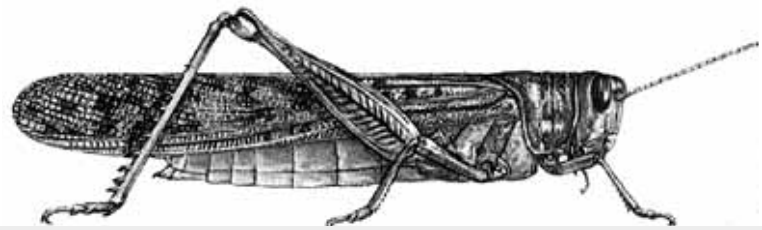

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations **No. 323**

(1 Sept 2005)

General Situation during August 2005 Forecast until mid-October 2005

During August, most of the Desert Locust activity was concentrated along the Chad/Sudan border and on the Eritrean Red Sea coast where hopper bands were present and developing. So far, one immature swarm has reportedly formed in eastern Chad while only adult groups have been seen in Darfur, Sudan. Although control operations are in progress in Sudan, a limited number of swarms could form during September and October in both countries. Some of these swarms are likely to move towards the winter breeding areas along the Red Sea coast while others could move towards Northwest Africa. A few additional swarms could form on the northern Eritrean coast where breeding is in progress. Although the situation remained calm in the Sahel despite unusually good breeding conditions, intensive survey operations should be maintained in the coming months.

Western Region. Even though unusually good rain has fallen for the third consecutive month in the Sahel and ecological conditions are extremely favourable for breeding, very few locusts were detected by intensive aerial and ground surveys during August and the situation remains calm. Only isolated solitarious adults were present in southern **Mauritania**, northern **Mali** and **Niger**. The situation is less clear in **Chad** where a few hopper bands were present and a small swarm formed at mid-month, and there were several unconfirmed reports of other swarms. There is a chance that a few swarms will form in September and October along the Chad/Sudan border and some of these could move towards Northwest Africa. Local breeding occurred in southern **Algeria** and control operations were carried out in August. Intensive ground and aerial surveys should be maintained in the Sahel during September and October in order to detect any signs that locust numbers might be increasing. This will probably become more evident once the rains end and vegetation starts to dry out.

Central Region. Ground control operations were carried out against hopper band infestations in the secure areas of Darfur, **Sudan**. Some of the hoppers had fledged and formed groups of immature adults in a few places. So far, locusts have not been detected by surveys conducted elsewhere in the summer breeding areas in Sudan. As vegetation dries out, any swarms that form in Darfur could move towards the Atbara River and the Red Sea coast. In **Eritrea**, local breeding occurred on the northern coastal plains where rains started in April. Although ground control operations treated hopper bands in August, there is a risk that a few small swarms could form in September but these are likely to remain on the coast for winter breeding. In **Ethiopia**, control operations treated a few residual hopper populations in Tigray. Locust numbers could increase in the interior of **Yemen** where good rains fell and breeding occurred during August.

Eastern Region. Small-scale breeding began in August in a few places in the summer breeding areas in Rajasthan, **India** where low numbers of solitarious adults were reported. So far, breeding has not been detected in adjacent areas in **Pakistan**. No significant developments are likely during the forecast period.

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.
Telephone: +39 06 570 52420 (7 days/week, 24 hr)
Facsimile: +39 06 570 55271
E-mail: eclo@fao.org
Internet: www.fao.org
DLIS: www.fao.org/ag/locusts

No. 323

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in August 2005

Good rains fell for a third consecutive month over large parts of the summer breeding area in the Sahel in West Africa and Sudan. Good rains also fell along both sides of the southern Red Sea. Consequently, ecological conditions were favourable for breeding in all of these areas.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated around 19N over West Africa during August. Several successive storms moved west along the ITCZ from Chad to Mauritania mainly during the first half of the month and caused rain to fall in most of the recession breeding areas in Mauritania, Mali, Niger and Chad where vegetation conditions were already improving. Rainfall increased during the second decade in southwest Mauritania, the southern part of Tamesna in Niger and in eastern Chad. Moderate to heavy rains fell throughout the Adrar des Iforas in northern Mali. MODIS imagery suggests that green vegetation was present at mid-month in southern Mauritania (north of Boutilimit to Moudjeria to Boumdeid, Tamchaket and northeast of Oualata), in the wadis of the Adrar des Iforas in Mali, in central Tamesna on both sides of the Mali/Niger border, in western Air in Niger, and in eastern Chad as far north as Fada and Wadi Achim.

