken. Some adult infestations persisted during April in this area. In addition, high densities of first to third instar hoppers were reported in Oued Tehaha (ca. 2511N/1111E). A total of 1,605 ha were treated from 29 March to 24 April.

EASTERN AFRICA

SUDAN

During March, groups and bands of third to fifth instar hoppers as well as fledglings were reported from four locations in Wadi Diib on the 15th-17th. Subsequent ground control operations treated 165 ha by the end of March and 101 ha in early April. There was an unconfirmed report of an immature swarm in Wadi Diib at Sourite (2134N/3608E) on 3 April.

Small numbers of immature scattered adults were reported on the southern Red Sea coast near Adobana (1810N/3817E) on 17 March, and scattered adults were present at a few places of the Tokar Delta on the 18th.

Low numbers of all instar hoppers as well as some solitary adults grouping on trees were reported from a few places near the Egyptian border at Wadi Halfa (2149N/3120E) between 19-24 March.

ERITREA

Late instar hoppers were reported near the coast east of Thio (1440N/4057E) over a total of 200 ha on 29 March; 8 ha were treated.

SOMALIA

In late March, isolated adults, some of them yellow, were reported from the north-western coastal plains east of Magab (1022N/4520E) between the 26th-30th.

During April, scattered immature and mature adults, some of them transiens, were reported from the northern coastal plains in two locations near Mait (1101N/4707E) over a total of 550 ha and at a density of 100 per ha between the 1st-5th. During another survey in 7 locations in the same area between the 13th-17th, mature adults were found at a similar density over 30 ha at Wagnderia (1107N/4748E) and one adult was seen in another location near Mait.

No locust information has been received from other countries in the region up to 30 April.

NEAR EAST

EGYPT

Locust infestations significantly declined as low density immature adults were reported persisting in only 3 locations in the extreme south-eastern desert on 3-6 April. In one of these locations (El Fadal, 2242N/3442E), late instar hoppers and fledglings were also present and 180 ha were treated by ground teams.

SAUDI ARABIA

By the end of April, only small adult infestations were reported to persist near Medina and there were no indications so far of adult movements from the coastal plains into the spring breeding areas of the interior. Details are awaited.

IRAQ

No locusts were reported from the south-east in the Al Muthanna and Al Basrah areas during a survey between 2-25 March. However, there was an unconfirmed report of swarms in the Al Muthanna area by the end of April.

KUWAIT

A late report indicated that no locusts were present in February and in March.

No locust information has been received from other countries in the region up to 30 April.

SOUTH-WEST ASIA**IRAN**

Between 23-26 April, a few isolated immature and mature adults were reported in a total of 3 locations on the Baluchistan coast, out of 11 locations surveyed between Beris (2511N/6105E) and Sorgala (2537N/5826E). Isolated first and second instar hoppers were also found in one of these 3 locations near Poshti (2529N/5927E). No locusts were reported north and east of Bampur (2712N/6027E) on the 27-28th.

PAKISTAN

During the second fortnight of March, isolated adults were reported from 28 locations of coastal and primarily interior areas of Baluchistan and north of Karachi, at a maximum density of 400 adults per sq. km near Khuzdar at Zehri (2831N/6644E). This suggested the beginning of the seasonal adult migration towards the summer breeding areas.

During the first half of April, there were more indications that seasonal migration was in progress. Scattered adults were reported from 28 locations within the same area, most of them in the interior of Baluchistan. Densities slightly increase, with a maximum of 4,000 adults per sq. km reported from Zian (2828N/6518E) on the 8th.

INDIA

During the second half of March and April, only one adult was reported at Gunsaingar (2804N/7442E) in northern Rajasthan on 21 March.

No locust information has been received from other countries in the region up to 30 April.



Forecasting terms used in this section to indicate the chances of a particular event happening are indicated below; every term is arranged within each category from most to least probable:

high probability	will, probably, almost certain, likely, expected
medium probability	may, might
low probability	possibly, perhaps, unlikely

WEST AFRICA**MAURITANIA**

Remaining adults in the el Hank and Oued el Hamra areas are expected to form some groups, perhaps a few small swarms, and migrate further north. However, there is also a high probability that some of these will start to move south towards the summer breeding areas during the forecast period.

MALI

Adults are expected to persist in the extreme north near the Mauritanian border and migrate further north. Other adults are expected to persist in Adrar des Iforas and Timetrine and be supplemented by small groups, possibly a few small swarms, arriving from the north during the second half of the forecast period. Laying on a small, possibly moderate, scale is likely to occur with the onset of the rainy season. However, the situation remains unclear and the scale of such infestations is difficult to foresee.

