

# DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 240  
(6 Oct 1998)



## General Situation during September 1998 Forecast until mid-November 1998

Despite good rains, the Desert Locust situation remained calm in September. Only low numbers of locusts were reported in summer breeding areas with the exception of Yemen where limited control operations were undertaken against a few small hopper bands. During the forecast period, numbers will decline in the summer breeding areas as adults move towards winter breeding areas. The scale of this movement is expected to be very small and locust numbers should remain at a low and non-threatening level.

**Western Region.** Good rains fell throughout the summer breeding areas of Mauritania, Mali, Niger and Chad for the second month in a row. However, only a few isolated adults were present and breeding in southern Mauritania. In northern Mali, control was carried out during August against adults mixed with grasshoppers, and there was an unconfirmed report of swarms in September but this does not seem very likely. By the end of the month, rainfall declined in all areas and vegetation was starting to dry up. During the forecast period, a few adults may appear in northern Mauritania and persist in northern Mali and Niger.

**Central Region.** Limited control operations were carried out against a few small hopper bands that formed in the interior of Yemen as a result of earlier breeding. Unless further rains fall, adults may form small groups or swarmlets and move towards the Red Sea coastal plains of Yemen or Saudi Arabia which have received recent rainfall. Good rains fell in the interior of Sudan for the second month in a row. Only isolated adults were reported but small scale breeding is likely to be in progress. By the end of the forecast period, low numbers of adults may appear on the Red Sea coastal plains of Sudan and Eritrea. Isolated adults were also present in southern Egypt where heavy rains fell, and in northern Somalia.

**Eastern Region.** Although unusually good rains fell along parts of the Indo-Pakistan border, locust numbers steadily declined in both countries. Numbers may increase slightly if additional breeding occurs; otherwise, they will continue to decrease as vegetation dries out. A few isolated adults may appear in western Pakistan. Isolated adults persisted on the south-eastern coastal plains of Iran.

The FAO Desert 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 Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.

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### Weather & Ecological Conditions in September 1998

**Good rains fell throughout the summer breeding areas in the Sahel of West Africa and Sudan where favourable conditions persisted. By the end the month, rains had declined in all areas and vegetation was starting to dry out. A similar situation prevailed along the Indo-Pakistan border.**

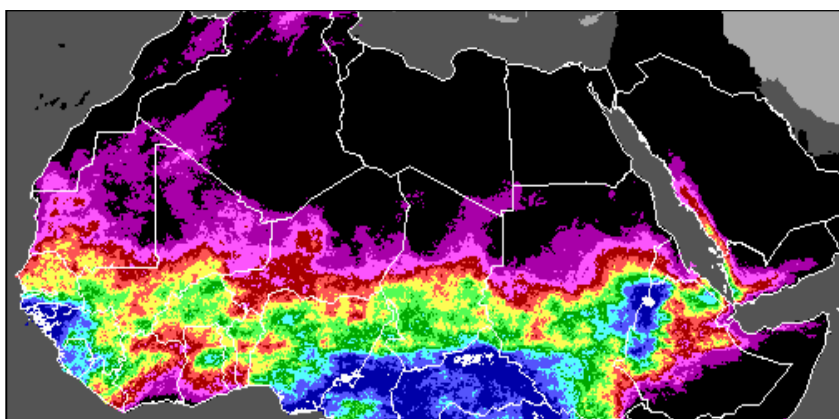
In **West Africa**, the ITCZ was generally located between 17N and 23N but by the end of the month it had started to retreat south towards 15N. As a result, good rains were well distributed throughout locust breeding areas but declined during the last dekad. In Mauritania, moderate to heavy rains fell throughout the south during the first dekad but subsequently decreased and by the last dekad only light rains were reported in a few places. In the north, isolated showers fell sporadically during the month between Akjoujt and Bir Moghreïn. Conditions were favourable for breeding in western Tagant (west and south of Tidjikja), southern Trarza (south of Boutilimit), northern Brakna and Assaba, Hodh El Garbi, southern Hodh El Chargui (south of Nema) and in some parts of the north (Akjoujt to Zouerate). Vegetation was starting to dry in some areas by the end of the month. In Mali, light rains fell in the Adrar des Iforas during the first dekad and isolated showers fell near Tessalit during the second dekad. Conditions are favourable for breeding in the Tilemsi Valley and in major wadis of the Adrar des Iforas. In Niger, moderate to heavy rains fell in eastern Tamesna, the Air, and Bilma during the first dekad but