In the **Central Region**, moderate to heavy showers fell during August in Darfur while light to moderate rainfall occurred in Northern Kordofan, White Nile and Kassala provinces in Sudan. Good rains fell for at least a second consecutive month along the Red Sea coastal plains in northeastern Eritrea and in Yemen. Light to moderate rains fell in the summer breeding areas in the interior of Yemen between Marib and the Hadhramaut and flooding was reported near Shabwah. Good rains also fell along the Gulf of Aden coastal plains in Yemen. Ecological conditions were favourable for breeding in western and central Sudan, in the Tokar Delta, the Red Sea coastal plains in Eritrea and Yemen and in the interior of Yemen. Conditions were improving along the Gulf of Aden coastal plains.

In the **Eastern Region**, light to moderate rain associated with the monsoon fell in parts of the summer breeding area in Rajasthan, India and in adjacent areas in the Cholistan and Tharparkar Deserts in Pakistan during August. Rainfall was heavier in India than in Pakistan and, consequently, ecological conditions were more favourable for breeding there.

Area Treated

Some 24,000 ha were treated in August compared to 125,000 ha in August 2004, bringing the total area treated since the beginning of the upsurge (October 2003) to 12.9 million ha.

Algeria	200 ha (28 July)
	630 ha (1-20 August)
Eritrea	11,117 ha (1-15 August)
Ethiopia	158 ha (1-20 August)
Sudan	12,289 ha (1-31 August)

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 in the south and northwest during the last decade of July and first decade of August. In mid-August, isolated mature adults were seen at a few places in Brakna, Adrar and Assaba regions and a few solitarious second instar hoppers were present east of Boumdeid (1726N/0950W).

• **FORECAST**

Small-scale breeding is expected to occur in those areas that have received good rainfall recently, causing locust numbers to increase gradually. Low numbers of adults may start to appear in the northwest by the end of the forecast period. Intensive surveys should be maintained during the forecast period.

Mali

• **SITUATION**

The situation during August remained nearly the same as in July. A few isolated immature and mature

adults persisted in the Adrar des Iforas and in central Tamesna. Some of the adults seen in the Tamesna were transiens. Individual locusts were seen during surveys carried out in the Timetrine.

• **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**

The situation during August remained nearly the same as in July. Isolated mature adults were present near Agadez (1700N/0756E) and in a few places in Tamesna and on the western side of the Air Mountains. In the Sahelian zone, a few immature adults were seen near Tanout (1505N/0850E) and northeast of Gouré (1359N/1015E). No locusts were seen during extensive ground and aerial surveys elsewhere in the country.

• **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 first week of August, hopper bands were present in Batha near Ati (1311N/1820E). At mid-month, a small swarm was seen southwest of Abeche (1349N/2049E) and hopper bands were present near the Sudan border and Adré (1326N/2214E). Although ground and aerial surveys found few locusts during the month, there were several unconfirmed reports by farmers of immature swarms moving north of Abeche in Ouaddai and near Arada (1501N/2040E) in Wadi Fira.

• **Forecast**

Small groups and perhaps a few small swarms could form in Ouaddai and Wadi Fira and, to a lesser extent, in Batha and Kanem. As long as ecological conditions remain favourable, adults are likely to stay, mature and lay eggs. If this occurs, there is a risk that locust numbers could increase rapidly.

Senegal

• **Situation**

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

• **Forecast**

No significant developments are likely.

Burkina Faso

• **Situation**

No locusts were reported during the first decade of August.

• **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 last decade of July, ground control operations treated 10 ha of solitarious third instar hoppers at densities of 5-6 hoppers/bush and 190 ha of solitarious immature adult groups at densities of 20-25 adults/bush present west of Tamanrasset (2250N/0528E).

During the first two decades of August, groups of solitarious hoppers and immature adults continued to be reported west of Tamanrasset. By mid-month, the hoppers had reached the fifth instar stage and adult densities had declined to 400-800 adults/ha. Ground control operations treated 630 ha. No locusts were reported in these areas or in the northern Sahara, in the west near Tindouf and in the east along the Libyan border during the remainder of the month

• **Forecast**

Low numbers of adults may persist 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 August.

• **Forecast**

No significant developments are likely.

Libyan Arab Jamahiriya

• **Situation**

No reports were received during August.

• **Forecast**

No significant developments are likely.

Tunisia

• **SITUATION**

No reports were received during August.

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

Late information indicated that groups of mature adults were present near El Fasher (1337N/2522E) in Northern Darfur during the last week of July.