NIGER

Small numbers of adults are expected to persist in Tamesna and to be supplemented by small groups, possibly a few small swarms, arriving from the north during the second half of the forecast period. Laying on a small, possibly moderate, scale is likely to occur in this area with the onset of the rainy season.

CHAD

Some adults are likely to be present in the north and gradually migrate further south in BET, Kanem, Batha and Biltine where breeding on a small scale is expected with the onset of the rainy season.

BURKINA FASO, CAMEROON, CAPE VERDE, GAMBIA, GUINEA BISSAU, GUINEA CONAKRY and SENEGAL

No significant developments are likely.

NORTH-WEST AFRICA**MOROCCO**

Current infestations are likely to continue to decline with some hopper patches persisting south of the Atlas Mountains. However, new groups, possibly a few small swarms, are expected to move again in this area from the south and breeding may occur again during May in areas of recent rains. As a result, new generation adults could appear in these areas by the end of the forecast period.

ALGERIA

In the Bechar area, additional hoppers and adults, possibly in groups, are expected to appear and persist during May. In the southern and central regions, any hoppers that escape control will fledge and new immature adults are expected to continue to appear and form some groups. By the end of the forecast period, infestations in these areas will commence to decline as a result of southwards migration, control operations and drying conditions.

TUNISIA

Adult numbers in the south are expected to decline as a result of the migration southwards and drying conditions.

LIBYA

Any escapees from control operations are expected to migrate south towards the summer breeding areas of the Sahel. However, this is expected to be on a small scale.

EASTERN AFRICA**SUDAN**

Infestations are likely to decline in the Wadi Diib area and on the Red Sea coast as a result of drying conditions and control operations. Some additional adults may appear on the Red Sea coast from the east during the forecast period. However, any adults in these areas will migrate towards the summer breeding areas of the interior.

ERITREA

Scattered adults are likely to persist on the coastal plains south of Massawa.

SOMALIA

Scattered adults are expected to persist along the northern coastal plains where they could breed on a small scale, with some hoppers appearing during the forecast period.

DJIBOUTI, ETHIOPIA, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

EGYPT

Some adults are expected to persist in the south-eastern desert and in the southern Nile Valley. Although some additional adults may appear from the east on the southern Red Sea coast during the forecast period, infestations are expected to decline as a result of seasonal migration and drying conditions.

SAUDI ARABIA

Adults, possibly some groups, may have migrated and bred in areas which received substantial rains in the south-east. If so, hoppers are likely to be present with new generation adults appearing early in the forecast period.

YEMEN

Scattered adults are likely to be present on the coastal plains near Aden and in the interior desert areas from Shabwa to Marib. The latter may be supplemented by additional adults, possibly forming a few groups, arriving from the north.

OMAN

As a result of heavy rains received during March and April, scattered adults are likely to be present and breeding in the Dhofar area where, if so, hoppers are expected to appear during the first half of the forecast period. A similar situation may prevail also on the northern Batinah and Musandam Peninsula. Surveys are recommended.

UAE

Scattered adults may be present and breeding in the Fujayrah and Buraimi areas.

QATAR and BAHRAIN

A few adults may appear from the west and lay in areas of recent rains.

IRAQ

If swarms reported in the south-east are confirmed, these could breed if rainfall would occur. Surveys are recommended to monitor the situation.

ISRAEL, JORDAN, KUWAIT, LEBANON, SYRIA and TURKEY

No significant developments are likely.

SOUTH-WEST ASIA

IRAN

As a result of seasonal migration, adult numbers are expected to decline on the coastal areas of Baluchistan. However, depending on developments in the Arabian Peninsula, adults may appear on the eastern coasts during the forecast period.

PAKISTAN

Small scale breeding is likely to be in progress in some areas of recent rains of Baluchistan. As a result of seasonal migration, adult numbers are expected to decline on the coastal areas of Baluchistan whereas some adults will appear further east in the Cholistan and Tharparkar deserts during May. Depending on developments in the Arabian Peninsula, additional adults may arrive by the end of the forecast period.

INDIA

Adults will appear from the west in Rajasthan during the second part of the forecast period.

AFGHANISTAN

No developments are likely.



GLOSSARY OF TERMS

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

Non-gregarious adults and hoppers

isolated	very few present and no mutual reaction occurring; 0 - 1 adult per 400 m foot transect (or less than 25 per ha). Other terms: a few.
scattered	enough present for mutual reaction to be possible but no ground or basking groups seen; 1 - 20 adults per 400 m foot transect (or 25 - 500 per ha). other terms: some, low numbers.
group	forming ground or basking groups; more than 20 adults per 400 m foot transect (or more than 500 per ha).

