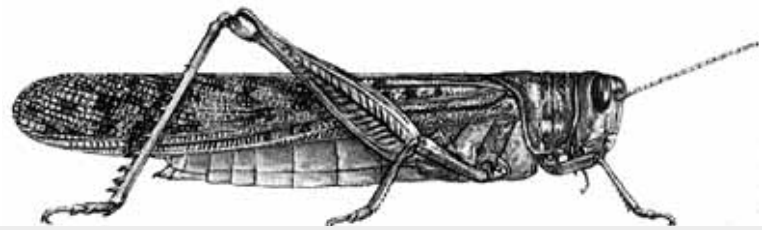

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations

No. 322

(3 August 2005)

General Situation during July 2005 Forecast until mid-September 2005

The Desert Locust situation continues to be a cause for concern in central and eastern Chad and western Sudan. In addition, new infestations have been found in eastern Eritrea. Breeding is in progress in Chad and Sudan and there is a risk of outbreaks developing. Hopper bands formed during July in both these countries but only limited control operations could be carried out because of the difficulty of access to many of the infested areas. A few small swarms could form in Chad and Sudan during August and September followed by another generation of breeding during which locust numbers could increase rapidly. Despite unusually good rainfall and excellent breeding conditions elsewhere in the Sahel in West Africa, very few locusts have been seen so far in the summer breeding areas in southern Mauritania, northern Mali, Niger and western Chad. Seasonal forecasts suggest that good rainfall will continue in August and September. Consequently, increased vigilance and intensive survey operations should be maintained in all countries.

Western Region. Unusually good rainfall and excellent breeding conditions caused hopper bands to form during July in **Chad**, primarily in the east of the country adjacent to Darfur, Sudan. Although many areas are difficult to access due to topography, flooding and insecurity, limited control operations over 1320 ha were undertaken. Given these difficulties and the likelihood of groups and maybe small swarms forming during August and September, there is a risk that an outbreak could develop. Very few locusts were present elsewhere in the summer breeding areas in the Sahel despite unusually good rainfall and suitable ecological conditions. During July, only isolated adults were seen in northern **Mali,** and in northern and central **Niger**. Similar scattered populations may be present in southern **Mauritania**. Nevertheless, intensive surveys must be maintained on a regular basis in all areas throughout the summer in order to detect the first signs of an increase in locust populations.

Central Region. Similarly to Chad, hatching and hopper band formation occurred during July in Western and Northern Darfur, **Sudan**. Ground control teams were able to treat nearly 1,726 ha in those areas that could be accessed. In **Eritrea**, two infestations were reported during the third decade of July, one in the North-East and the other south of Massawa. Small-scale breeding occurred in northern **Ethiopia** following the arrival in June of at least one Southern Circuit swarm. Consequently, a few small hopper bands formed and were treated but there were other areas where breeding may have occurred but could not be accessed on the ground. During the forecast period, small swarms could form in western Sudan. There is slight chance that a few small groups or swarmlets could also form in northern Ethiopia. Elsewhere, good rains that fell in the summer breeding areas in the interior of **Yemen** may cause a slight increase in locust numbers there in the coming months.

Eastern Region. Scattered locusts were reported in a few places in the summer breeding areas along both sides of the border between **India** and **Pakistan** where monsoon rains fell during July. Small-scale breeding will occur during the forecast period but no significant developments are expected.

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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DLIS: www.fao.org/ag/locusts

No. 322

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in July 2005

Good rains fell for a second consecutive month over large parts of the summer breeding area in the Sahel in West Africa and Sudan. Heavy rains also fell in the interior of Yemen and monsoon rains started along the Indo-Pakistan border. Consequently, ecological conditions improved and were favourable for breeding in most of these areas.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated between 16N and 20N over West Africa during July, with occasional northwards surges to 24N over northern Mali. This resulted in unusually good rainfall for the second consecutive month throughout the summer breeding areas in Mauritania, Mali, Niger and Chad. Consequently, ecological conditions improved or were already favourable for breeding within large areas of southern and central Mauritania, northern Mali (in the wadis of the Adrar des Iforas, in Tamesna and in the Timetrine), in Niger (Tamesna up to 18N and the central and eastern Air Mountains up to 19N) and in Chad (Batha, Kanem, Ouaddai and Wadi Fira regions). In some areas such as eastern Chad, the good rains have caused local flooding, making many places inaccessible to ground survey teams.