During August, hopper bands of all instars and at densities up to 300 hoppers/m^2 persisted in Western Darfur near Geneina (1327N2230E) and, to a lesser extent, near Zalingei (1251N/2329E) as well as in Northern Darfur near El Fasher. Some of the hoppers had fledged and formed groups of immature adults in a few places. New areas of breeding were found in Southern Darfur near Nyala (1201N/2450E) where first instar hopper bands were seen early in the month. Ground control operations treated 11,597 ha in the secure areas in Darfur during August.

No locusts were seen elsewhere in the summer breeding areas except for solitarious immature adults at densities of 20 adults/ha along the Nile River north of Atbara (1742N/3400E) on 10 August.

• **FORECAST**

Low numbers of small adult groups and swarms are likely to form in Darfur during the forecast period. As vegetation dries out, some of these infestations are likely to move west while others will move east towards the Atbara River and the Red Sea coast. Small-scale breeding may be in progress or will occur in the summer breeding areas in Northern Kordofan and White Nile States and along the Atbara and Gasht Rivers but it may be difficult to detect. There is a risk that adult groups could appear on the southern coastal plains of the Red Sea and in the Tokar Delta from adjacent areas in Eritrea.

Eritrea

• **SITUATION**

During August, locust numbers increased on the northern Red Sea coastal plains because of local breeding in areas of recent rainfall. Hoppers of all instars at densities of 12-140 hoppers/m^2 were forming small groups and bands near Mehimet (1723N/3833E). By mid-month, most of the hoppers were third instar but some had already fledged and immature solitarious, transiens and gregarious adults were present. The infestations extended to the Sudanese border and were scattered within an area of about 45 km by 200 km. A second area of about 20 km^2 was similarly infested south of Mehimet at Shakat (1715N/3843E). First to third instar hoppers at densities of 10 hoppers/m^2 mixed with immature adults were present in a third area on the coast near Naro (1626N/3840E). Scattered mature adults were reported south of Massawa near Bada (1433N/4008E) in the northern Danakil depression. Control operations treated 11,117 ha from 1 to 15 August in all areas.

• **FORECAST**

A few small adult groups or swarms are likely to form on the northern Red Sea coastal plains during September and October as the remaining hoppers fledge and become adults. Most of the adults are likely to stay in place, mature and eventually lay eggs in those areas where ecological conditions are favourable. The populations in the Danakil are likely to disperse due to dry and hot conditions.

Ethiopia

• **SITUATION**

During the first two decades of August, ground control operations treated 158 ha of residual late instar hopper populations at two places in western Tigray. No locusts were seen elsewhere in the north during intensive surveys.

• **FORECAST**

A few isolated adults may persist in Tigray. No significant developments are likely.

Djibouti

• **SITUATION**

No locusts were seen during surveys carried out in the southeast near Ali Sabieh (1109N/4242E) on 10-11 August.

• **FORECAST**

No significant developments are likely.

Somalia

• **SITUATION**

No reports were received during August.

• **FORECAST**

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

Egypt

• **SITUATION**

During August, no locusts were seen during surveys

carried out in the Western Desert near Sh. Oweinat, along the shoreline of Lake Nasser, further east in the Red Sea Hills in the Allaqi area and on the Red Sea coast near Abu Ramad.

• **FORECAST**

No significant developments are likely.

Saudi Arabia

• **SITUATION**

No locusts were seen during surveys carried out on the Red Sea coastal plains near Jizan and the Yemeni border. No locusts were reported in other regions of the country.

• **FORECAST**

No significant developments are likely.

Yemen

• **SITUATION**

During August, scattered immature and mature adults persisted in the summer breeding areas in the interior near Ataq (1435N/4649E) and Shabwah (1522N/4700E). Local breeding occurred near Marib (1525N/4521E) where first to third instar hoppers were concentrated in a few places at densities up to 25 hoppers/m^2 on 30 ha.

• **FORECAST**

Locust numbers will increase slightly as small-scale breeding continues in the summer breeding areas in the interior between Marib and the Hadhramaut. A few small adult groups could form by the end of the forecast period. Low numbers of locusts may be present and breeding in areas of recent rainfall on the Red Sea coastal plains.

Oman

• **SITUATION**

No locusts were seen during surveys carried out along the Musandam peninsula in August.

• **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 21 August in the southern coast near Jask and Bandar Abbas.

• **FORECAST**

No significant developments are likely.

Pakistan

• **SITUATION**

During the second half of July, solitarious mature adults at densities up to 25 adults/ha were present in several places in the Tharparkar, Nara and Cholistan Deserts near the border with India.

