

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 222
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General Situation during February 1997 Forecast until mid-April 1997

Small scale Desert Locust breeding was reported during February from a few places in North-West Africa and in the Red Sea area. As a result, low numbers of solitary hoppers and new adults were present in northern Mauritania and along the Red Sea coastal plains of Sudan and Saudi Arabia. Unless additional rains fall, breeding during the forecast period will be limited in the spring breeding areas of North-West Africa and in the Red Sea area.

Western Region

Isolated solitary adults were present in northern Mauritania and central Algeria during February. A few of those in the latter area were reported to be in the transiens phase. There was also an unconfirmed report of small scale breeding in northern Mauritania. Although very little rainfall fell during the month and conditions are not particularly favourable for breeding, there is still a possibility of limited breeding in the coming months if additional rainfall occurs. Otherwise, vegetation will continue to dry out and adults may concentrate to form small groups.

Central Region

Winter breeding so far has been confined to just a few places along the Red Sea coastal plains as a result of low rainfall since November. Scattered solitary adults were reported by Saudi Arabia and to a lesser extent by Sudan, Eritrea and Yemen. The majority of the infestations were present along the central Red Sea coastal plains of Saudi Arabia where adults were concentrating in remaining areas of green vegetation and changing from solitary to transiens phase. Some of these were treated by ground teams. Breeding has also occurred in a few areas along the coast of Sudan. However, further breeding will be limited unless additional rainfall occurs during the forecast period.

Eastern Region

Light rainfall may have occurred during February in the spring breeding areas of coastal and interior Baluchistan in eastern Iran and perhaps in adjacent areas of western Pakistan. Although no reports of locusts have been received to date, it is expected that small scale breeding will occur in parts of Baluchistan in the coming months.



Weather & Ecological Conditions during Feb 1997

As a result of very little rainfall during February, ecological conditions are generally dry and not favourable for breeding in the spring breeding areas of North-West Africa, the Red Sea and Baluchistan of eastern Iran and western Pakistan. Night-time temperatures in these areas were relatively low.

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, Other Migratory Pests and Emergency Operations Group, AGP Division, FAO, 00100 Rome, Italy.

It is also available on the Internet.

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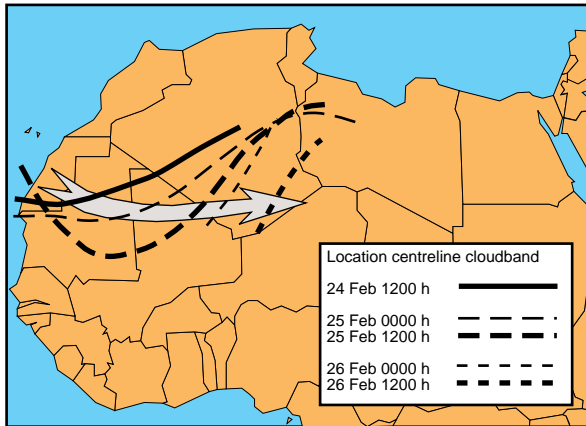
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In contrast to the past few months, the western portion of **North-West Africa** was dominated by several high pressure areas. Consequently, only light rains fell from an occasional shower in the coastal areas north of the Atlas Mountains in Morocco. Further east, the weather was influenced by a number of frontal systems which produced some rain in Tunisia and on the coast of Libya. Prevailing winds were highly variable in the northern part of the Western region, whereas further south they tended to be more easterly. A large band of cold clouds formed over the interior of Algeria and Mali with the leading edge extending to Libya and the rear to Mauritania from 24-27 February. Localised showers may have been associated with these clouds (Fig. 1). The temperature in western Algeria near Tindouf and Bechar varied from 18-25°C during the day and 4-14°C during the night. Temperatures in the Hoggar area were between 20-26°C and 11-18°C during the day and night respectively. Vegetation in Morocco is reported to be drying out between Laayoune and Agadir. In Algeria, it is becoming green in a few places of the south-west and drying out further south in the Sahara.

In **West Africa**, the Inter-Tropical Convergence Zone (ITCZ) was generally located between 5-10N and the winds in the region came from the east. Over coastal areas, clouds drifting in from the Atlantic Ocean may have produced some localised showers in Mauritania, but most of these were unable to penetrate further east into Mali. The southern end of the band of clouds mentioned above may have produced rain in Mauritania and in Mali north of 17N. Temperatures in Mauritania were between 20-31°C during the day and

10-20°C during the night. The vegetation is drying out in most places and the soil is dry and unfavourable for breeding.