subsequently declined and only prevailed in parts of Tamesna. Conditions were favourable for breeding in the wadis between Agadez and Arlit and in the Tamesna south of In-Abangharit. In Chad, good rains fell in central and eastern areas during the month, and light rains may have fallen in the north-east (Ennedi) during the first dekad. Breeding conditions were favourable in Biltine and in Ennedi (south of Fada) and perhaps in a few places in the extreme north-east (Erdi).

In **North-West Africa**, dry weather prevailed except for isolated showers in central Algeria and moderate rains over south-west Morocco (Dakhla south to Mauritania) during the second dekad. Patches of green vegetation may be present in western Algeria (Tindouf to Bechar) and in the east (west of Illizi).

In **Eastern Africa**, good rains fell throughout the summer breeding areas but declined by the end of the month. Heavy rains in the Eritrean highlands caused the Gash (Kassala), Atbara (Ed Damer) and Nile (Khartoum) Rivers to flood in Sudan. Conditions are favourable for breeding in Northern Darfur (to the north of Malha and Kutum), Northern Kordofan, White Nile and southern parts of the Northern region as well as in parts of the Eastern region and adjacent areas of the western lowlands in Eritrea. In Ethiopia, light rains fell in the railway area. In northern Somalia, conditions are becoming green as a result of recent rains.

In the **Near East**, light rain fell in parts of the Red Sea coastal plains and adjacent mountains of Yemen and Saudi Arabia (south of Jeddah). Rain also was reported in a few places of Shabwah in the interior of Yemen where breeding conditions are favourable. In Egypt, heavy rains and floods were reported on the Red Sea coastal plains and in adjacent interior areas from 22N to Hurghada and vegetation was becoming green by the end of the month.



Cold clouds increased over Desert Locust breeding areas during September 1998.

light  heavy

In **South-West Asia**, moderate to heavy rain associated with a monsoon depression fell in a few parts of Rajasthan, India and in adjacent areas of Pakistan (Chore reported 382 mm and Bahawalapur 58 mm) where favourable breeding conditions prevailed. Rains were especially heavy on the 16-20th.



## Area Treated

Mali	1,200 ha	(Aug; mixed with grasshoppers)
Yemen	35 ha	(22-31 Aug)
	77 ha	(1-6 Sep)



## Desert Locust Situation and Forecast

( see also the summary on the first page )

### WEST AFRICA

#### **Mauritania**

##### • SITUATION

A single solitary adult was seen south of Aioun El Atrous at 1634N/0942E on 7 September. During the last dekad of the month, isolated mature adults were seen at a few places in Trarza and western Tagant. Some of these were reported to be copulating east of Nouakchott.

##### • FORECAST

*Locust numbers are likely to increase but remain at a low and non-threatening level in the south-west and in the north between Akjoujt and Zouerate. Limited breeding could occur in areas of recent rainfall.*

#### **Mali**

##### • SITUATION

Small adult infestations that were reported in mid August in the Adrar des Iforas persisted during the last dekad of the month south-east of Kidal at Inforaten (1730N/0154E), Tin-Adjar (1736N/0152E) and north-west of Aguelhok at Marat (1929N/0042E) and Tarlit (1938N/0052E) covering about 2,050 ha. Control operations treated 1,200 ha. Some of the infestations were mixed with grasshoppers.

During September, isolated adults were seen in the Kidal region at Tin-Talassabat early in the month. There were unconfirmed reports from nomads of high densities of adults mixed with grasshoppers between Tarlit and Tibagaten (1934N/0044E) and immature and mature swarmlets near Bolrech and Ikadaouaten (2044N/0048E).

##### • FORECAST

*Small scale breeding is expected to be in progress and continue during October in the Tilemsi Valley and in some of the larger wadis in the Adrar des Iforas. As a result, locust numbers may increase and, as the vegetation becomes dry, concentrate and form a few small groups.*

#### **Niger**

##### • SITUATION

Isolated adults were reported in mid September near Diffa (1320N/1237E).