In the **Central Region**, ecological conditions improved in the summer breeding areas in Sudan because of good rainfall during July, mainly in the Darfur region. By the end of the month, breeding conditions were favourable over a large area of the interior from the Chad border to the Nile River and in the Kassala area. Khor Barka and several wadis leading to the Tokar Delta on the Red Sea coast were reported to be flooded, probably from rainfall in the Eritrean Highlands. Light to moderate rain fell in the western lowlands in Eritrea during the first half of July and ecological conditions were improving. Small patches of green vegetation were present in the interior of Yemen between Ataq and Shabwah in areas of recent heavy rainfall and runoff. Good rains also fell in the interior near Marib, and light to moderate rains fell along the northern and central parts of the Tihama coastal plains along the Red Sea.

In the **Eastern Region**, light to moderate rains associated with the annual monsoon fell in the summer breeding areas along the Indo-Pakistan border. Rainfall was heaviest in Rajasthan. Consequently, ecological conditions were improving or were already favourable for breeding.

Area Treated

Nearly 12,000 ha were treated in July compared to 1.6 million ha in July 2004, bringing the total area treated since the beginning of the upsurge (October 2003) to nearly 12.9 million ha.

Chad *(1)*	4,272 ha (16-30 June)
	1,320 ha (1-28 July)
Eritrea	8,933 ha (25-30 July)
Ethiopia	14 ha (11-14 July)
Sudan	1,726 ha (1-30 July)

(1) updated information

Note: Reporting delays and discrepancies may affect the accuracy of these figures.

Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• **SITUATION**

No locusts were seen during surveys carried out during the first two decades of July in the south and northwest. No locusts were reported during the third decade.

• **FORECAST**

Scattered adults are likely to be present in parts of the south and centre of the country. Small-scale breeding is expected to occur in those areas that have received good rainfall recently, causing locust numbers to increase gradually.

Mali

• **SITUATION**

During July, a few isolated mature adults were present in the northern Adrar des Iforas and in central Tamesna. Some of the adults seen in the Tamesna were transiens. No locusts were seen during surveys carried out in the Timetrine, the Tilemsi Valley and in the central Adrar des Iforas.

• **FORECAST**

Small-scale breeding is likely to occur in parts of the Adrar des Iforas, Timetrine and Tamesna where good rains have fallen recently. Intensive surveys should be maintained during the forecast period.

Niger

• **SITUATION**

During July, isolated immature and mature adults, some of them laying, as well as a few second and third instar hoppers were reported in areas of previous breeding near Tanout (1505N/0850E). Isolated mature adults were present south of Agadez (1700N/0756E). Isolated immature adults and third instar hoppers were also seen in the western Air. No locusts were seen during surveys in the Tamesna.

• **FORECAST**

Small-scale breeding is likely to occur in Tamesna and parts of the Air Mountains where good rains have fallen recently. Intensive surveys should be maintained during the forecast period.

Chad

• **SITUATION**

During the second half of June, substantial hatching reportedly occurred in the eastern part of the country (Ouaddai and Wadi Fira) and to a lesser extent in the centre (Batha) and west (Kanem). Hatchlings formed hopper bands at densities of up to 800-3,000 hoppers/m^2. By the end of the month, most of the hoppers had reached the second and third instar stage. Ground control operations treated 4,272 ha.

During the first decade of July, hopper bands continued to be reported in Ouaddai but there were also unconfirmed reports of hopper bands in Wadi Fira, Kanem and Batha. During the second decade, 10,000 ha were reported as infested in Batha and Kanem and 10 immature adults were seen in Ouaddai. On 25 July, surveys detected six fifth instar hopper bands of 0.5-1 ha in size in Batha, close to Ati (1315N/1828E); other last instar hopper bands, fledglings, immature and mature adults were also found in Batha during the third decade. Only one transiens adult was observed in Wadi Fira, and no locusts were reported in Borkou-Ennedi-Tibesti, Kanem and Lake up to the end of the month. Ground control operations treated 1,320 ha up to 28 July, mainly in Batha.

