

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 258
(4 April 2000)



General Situation during March 2000 Forecast until mid-May 2000

The Desert Locust situation continues to remain calm except for two places in West and North-West Africa. In northern Mauritania, hopper bands started forming in early March near the Moroccan border as a result of earlier breeding. Along the Algerian-Libyan border, breeding is in progress in one area where high densities of adults laid eggs towards the end of March. Control operations were undertaken and continue in all three countries. No breeding was reported along both sides of the Red Sea except for one area in Sudan where low numbers of hoppers are maturing. During the forecast period, small scale swarm formation is expected in northern Mauritania and hopper bands will form in south-eastern Algeria and south-western Libya. Locust numbers will decline on the coastal plains of Sudan. Elsewhere, the situation is likely to remain calm in view of the prevailing dry and unfavourable conditions and no significant developments are expected.

Western Region. Breeding continued in northern Mauritania where hatching commenced during the second week of March followed shortly thereafter by the formation of small but dense hopper bands. Most of the infestations were located near Bir Moghreïn and the Moroccan border but new locations were found further south by the end of the month. Ground operations treated 340 ha during March. Hatching should come to end in early April but hopper bands

will continue into May, with new swarms starting to form during the second half of April onwards. Unless further rains fall, the swarms are likely to move on a relatively small scale towards the north-east or south during May. Along the Algerian-Libyan border, high densities of adults, thought to have originated from earlier and undetected local breeding or from previous infestations in northern Mali and Niger, laid eggs between Djanet, **Algeria** and Ghat, **Libya**. Hatching and band formation are expected to occur during the forecast period. Control operations so far have treated 1600 ha in Algeria and 650 ha in Libya. In **Morocco**, small groups of adults were present in the extreme south-west and insignificant adults were reported in a few places along the southern side of the Atlas Mountains. Low numbers of adults may be present and will persist in the Adrar des Iforas, **Mali** and in the southern Air, **Niger**.

Central Region. Low numbers of solitary hoppers continued to mature in one area on the Red Sea coastal plains of **Sudan**. There were no other reports of locusts or breeding on the coastal plains of **Eritrea** or **Saudi Arabia** nor in **Ethiopia** and **Oman** due to dry and unfavourable conditions. In northern **Somalia**, a few isolated adults were present on the central coastal plains. As this year's winter breeding produced very few locusts and further rainfall is unlikely, no significant developments are expected during the forecast period.

Eastern Region. Low numbers of solitary adults were present in the spring breeding areas of Baluchistan, **Pakistan** but there were no reports of laying due to prevailing dry and unfavourable conditions. If rain occurs, locust numbers may increase in parts of Baluchistan in **Iran** and Pakistan 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 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.

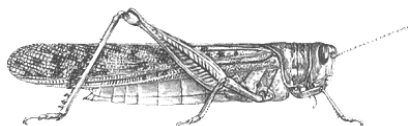
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No. 258

DESERT LOCUST BULLETIN



Weather & Ecological Conditions in March 2000

Unusually dry weather prevailed in all locust areas. Conditions remain unfavourable for breeding except in parts of northern Mauritania and in one area along the Algerian-Libyan border.

In **West Africa**, no significant rainfall was reported during March. As a result of a strong high pressure system over North Africa that persisted for the first half of the month, the prevailing winds from the north-east shifted to the east and south-east causing temperatures to be higher than normal in northern Mauritania. Severe sandstorms occurred in northern areas of Mauritania, Mali and Niger. Despite the lack of rainfall, patches of green vegetation were present in wadis and low-lying areas of northern Mauritania near Bir Moghreïn and in a few places of the Adrar des Iforas in northern Mali and parts of the southern Air, Niger.

In **North-West Africa**, no significant rainfall was reported during March. Temperatures were higher than normal in southern Morocco, southern and central Algeria, and western Libya as a result of a strong high pressure system over Libya during most of the month. Prevailing winds were from the east and south-east over the western portion of the region and varying from the north and north-east to the south and south-west over the eastern part of the region. In Morocco, vegetation was drying up in most places except for a few spots in wadis and low-lying areas south of the Atlas Mountains. In Algeria, vegetation was green from last month's rains and conditions were favourable for breeding in the Tassili N'Ajjer region of the extreme south-east adjacent to the Libyan border. Similar conditions continue across the border into south-western Libya near Ghat.