In **Eastern Africa**, northerly and north-easterly winds prevailed over the interior of Sudan and no significant rain was reported during February. A convergence zone was generally located around 13N/37E over the interior of Ethiopia and sometimes extended to the Red Sea Convergence Zone (RSCZ) which was situated over the coast of Eritrea. Here, northerly winds along the coast of Sudan and the northern part of the Eritrean coast met easterly to south-easterly winds coming from the southern Red Sea. Although a low cloud cover was common in the RSCZ, no rain was reported. Breeding conditions were reported to be favourable on the Red Sea coastal plains of Sudan near Port Sudan where daytime temperatures were between 22-26°C and between 11-14°C during the night. Ecological conditions in the interior of northern Somalia are dry, compared the coastal plains near Djibouti where green vegetation and wet soil were reported in a few places.

In the **Near East**, two large depressions that formed over the Mediterranean influenced the weather in the second half of the month as they moved eastward over the northern part of Egypt and Saudi Arabia to Iraq. The frontal systems associated with these depressions may have produced light rainfall in some places. The prevailing winds over southern Arabian were north-easterly along the coast, veering to south-east over the interior. The eastward moving depressions further north imposed a westerly wind over the Red Sea coast and the northern interior in the last days of the month. Breeding conditions are favourable on the central Red Sea coastal plains of Saudi Arabia between Rabigh and Al-Lith.

In **South-West Asia**, temperatures in the Baluchistan region of eastern Iran and western Pakistan varied from 21-26°C during the day to 0-14°C during the night. The prevailing winds were from the west or north and no significant rainfall was reported. Consequently, ecological conditions are not suitable for breeding at the moment.



Area Treated

Saudi Arabia 1,020 ha (February)



Desert Locust Situation and Forecast

WEST AFRICA

Mauritania

• SITUATION

Isolated immature adults were present during the first two dekads of February between Akjoujt (1944N/1420W) and Atar (2031N/1303W). Nomads reported seeing a mature swarm moving north in the El Hank region on the 5th and 7th near Bir Amrane (2249N/0842W) which may have originated near the Malian border where vegetation is reported to be green. There was also an unconfirmed report of mature adults and hoppers near the Moroccan border west of Fderik (2240N/1241W). No locusts were reported during the last dekad of the month.

• FORECAST

Low numbers of adults will continue to mature in parts of Adrar, Inchiri and Tiris-Zemmour. Some of these could breed on a limited scale if further rainfall occurs during the forecast period.

Mali

• FORECAST

Isolated adults may be present and will persist in some parts of the Adrar des Iforas.

Niger

• FORECAST

Isolated adults may be present and will persist in a few areas of central Tamesna and perhaps in Air.

Burkina Faso, Cape Verde, Chad, Gambia, Guinea Bissau, Guinea Conakry and Senegal

• FORECAST

No significant developments are likely.

NORTH-WEST AFRICA

Morocco

• SITUATION

Isolated adults at a density of 5 per ha were reported at Aguejguel (2925N/0901W) during the first half of February. No locusts were reported during the second half of the month.

• FORECAST

Small scale breeding may occur in a few areas south of the Atlas Mountains in Oued Draa and along the western coast if further rainfall occurs during the forecast period. Otherwise, adults are likely to become concentrated in vegetation that remains green and could start to move towards the south by the end of the forecast period. Low numbers of adults may be present in the extreme south-west.

Algeria

• SITUATION

Isolated maturing adults were present at several locations in the south-west between Tindouf (2742N/0810W) and Adrar (2751N/0019W) and at one location east of Adrar during February.

• FORECAST

Small scale breeding may occur in parts of the central and western Sahara if further rainfall occurs during the forecast period. Otherwise, adults are likely to become concentrated in vegetation that remains green. Locust numbers may increase slightly in southern areas as adults begin to move from the north at the end of the forecast period.

Libya

• FORECAST

Scattered adults may be present in a few places of the west and north-west where they could breed in areas of recent rainfall.

Tunisia

• FORECAST

No significant developments are likely.

EASTERN AFRICA

Sudan

• SITUATION

A late report indicated that fifth instar hoppers mixed with solitary fledglings were present between Suakin and Port Sudan on 21 January. Most of the infestations were in millet fields and densities were up to 1 per sq. metre. A week later, most of the hoppers had fledged.

A few small swarms and adults appeared on the Red Sea coastal plains about 60 km north of Port Sudan in mid February. Adults were seen copulating and laying eggs on 22 February within an estimated area of about 3,600 ha between 2009-2013N/3712-3709E. Transient infestations at densities of 400 adults/ha and 2-3 first to fourth instar hoppers/sq. metre were present nearby at Khor Yoider (2014N/3709E), and scattered mature adults were seen within 12 ha at Eight (2009N/3707E). On the southern coastal plains, scattered mature adults mixed with *Locusta* were seen laying near Jebel Haleshtu (1755N/3820E), Adobana (1809N/3817E) and Khor Balatat (1800N/3825E) on the 23rd. A total of about 920 ha were estimated to be infested. No locusts were reported from the Tokar Delta up to 28 February.