• **FORECAST**

Small groups and probably a few small swarms are likely to form in Ouaddai, Wadi Fira and Batha, and to a lesser extent, in Kanem during August. As ecological conditions are favourable, adults are expected to stay, mature and lay eggs by the end of the forecast period. If this occurs, there is a risk that locust numbers could increase rapidly and an outbreak may develop.

Senegal

• **SITUATION**

No locusts were reported during the first two decades in July.

• **FORECAST**

No significant developments are likely.

Burkina Faso

• **SITUATION**

No locusts were reported up to 25 July.

• **FORECAST**

No significant developments are likely.

Benin, Cameroon, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea Bissau, Guinea, Liberia, Nigeria, Sierra Leone and Togo

• **FORECAST**

No significant developments are likely.

Algeria

• **SITUATION**

During the first three weeks of July, no locusts were seen in the northern Sahara, near Tindouf in the west, along the Tunisia/Libya border in the east and in the southern Sahara near the Niger border.

• **FORECAST**

Low numbers of locusts may be present and breeding on small scale is likely in a few places in the south, primarily between the Mali/Niger border and Tamanrasset, if ecological conditions are favourable.

Morocco

• **SITUATION**

No locusts were reported during July.

• **FORECAST**

No significant developments are likely.

Libyan Arab Jamahiriya

• **SITUATION**

No locusts were reported during July.

• **FORECAST**

No significant developments are likely.

Tunisia

• **SITUATION**

The situation was reported to be calm during the first three weeks of July.

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

During the first decade of July, medium-density mature gregarious adults were present in two locations in Northern Darfur and there were unconfirmed reports of swarms near El Fasher (1337N/2522E) as well as egg laying at 12 locations. Early instar hopper bands continued to form in Western Darfur near Geneina (1327N2230E) and egg-fields were reported nearby.

During the remainder of the month, small hopper bands, up to 1,000 m^2 in size, continued to develop in Western Darfur where many had reached the fledging stage by late July. In Northern Darfur, high-density first and second instar bands started forming during the third week and groups of gregarious adults were seen copulating. Scattered mature gregarious adults were found laying eggs at three places in Western Kordofan, west of En Nahud (1246N/2828E) and El Obeid (1311N/3010E) at mid-month.

During July, ground control operations treated 1,675 ha in the secure areas in Western Darfur and 51 ha in Northern Darfur. No locusts were seen in Northern Kordofan from El Obeid and Hamrat El Wuz (1500N/3010E) to the Nile River, on the western side of the Red Sea Hills and along the Red Sea coast, although locals reported locusts in the Tokar Delta. The situation is less clear in Northern Darfur, between El Fasher and En Nahud, and along the Gasht River north of Kassala because of access difficulties.

• **FORECAST**

Breeding will continue in Western and Northern Darfur and, on a smaller scale, in Western Kordofan, causing locust numbers to increase. Solitarious breeding is likely to occur in Northern Kordofan and White Nile States and along the Atbara and Gasht Rivers. Current hopper band infestations in Darfur will fledge and small adult groups and a few small swarms could form in August and September.

Eritrea

• **SITUATION**

No locusts were seen during surveys carried out in the western lowlands near the border with Sudan from 29 June to 15 July. During the third decade of July, infestations were reported in two separate areas, one in Mahmimet (1723N/3833E) in the North-East and the other in Bada, south of Massawa (1536N/3927E), and 8,933 ha have been treated. The infestations in Mahmimet consisted of all stages of hoppers and of one small hopper band at a density of up to 100-150/ m^2. Scattered fledglings, immature and mature laying adults and groups of these locusts were also present. The extent of these newly found infestations is being investigated.

• **FORECAST**

No significant developments are likely in the western lowlands but monitoring is requested. It is not clear if the recently found infestations derived from local breeding or were produced by Southern Circuit swarms. The density of the infestations is relatively low with the result that only small adult groups and a few small swarms are likely to be produced during the forecast period.