In **Eastern Africa**, prevailing winds were mainly from the north-east and no significant rainfall was reported during March. Although clouds were present at times during the second half of the month over the Red Sea coastal plains between Suakin, Sudan and Masawa, Eritrea, conditions were generally dry except for one area south of Suakin where green vegetation was present in several khors and near

Sheib, Eritrea where a few patches of green vegetation were reported. In addition, satellite imagery suggests the presence of green vegetation in Tokar Delta, Khor Baraka, and on the plains to the south near Aqiq, Sudan. In Ethiopia, dry conditions persisted in the south-east as a result of an on-going drought. In northern Somalia, clouds were present at times over the central coast and mountains but conditions remained dry except for small patches of green vegetation in a few wadis on the coastal plains. Dry conditions persisted in the interior and on the escarpment.

In the **Near East**, no significant rainfall was reported during March. Consequently, vegetation was dry and conditions were unfavourable for breeding along the Red Sea and Gulf of Aden coastal plains and in the spring breeding areas of the interior of Saudi Arabia and the Batinah coast of northern Oman. Satellite imagery suggests that some green vegetation may have been present on the Red Sea coastal plains of Yemen in early March but that it was limited to just a few of the major wadis.

In **South-West Asia**, no significant rainfall was reported during March. Conditions were generally dry but may be improving slightly in a few of the spring breeding areas of Baluchistan such as the Turbat Valley in western Pakistan, and the Vashnam Plains and Bampur area of south-eastern Iran.



Area Treated

Algeria	1600 ha (31 March)
Libya	650 ha (21-23 March)
Mauritania	340 ha (1-31 March)



Desert Locust Situation and Forecast

(see also the summary on the first page)

WEST AFRICA

Mauritania

• SITUATION

During March, adults continued to regroup and lay eggs in the extreme north near the Moroccan border. Hatching was first reported on the 8th at 11 locations near Bir Moghreïn (2510N/1135W). During the second dekad, first instar hoppers formed dense groups and bands, ranging in size from 10 sq. m. to 5 ha. Second instar hoppers were first seen on the 14th. Most of the infestations were concentrated in the Tamreiket area

about 60 km north-east of Bir Moghreïn between W. Zouania (2535N/1116W) and W. El Mrhader (2535N/1105W) and to a lesser extent just to the east of Bir Moghreïn. Adult groups were seen laying in a third area, Beirat Tourassine, about 110 km south-east of Bir Moghreïn, where hatching started on the 18th. During the third dekad, control operations increased near Bir Moghreïn, treating primarily second and third instar bands. Small patches of first instar hopper bands started forming in the Beirat Tourassine area on the 30th where no further laying was seen after the 22nd and in a fourth area of previous breeding west of Beirat Tourassine. A total of 340 ha was treated by ground teams during the month.

• **FORECAST**

Hatching is likely to come to an end by early April in north-western Tiris-Zemmour but hoppers will continue to mature, forming groups and bands. Fledging is expected to start in mid April and continue for the remainder of the forecast period with the likelihood of adult groups or small swarms forming. Unless further rains fall, these will eventually move towards the north-east or southwards in May.

Mali

• **SITUATION**

A late report indicated that no surveys were undertaken during February but there were unconfirmed reports from nomads and travellers of the formation of small swarms in several wadis of Timetrine.

• **FORECAST**

Low numbers of locusts may be present and are likely to persist in a few wadis in the Adrar des Iforas.

Niger

• **SITUATION**

No reports received.

• **FORECAST**

Low numbers of locusts may be present and are likely to persist and mature in a few places in south-eastern Air.

Chad

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

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**

In the extreme south-east (2353-2446N/1003-1053E), there were several reports of high densities of adults, up to 70 per sq. metre, copulating south-east of Djanet near the Libyan border on 21-30 March. An estimated area of about 2,400 ha was infested. Ground teams treated 1,600 ha on the 31st at 2446N/1042E.

• **FORECAST**

Hatching is expected to commence in early April south-east of Djanet and small hopper bands could form with fledging starting at the end of the forecast period. Low numbers of adults, associated with current infestations in northern Mauritania, may be present or could appear south-west of Tindouf.

Morocco

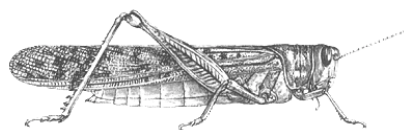
• **SITUATION**

In the extreme south-west, small groups of solitary and transiens adults continued to mature in early March at three locations in the Aousserd region (ca. 2250N/1405W). A small group was seen flying on the 22nd towards the south-east near the Mauritania border in the Bir Guendouz (2123N/1634W) area.

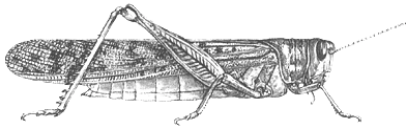
On the southern side of the Atlas Mountains, isolated adults were present on 5-7 March near Ourzazate (3057N/0650W) and Tinjdade (3131N/0501W). Scattered adults at densities of 30-40 per ha were reported in Oued Draa at Ksar Chair (2911N/0759W) on the 21st.