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• FORECAST

Locust numbers may increase slightly as a result of further breeding during the forecast period in a few places along the Red Sea coastal plains. As vegetation starts to dry up, some of these may concentrate and form small groups.

Eritrea

• SITUATION

There was an unconfirmed report of solitary adults on the Red Sea coastal plains north of Massawa during the first half of February.

• FORECAST

Isolated adults are likely to be present in a few places along the Red Sea coastal plains between Massawa and Karora but numbers will decline unless further rainfall occurs during the forecast period to allow breeding.

Somalia

• SITUATION

A few isolated maturing adults were seen at a few places during surveys along the north-western coastal plains on 10-16 February between the Djibouti border and Berbera (1028N/4502E) and on the 19-25th from Berbera to Onkhor (1046N/4610E).

• FORECAST

Isolated adults are expected to persist along some parts of the north-west coastal plains and adjacent areas of the interior.

Djibouti, Ethiopia, Kenya, Tanzania and Uganda

• FORECAST

No significant developments are likely.

NEAR EAST

Saudi Arabia

• SITUATION

Groups of mature adults were seen during February at a few places along the Red Sea coastal plains between Al Lith (2010N/4020E) and Rabigh (2242N/3910E). Control operations were carried out at three locations, treating a total of 1,020 ha. The infestations near Rabigh and Khulais (2217N/3920E) consisted of transiens adults that were copulating and laying at densities of up to 4,500 per ha.

• FORECAST

Locust numbers will increase slightly as a result of small scale breeding along the central Red Sea coast during the forecast period. By mid April, hoppers and new adults could concentrate and form small groups as vegetation begins to dry out. Some of the adults may start to move towards the interior.

Yemen

• SITUATION

No locusts were seen during surveys carried out on the southern coastal plains east and west of Aden on 19-24 February except for isolated solitary adults in the Dar Al-Gudaimi (1250N/4418E) area. There were no reports of locusts on the Red Sea coastal plains during the month.

• FORECAST

Locust numbers are expected to decline unless further rainfall occurs during the forecast period on the coastal plains of the Red Sea and Gulf of Aden.

Egypt

• FORECAST

Locust numbers are expected to decline during the forecast period on the southern Red Sea coastal plains as vegetation dries out. Densities may increase slightly as adults become concentrated in remaining areas of green vegetation.

Kuwait

• SITUATION

No locusts were reported during January.

• FORECAST

No significant developments are likely.

Oman

• FORECAST

Low numbers of adults may be present in some areas of the Batinah coast between Seeb and Sohar, and perhaps in Sharkiya and in the Musandam Peninsula. Small scale laying may occur in any areas of recent rainfall with hoppers appearing by the end of the forecast period.

UAE

• FORECAST

Low numbers of adults may be present in some areas of the Fujayrah coast. Small scale laying may occur with hoppers appearing by the end of the forecast period in areas of recent rainfall.

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

• FORECAST

No significant developments are likely.

SOUTH-WEST ASIA

Pakistan

• SITUATION

No locusts were reported during the first half of February.

• FORECAST

Low numbers of adults may be present in coastal and interior areas of Baluchistan. Small scale laying and hatching may occur if rains fall during the forecast period.

India

• SITUATION

No locusts were seen during surveys carried out during the first half of February.

• FORECAST

Low numbers of solitary adults may persist in a few places of Rajasthan.

Iran

• FORECAST

Low numbers of adults may be present in coastal and interior areas of Baluchistan. Small scale laying and hatching may occur if rains fall during the forecast period.

Afghanistan

• FORECAST

No significant developments are likely.



Other Species & Announcements

Locust Outbreak in Madagascar. An outbreak of *Locusta migratoria capito* has been reported in Madagascar. This has developed as a result of successful breeding during 1996. The populations are already gregarious and widely distributed in the south-west of the country where 1 to 2 million hectares are estimated to be infested. The infestations consist of early instar hopper bands in the west, late instar bands in the centre, and new swarms are starting to form in the eastern part of the infested area.

Desert Locust Interactive Mapper. The Locust Group has developed an application on the InterNet which allows the user to select a time period and different types of locust infestations for display on a map that can be printed. The data is continuously updated on a regular basis. You can visit this site at: <http://193.43.36.11/mapper/>



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 per 400 m foot transect (or less than 25 per ha).

SCATTERED (SOME, LOW NUMBERS)

- 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).