Ethiopia

• **SITUATION**

On 16 June, at least one small mature Southern Circuit swarm arrived in the northern region of Tigray and, on the next day, a swarm was reported in the adjacent region of Amhara. During the last decade of June, mature groups and swarms were seen in the Bombai area (1404N/3645E), Tigray region, some of them copulating and laying eggs. Although ground control operations were undertaken at five locations and treated about 100 ha, hatching occurred and about twenty small first and second instar bands formed by mid-July near Bombai. Control operations treated 14 ha. No locusts were seen during follow-up surveys in the surrounding areas up until 20 July but some areas were inaccessible by ground.

• **FORECAST**

Hatching and the formation of small bands may have occurred in a few inaccessible places in Tigray and Amhara. If so, the hoppers would fledge and the adults could form a few small groups or swarmlets and mature during the forecast period.

Djibouti

• **SITUATION**

No locusts were reported during July.

• **FORECAST**

No significant developments are likely.

Somalia

• **SITUATION**

Scattered immature solitary adults were seen on 12 July near Iredame (1030N/4930E). At the end of the second decade, a few isolated immature and mature adults were present in the Togdheer region (0900N/4600E). There were also unconfirmed reports

of locusts on the northeastern coast near Las Koreh (1110N/4812E) at the beginning of the third decade. Further details are awaited.

• **FORECAST**

Scattered adults will probably persist in a few places along the northern coast and the escarpment if ecological conditions remain favourable for survival. No significant developments are likely.

Egypt

• **SITUATION**

During July, no locusts were seen during surveys carried out in the Western Desert (Bahariya, New Valley and Sh. Oweinat), along the shoreline of Lake Nasser and further east in the Red Sea Hills in the Allaqi area.

• **FORECAST**

No significant developments are likely.

Saudi Arabia

• **SITUATION**

No locusts were reported during July in the interior regions of Riyadh, Al Jouf and Al Gassim.

• **FORECAST**

No significant developments are likely.

Yemen

• **SITUATION**

Scattered immature and mature adults, including a few transiens, were present at densities up to 163 adults/ha during July at six places in the interior between Ataq (1435N/4649E) and Shabwah (1522N/4700E).

• **FORECAST**

Low numbers of adults may be present in parts of the summer breeding areas in the interior. Small-scale breeding could occur in those places where rainfall occurs and ecological conditions are favourable.

Oman

• **SITUATION**

No locusts were seen during surveys carried out in Sharqiya and Dofar regions in July.

• **FORECAST**

No significant developments are likely.

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**

No locusts were seen during surveys carried out on 22 July in the southern coast near Jask and Bandar Abbas.

• **FORECAST**

No significant developments are likely.

Pakistan

• **SITUATION**

During the last week of June, isolated mature adults appeared at two locations in the Nara Desert near the Indian border.

During the first half of July, solitarious mature adults, at densities ranging from 6 to100 adults/ ha, appeared in the summer breeding areas at 31 locations in the Tharparkar, Nara and Cholistan Deserts near the border with India.

• **FORECAST**

Small-scale breeding will occur in areas of recent rainfall in Tharparkar, Nara and Cholistan Deserts. Consequently, locust numbers will increase during the forecast period but will remain well below threatening levels.

India

• **SITUATION**

No locusts were seen during surveys carried out during the second half of June.

Isolated mature adults and one mature group were seen in a few places in Rajasthan from 1 to 25 July.

• **FORECAST**

Small-scale breeding will occur in areas of recent rainfall in Rajasthan. Consequently, locust numbers will increase during the forecast period but will remain well below threatening levels.

Afghanistan

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

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DESERT LOCUST BULLETIN

Announcements

Locust reporting. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent twice/week and affected countries are encouraged to prepare decadal bulletins summarizing the situation. During recession periods, countries should report at least once/month. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@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 web pages. The Locust Group has launched an updated version of its web site in English and French at: www.fao.org/ag/locusts.

Locust archives. Desert Locust reports received by FAO from affected countries from 1952 to the present are available on a series of four CDs in PDF. Please contact the Locust Group for more details.

Desert Locust booklet. FAO has produced a booklet for the general public and donor community entitled *Hunger in their wake: Inside the battle against the Desert Locust*, available for download at www.fao.org/ag/locusts (Publications).