During the first half of August, isolated mature adults persisted in the Cholistan Desert and, to a lesser extent, in the Nara and Tharparkar Deserts as well as in the Lasbela Valley west of Karachi.

• **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**

During August, isolated adults at densities up to 25 adults/ha were found at an increasing number of places in Rajasthan, primarily between Jodhpur (2618N/7308E) and Bikaner (2801N/7322E), and to a lesser extent near Barmer (2543N/7125E). Some adults were reported to be laying eggs northwest of Jodhpur.

• **FORECAST**

Hatching will occur in areas of recent egg laying in Rajasthan and low numbers of hoppers will be present during the forecast period. Consequently, locust numbers will increase slightly but will remain well below threatening levels.

Afghanistan

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

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)

2003-05 campaign evaluation. An independent evaluation of the recent Desert Locust campaign will be carried out during the next few months. It will be overseen by a Steering Committee composed of donors and affected countries. The results of the evaluation are expected to be reported at the next session of the DLCC. Consequently, this session has been rescheduled to accommodate the evaluation.

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

- **EMPRES/CR.** 6th Consultative Committee, Cairo (Egypt), 13-15 November
- **EMPRES/CR.** 13th Liaison Officers meeting, Yemen, January 2006
- **EMPRES/WR.** 4th Liaison Officers meeting, Algiers, January/February 2006
- **DLCC.** 38th Session, Rome, 6-10 March

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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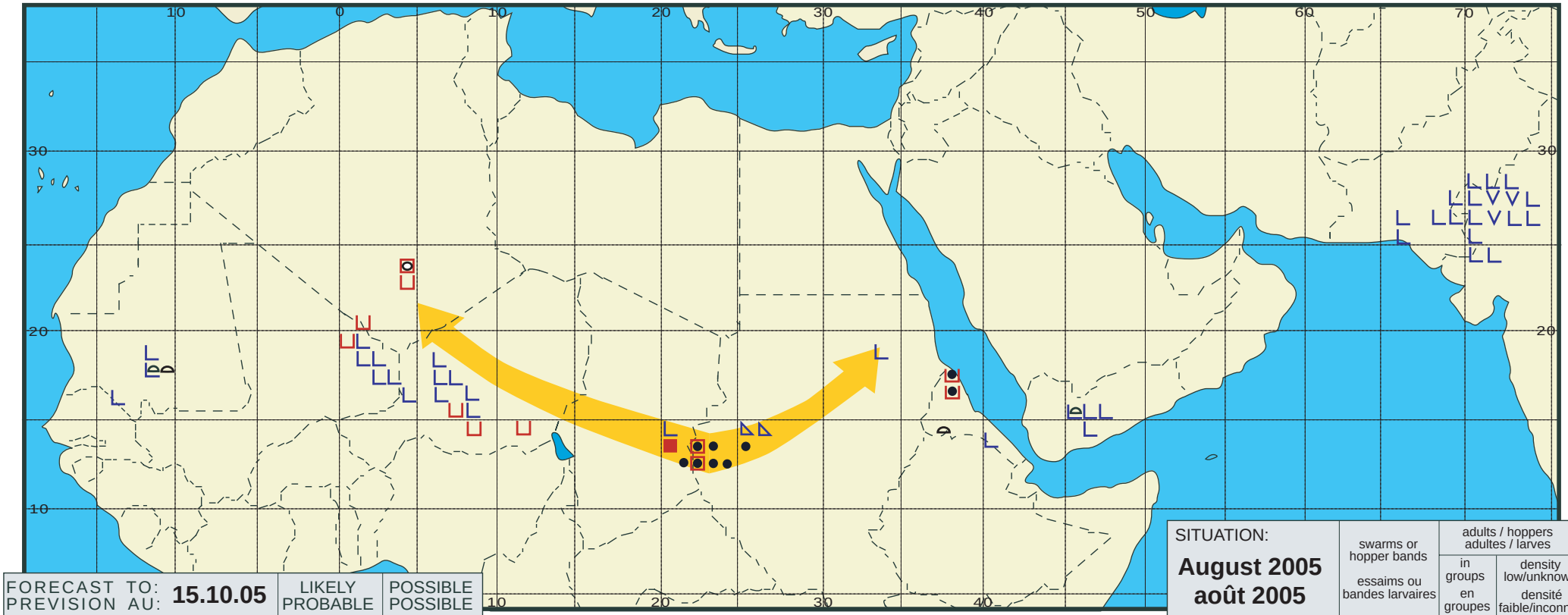

FORECAST TO: PREVISION AU: **15.10.05**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **August 2005 août 2005**	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	◣	◺	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)	◘	◙	◒