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 km² • band: 1 - 25 m²

SMALL

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

MEDIUM

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

LARGE

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

VERY LARGE

- swarm: 500+ km² • band: 50+ ha

RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.



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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

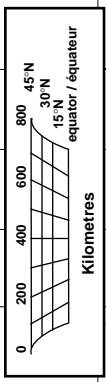
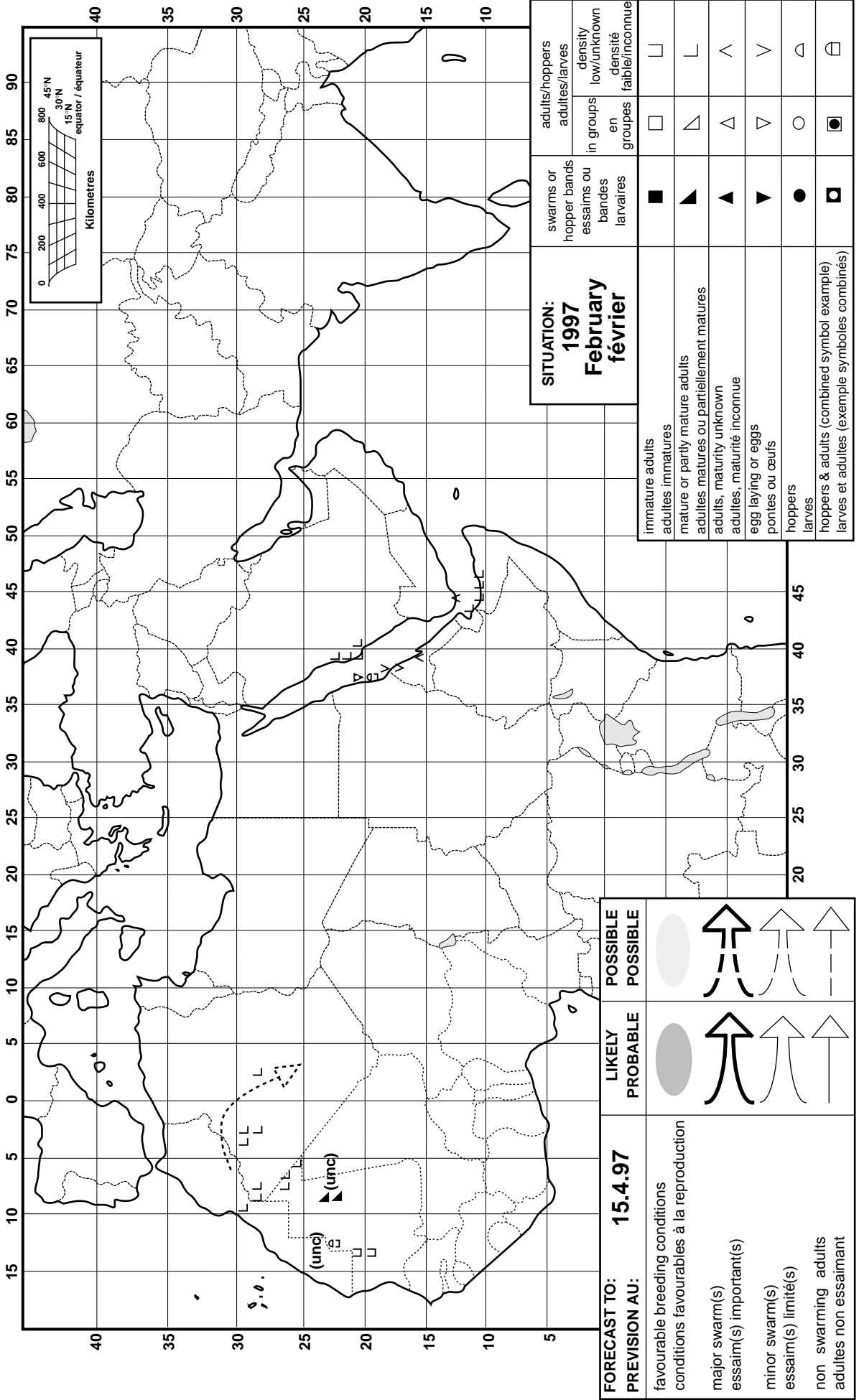
- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to-gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust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

issued: 4 March 1997



Desert Locust summary Criquet pèlerin situation résumée

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SITUATION: 1997 February février		swarms or hopper bands essaïms 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	▼	▽	V
hoppers larves	●	○	◡
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)	◼	◻	◻

FORECAST TO: PREVISION AU:	15.4.97	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction			
major swarm(s) essaïm(s) important(s)			
minor swarm(s) essaïm(s) limité(s)			
non swarming adults adultes non essaïmant			