Publications on the Internet. New FAO publications and meeting reports are available for downloading at www.fao.org/ag/locusts (Publications):

- Report of the Desert Locust joint survey in the spring breeding areas of Pakistan and I.R. Iran, April 2005 (English)

2005-2006 events. The following meetings are tentatively scheduled:

- **EMPRES/CR.** 6th Consultative Committee, Cairo (Egypt), 13-15 November
- **DLCC.** 39th Session, Rome, 5-9 December
- **EMPRES/CR.** 13th Liaison Officers meeting, Yemen, January 2006
- **EMPRES/WR.** 4th Liaison Officers meeting, Algiers, January/February 2006

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^2 • band: 1 - 25 m^2

SMALL

- swarm: 1 - 10 km^2 • band: 25 - 2,500 m^2

MEDIUM

- swarm: 10 - 100 km^2 • band: 2,500 m^2 - 10 ha

LARGE

- swarm: 100 - 500 km^2 • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km^2 • 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.

REGIONS

WESTERN

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

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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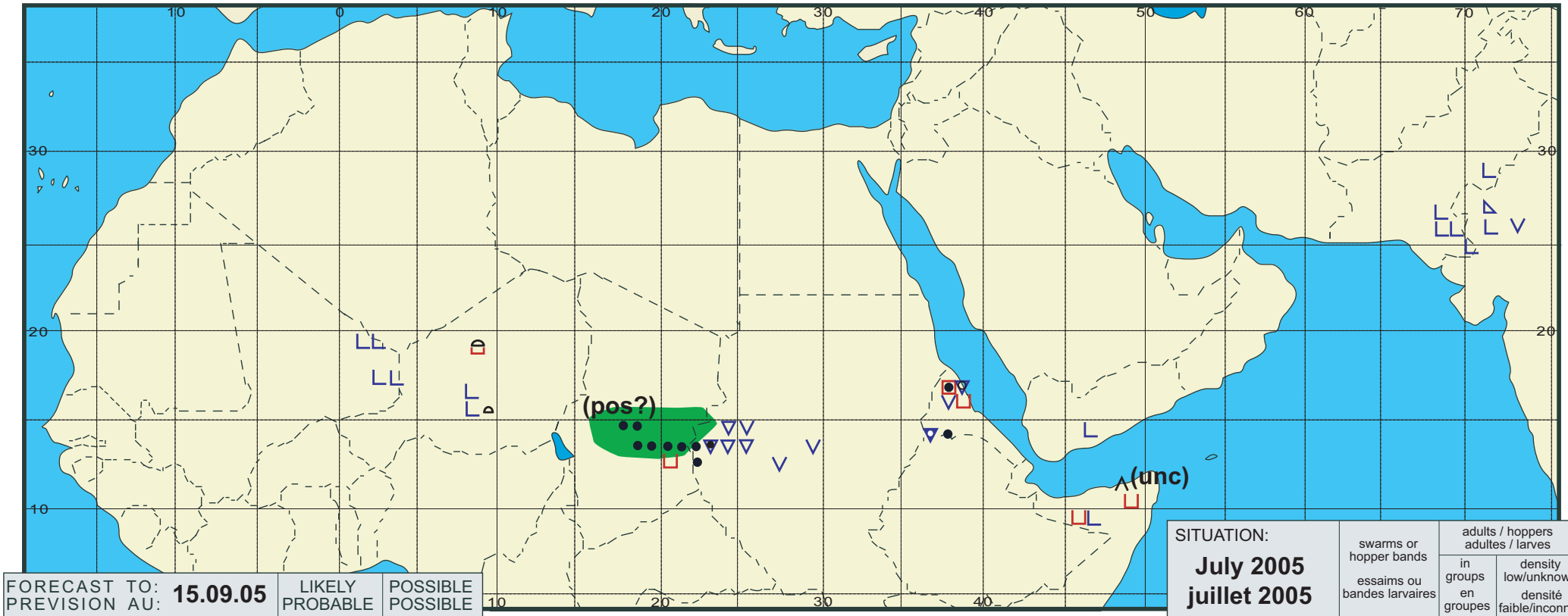

FORECAST TO: PREVISION AU: **15.09.05**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **July 2005 juillet 2005**	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves: in groups en groupes	adults / hoppers adultes / larves: density low/unknown densité faible/inconnue
immature adults adultes immatures	■	□	⊔
mature or partly mature adults adultes matures ou partiellement matures	◣	◺	L
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)	◘	◙	⊟