Adult swarm and hopper band sizes

very small	swarm: less than 1 sq. km	band: 1 - 25 sq. m.
small	swarm: 1 - 10 sq. km	band: 25 - 2,500 sq. m.
medium	swarm: 10 - 100 sq. km	band: 2,500 sq. m - 10 ha
large	swarm: 100 - 500 sq. km	band: 10 - 50 ha
very large	swarm: more than 500 sq. km	band: more than 50 ha

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.
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.
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.

5 May 1995

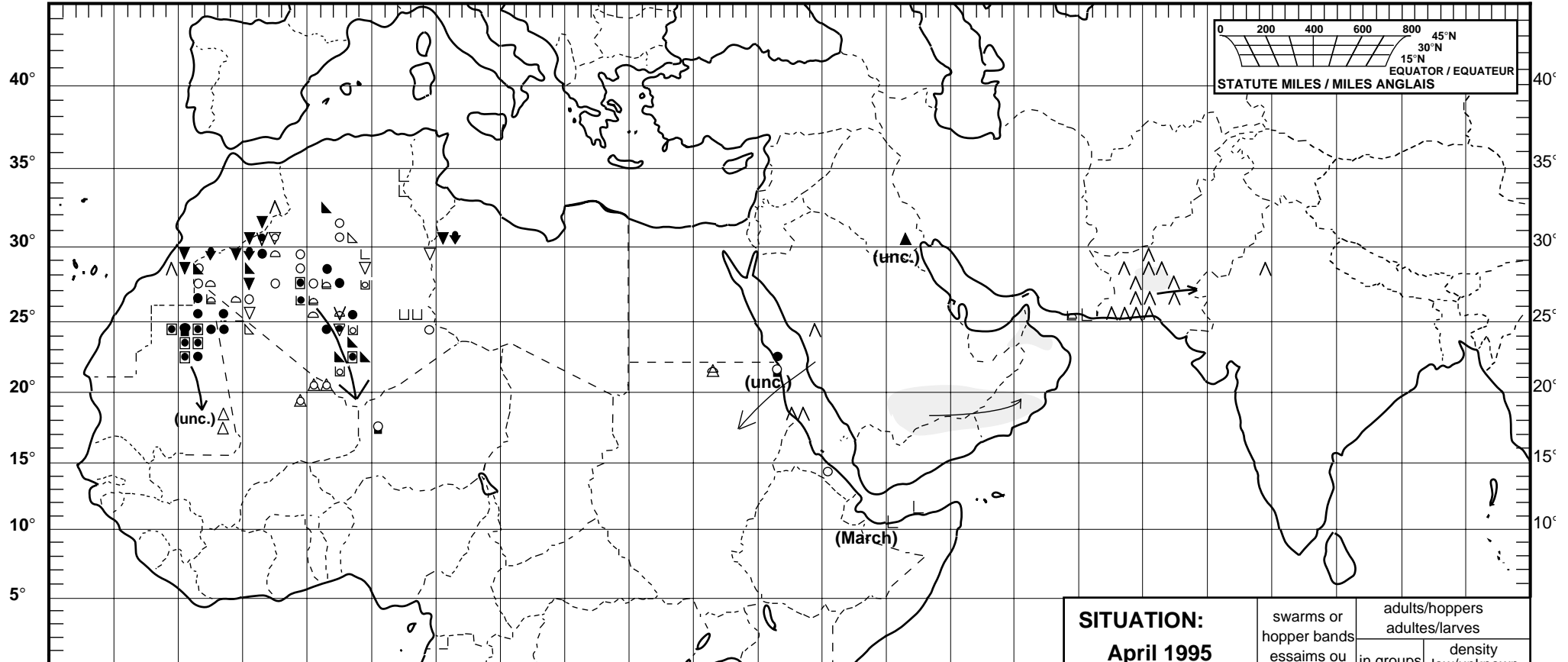
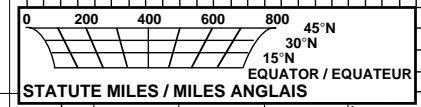


Desert Locust: summary Criquet pèlerin: situation résumée

No. 200



20° 15° 10° 5° 0° 5° 10° 15° 20° 25° 30° 35° 40° 45° 50° 55° 60° 65° 70° 75° 80° 85° 90° 95°



FORECAST TO: PREVISION AU: 15.6.95	LIKELY PROBABLE	POSSIBLE POSSIBLE
current undetected breeding reproduction en cours et non détectée		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION:
April 1995
avril 1995

	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)	◼	◼	◼

15° 20° 25° 30° 35° 40° 45°