##### • FORECAST

*Low numbers of solitary adults are likely to be present and breeding in areas of recent rains in southern Tamesna and western Air. Consequently, locust numbers could increase but remain at a low and non-threatening level. Isolated adults may persist in the south-east.*

#### **Chad**

##### • SITUATION

No reports received.

##### • FORECAST

*Low numbers of solitary adults may be present and breeding in a few places in Biltine and Ennedi south of Fada and in the Erdi.*

#### **Senegal**

##### • SITUATION

No reports received.

##### • FORECAST

*No significant developments are likely.*

#### **Burkina Faso, Cape Verde, Gambia, Guinea Bissau, and Guinea Conakry**

##### • FORECAST

*No significant developments are likely.*

### NORTH-WEST AFRICA

#### **Algeria**

##### • SITUATION

No locusts were reported during September.

##### • FORECAST

*Isolated adults may be present or could appear in areas of recent rainfall near the Hoggar Mountains and Illizi. Limited breeding could occur in areas of green vegetation.*



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### Morocco

- SITUATION

No locusts were reported during September.

- FORECAST

*Low numbers of adults may appear in areas of recent rainfall in the Adrar Souttout of the extreme south-west.*

### Tunisia

- SITUATION

No reports received.

- FORECAST

*No significant developments are likely.*

### Libya

- SITUATION

No reports received.

- FORECAST

*No significant developments are likely.*

## EASTERN AFRICA

### Sudan

- SITUATION

Only scattered solitary adults were seen near El Safya (1530N/3006E) and Umm Saiyala (1426N/3110E) during surveys undertaken in Northern Kordofan in mid September. No locusts were seen during surveys in White Nile province. Results are awaited from surveys that are in progress in other areas of the country.

- FORECAST

*Low numbers of solitary adults are likely to be scattered throughout parts of Northern Darfur, Northern Kordofan, Northern and Eastern regions. Small scale breeding is likely to continue for another month or so until conditions become dry. At that point, low numbers of adults will likely move east to the Red Sea coastal plains where they could appear from late October onwards.*

### Eritrea

- SITUATION

No reports received.

- FORECAST

*Low numbers of solitary adults are probably present and may be breeding in parts of the western lowlands. As conditions become dry, adults are expected to move east through the highlands and ap-*

*pear on the Red Sea coastal plains from late October onwards.*

### Somalia

- SITUATION

During the first week of September, isolated immature adults were seen south of Berbera at the base of the coastal foothills near Lasadawaco (1003N/4459) and mature adults were seen further east at two places on the plateau north-east of Burao (0932N/4535E).

- FORECAST

*Low numbers of solitary adults are likely to persist and breed in a few places on the escarpment.*

### Djibouti

- SITUATION

No reports received.

- FORECAST

*No significant developments are likely.*

### Ethiopia

- SITUATION

No locusts were seen in the eastern region near Dire Dawa and Jigjiga up to 25 September.

- FORECAST

*Isolated adults may be present and breeding on a small scale in areas of recent rainfall near Dire Dawa.*

### Kenya, Tanzania and Uganda

- FORECAST

*No significant developments are likely.*

## NEAR EAST

### Saudi Arabia

- SITUATION

No locusts were reported during September.

- FORECAST

*Low numbers of locusts are likely to present and may be breeding on the southern Tihama near Jizan. Adults may appear elsewhere on the coastal plains south of Jeddah and breed on a small scale. Consequently, numbers are expected to increase but remain at a low and non-threatening level.*

### Yemen

- SITUATION

A late report indicated that 62 ha were treated in the interior of Shabwah near Ataq (1435N/4649E) from 22 August to 1 September. No further details were provided.

In September, hopper groups of all instars were present during the first dekad at six locations west of Ataq where laying occurred the previous month. The hoppers were solitary and transients at densities of

up to 650 per sq. metre. By mid month, hopper bands had formed at four places mixed with low to moderate numbers of solitary and transiens adults. The bands ranged in size from 2-10 sq. m. with densities up to 100 per sq. m. Limited control operations treated 50 ha near cropping areas at Al Maglam (1439N/4647E). Elsewhere, isolated mature adults were present at five places along the coastal plains east of Aden. No locusts were seen during surveys at mid month along the southern coast and in Wadi Hadhramaut.