• **FORECAST**

Locust numbers are expected to decline in the extreme south-west as adults move out of the area. Numbers along the southern side of the Atlas Mountains and in Oued Draa will probably decline unless enough rain falls to allow for small scale breeding. The area of current infestations in northern Mauritania may extend into Morocco south of Smara where breeding could be in progress.



No. 258



No. 258

DESERT LOCUST BULLETIN

Libyan Arab Jamahiriya

• SITUATION

Mature adults were reported to be copulating and laying in the southwest near Ghat and the Algerian border during March. Ground operations treated a total of 650 ha at four locations in Wadi Tanezzuft (2500N/1014E) and nearby areas on 21-23 March.

• FORECAST

Despite control operations, small scale laying probably occurred at several places. The extent of the laying and subsequent hatching which is expected to start in early April is likely to be limited to the Ghat area but could be locally dense. Hoppers are likely to start fledging at the end of the forecast period.

Tunisia

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.

EASTERN AFRICA

Sudan

• SITUATION

In early March, low numbers of mature solitarious adults persisted in a few places along the coastal plains between Suakin and Tokar Delta, primarily in Khor Ashat (1844N/3728E) and Khor Gowb (1850N/3720E). Solitarious and transiens hoppers at densities of up to 50 per sq. m. continued to mature in these places, reaching fifth instar by 8 March. These fledged and are thought to have dispersed towards the southwest. No further locusts were reported during the second half of the month.

On the northern coast and subcoastal areas, no locusts were seen during surveys in Wadi Diib and in the eastern Nubian Desert on 3-4 March.

• FORECAST

As no further rains have been reported and conditions are drying up, locust numbers are expected to decline on the Red Sea coastal plains south of Port Sudan. Low numbers of immature adults may appear in Khor Baraka or on the western side of the Red Sea Hills. No significant developments are likely.

Eritrea

• SITUATION

No locusts were reported on the Red Sea coastal plains during February and March.

• FORECAST

No significant developments are expected.

Somalia

• SITUATION

Isolated immature adults were seen at five places during surveys carried out in central coastal and interior areas of the north on 4-20 March. The adults were present near the coast between Berbera (1028N/4502E) and Meit (1058N/4705E).

• FORECAST

No significant developments are expected.

Ethiopia

• SITUATION

No locusts were seen during surveys on 13-17 March near Dire Dawa.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.

Kenya, Tanzania and Uganda

• FORECAST

No significant developments are likely.

NEAR EAST

Saudi Arabia

• SITUATION

No locusts were reported during surveys carried out on the Red Sea coast near Al Lith and Khulais, and in the spring breeding areas of the interior from 26 February to 14 March

• FORECAST

As no rainfall has been reported and dry conditions persist, no significant developments are likely in coastal and interior areas.

Yemen

• SITUATION

No reports received.

• FORECAST

As no rainfall has been reported and dry conditions persist, no significant developments are likely on the Red Sea and Gulf of Aden coastal plains.

Egypt

• SITUATION

No reports received.

• FORECAST

As no rainfall has been reported and dry conditions persist, no significant developments are likely on the Red Sea coastal plains and in the adjacent interior areas.

Kuwait

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.

Oman

• SITUATION

No locusts were seen during surveys on the Batinah coast between Sohar and Muscat from 27 February to 4 March.

• FORECAST

A few isolated adults may be present on the Batinah coast but laying is not expected unless rainfall occurs.

United Arab Emirates

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

SOUTH-WEST ASIA

Iran

• SITUATION

Late reports indicated that no locusts were seen during surveys in Hormozgan and Kerman provinces and near Jask from December to February.

• FORECAST

Low numbers of adults may begin to appear on the south-eastern coastal plains from Jask to Chabahar and in the interior from Jaz Murian to Iranshahr. Small scale breeding is expected if rainfall occurs.

Pakistan

• SITUATION

During the second fortnight of February, a few individual maturing and mature adults were seen at several locations throughout coastal (Pasni and Gwadar) and interior (Turbat and Panjgur) areas of Baluchistan as well as in Uthal.

During the first fortnight of March, a similar situation prevailed in the above areas and extended further north into Khuzdar.

• FORECAST

Low numbers of adults will persist in Baluchistan and lay with the onset of the rains. As conditions continue to remain dry and there is no indication that rains have started, small scale breeding may only occur in a few coastal and interior areas and locust numbers will only slightly increase. No significant developments are likely in the absence of rainfall.

India

• SITUATION

No locusts were seen during surveys in the first half of March.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

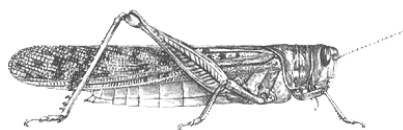
No significant developments are likely.