• **FORECAST**

*Unless further rains fall in Shabwah, current infestations are likely to concentrate in response to drying conditions and small bands and swarmlets may form. Consequently, numbers will decline as adults move west towards the Red Sea coastal plains or south towards the Gulf of Aden plains. Laying could occur on the coastal plains by the end of the forecast period.*

**Egypt**

• **SITUATION**

Isolated mature adults continued to be present in a few oases in the Nile River Valley near Lake Nasser on 15-19 September. Similar populations were seen on the Red Sea coastal plains near Halaib (2212N/3635E) and in adjacent interior areas.

• **FORECAST**

*Isolated adults will persist and may breed on a very small scale in a few oases near Lake Nasser and on the Red Sea coastal plains.*

**Oman**

• **SITUATION**

No reports received.

• **FORECAST**

*No significant developments are likely.*

**Kuwait**

• **SITUATION**

No locusts were reported during August.

• **FORECAST**

*No significant developments are likely.*

**UAE**

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

*No significant developments are likely.*

**Bahrain, Iraq, Israel, Jordan, Qatar, Syria and Turkey**

• **FORECAST**

*No significant developments are likely.*

**SOUTH-WEST ASIA**

**Iran**

• **SITUATION**

In late August, isolated mature adults were seen at three locations on the coastal plains near Chabahar (2518N/6038E) on the 22nd.

In September, isolated mature adults were present on the coastal plains west and east of Chabahar on the 21st. No locusts were seen during surveys on the coastal plains east of Bushehr on the 14th and 21st.

• **FORECAST**

*Isolated adults may persist at a few places along the Chabahar coastal plains but numbers will remain low and no significant developments are expected.*

**Pakistan**

• **SITUATION**

During September, the number of locations reporting locusts continued to decline although densities increased probably in response to drying conditions. Up to 67 maturing and mature adults per ha were present during the first fortnight at 24 locations in the desert along the Indian border from Tharparkar to Bahawalpur and in Las Bela district west of Karachi. Up to 90 adults per ha were reported during the second fortnight at 21 locations in the above areas.

• **FORECAST**

*Numbers may increase slightly if additional breeding occurs; otherwise, they will continue to decline in the summer breeding areas as conditions become dry. Low numbers of adults may start to appear in Baluchistan by the end of the forecast period.*

**India**

• **SITUATION**

During September, the number of locations reporting locusts in Rajasthan continued to decline although densities increased probably in response to drying conditions. Up to 75 adults per ha were present during the first fortnight at 7 locations in Bikaner district.

• **FORECAST**

*There is a low possibility of another generation of breeding in areas of recent rainfall in Rajasthan. Even if this occurs, numbers will continue to remain low and non-threatening. Otherwise, numbers will continue to decline in most areas and only a few isolated adults will persist.*



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## Glossary of terms

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

### Afghanistan

#### • FORECAST

*No significant developments are likely.*



### Madagascar update

**African Migratory Locust.** During the first two dekads of September, adult populations persisted and were reported to be forming groups and swarms while others remained scattered. Swarms were seen flying over Antananarivo several times at mid month. Adults continued to mature but at differing rates. There were unconfirmed reports of hoppers in a few places. Good rains during the second dekad should insure favourable conditions for breeding. During the period, 18,095 ha (53 swarms) were treated by the two EC helicopters and about 5,000 ha by other aircraft. Further details are awaited.

**Red Locust.** Swarms are still present in the south near Manambien. No further details are available.



### Announcements

**Locust reporting.** Affected countries are kindly reminded to make sure that locust situation reports are sent to FAO HQ by the 25th day of the month so the information can be included in the FAO bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

**Desert Locust Control Committee Technical Group (DLCCTG).** The sixth session is being held in Rome on 6-8 October to discuss EMPRES progress, control resources, research coordination, DLCC recommendations, and the future of the DLCCTG.

### NON-GREGARIOUS ADULTS AND HOPPERS

#### ISOLATED (FEW)

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

#### SCATTERED (SOME, LOW NUMBERS)

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

#### GROUP

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

### ADULT SWARM AND HOPPER BAND SIZES

#### VERY SMALL

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

#### SMALL

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

#### MEDIUM

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

#### LARGE

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

#### VERY LARGE

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

### RAINFALL

#### LIGHT

- 1 - 20 mm of rainfall.

#### MODERATE

- 21 - 50 mm of rainfall.

#### HEAVY

- more than 50 mm of rainfall.

### OTHER REPORTING TERMS

#### BREEDING

- the process of reproduction from copulation to fledging.

#### SUMMER RAINS AND BREEDING

- July - September/October

#### WINTER RAINS AND BREEDING

- October - January/February

#### SPRING RAINS AND BREEDING

- February - June/July

#### DECLINE

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

#### **OUTBREAK**

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

#### **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.



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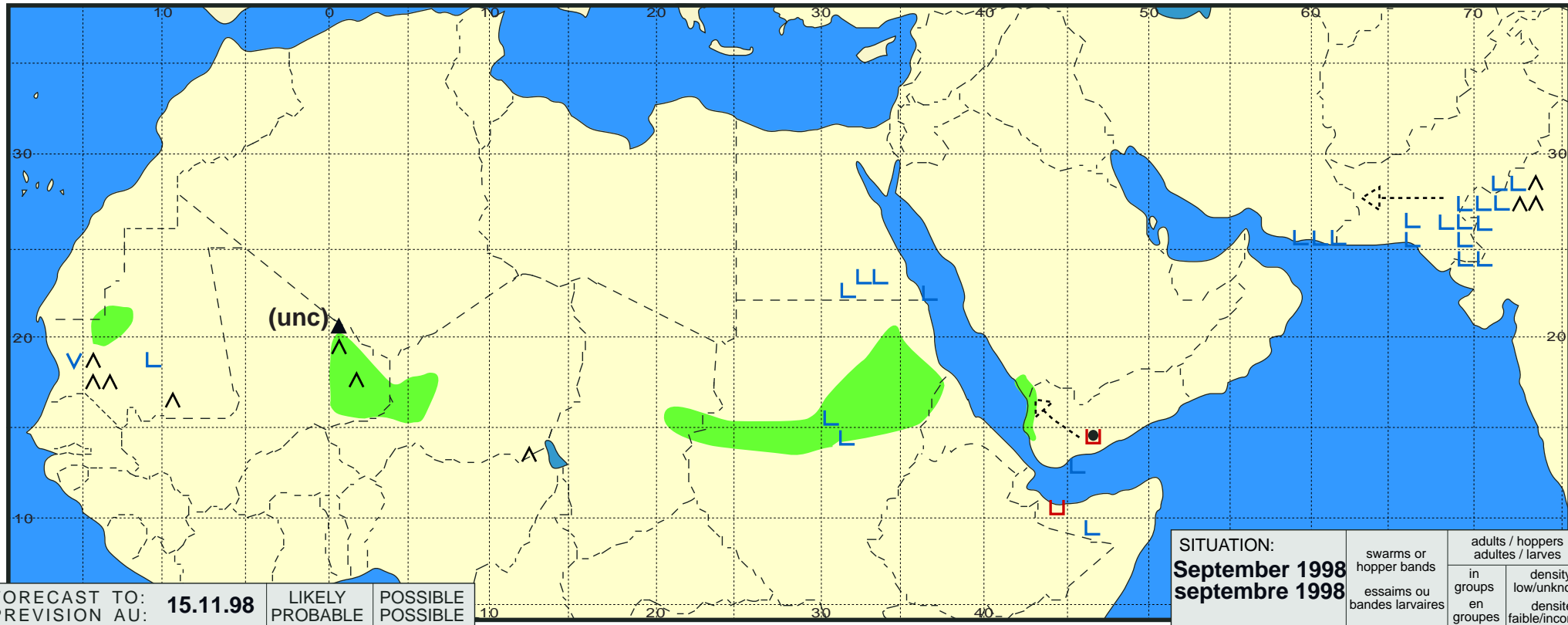
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# Desert Locust Summary

## Criquet pèlerin situation résumée

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FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.11.98		
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: September 1998 septembre 1998	swarms or hopper bands	adults / hoppers adultes / larves	
	essaims ou bandes larvaires	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)			

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)			