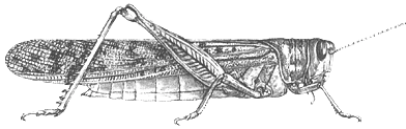
Announcements

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.

Reporting by email. Affected countries are encouraged to send completed FAO Locust Survey Forms with a brief interpretation of the results by email to eclo@fao.org.



No. 258

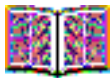


No. 258

DESERT LOCUST BULLETIN

Latest webpage updates. Details and photos from the *FAO/NRI Train the Trainers Course in Oman* (<http://www.fao.org/NEWS/GLOBAL/locusts/OMNtrain/OMNmain.htm>) and the results and photos from the *First Joint Survey of the Desert Locust Winter Breeding Areas on the Egyptian-Sudanese Border* (<http://www.fao.org/NEWS/GLOBAL/locusts/EGYSUD/JSmain.htm>) are available. The locust publications page (<http://www.fao.org/NEWS/GLOBAL/locusts/PUBS1.htm>) has been redesigned.

Iran / Pakistan Joint Survey. The annual joint border survey in the spring breeding areas of Iran and Pakistan will take place from 15 April to 15 May. The final report will be posted on the locust webpages.



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 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.

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

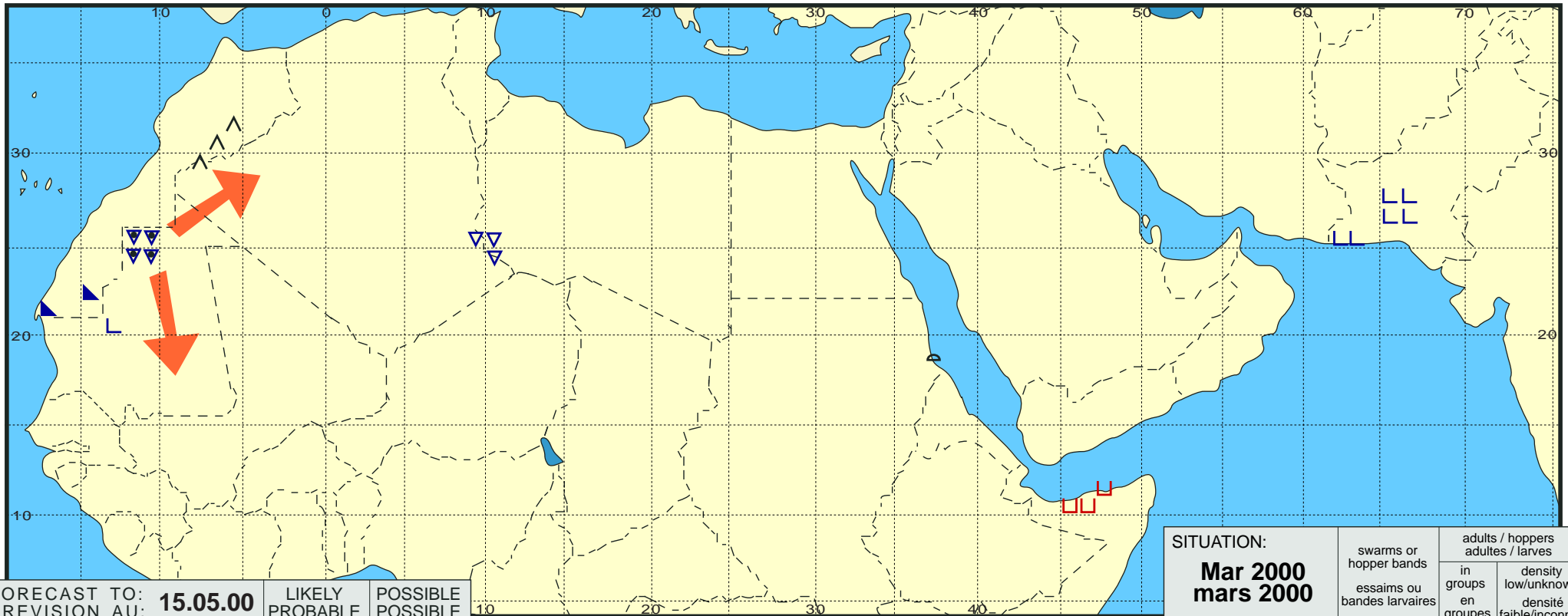
- period of deep recession marked by the complete absence of gregarious populations.



Desert Locust Summary

Criquet pèlerin - Situation résumée

258



FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.05.00		
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: Mar 2000 mars 2000	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)			