

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 466



**General Situation during July 2017
Forecast until mid-September 2017**

(1.8.2017)

The Desert Locust situation continued to remain calm during July. Control operations were undertaken in Iran and, to a lesser extent, in Algeria where small-scale breeding had occurred. Low numbers of adults appeared in the summer breeding areas of Mauritania, Sudan and along both sides of the Indo-Pakistan border. Good rains fell in all summer breeding areas of the Sahel in West Africa and Sudan, in the interior of Yemen and along the Indo-Pakistan border. Consequently, small-scale breeding is expected to occur in all of these areas during the forecast period, causing locust numbers to increase slightly. Regular surveys should be conducted in all areas wherever possible.

Western Region. The situation remained calm during July. Scattered mature solitary adults mixed with solitary hoppers of all instars were present in a few places in the Central Sahara of Algeria where 3 ha were treated. Isolated mature solitary adults appeared in the summer breeding areas of southeastern Mauritania as well as in central areas which is somewhat unusual. For the second consecutive month, good rains fell throughout the northern Sahel of West Africa because the Inter-Tropical Convergence Zone (ITCZ) was much further north than normal. Consequently, small-scale breeding will cause locust numbers to increase slightly between Mauritania and Chad during the forecast period.

Central Region. The locust situation remained calm in the region during July. Low numbers of solitary adults were present in the interior of Sudan where good rains fell and small-scale breeding is expected to cause locust numbers to increase slightly during the forecast period. Good rains also fell in the interior of Yemen but surveys could not confirm the situation due to prevailing insecurity. Nevertheless, adults are probably present and small-scale breeding is likely to occur, which will cause a further increase in locust numbers.

Eastern Region. Control operations continued during the first decade of July in southeast Iran where 8,500 ha of hoppers and adults were treated in the Jaz Murian Basin. Although above-normal monsoon rains fell in the summer breeding areas along both sides of the Indo-Pakistan border, only isolated adults have been seen in a few places in both countries. Nevertheless, locust numbers are expected to increase slightly as a result of small-scale breeding during the forecast period.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and are 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/ag/locusts

Facebook: www.facebook.com/faolocust

Twitter: twitter.com/faolocust



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Weather & Ecological Conditions in July 2017

For the second consecutive month, seasonal rains fell further north than usual in the Sahel of West Africa where ecological conditions were favourable for breeding. Widespread rains fell in the summer breeding areas in the interior of Yemen. Above-normal monsoon rains fell along both sides of the Indo-Pakistan border.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards over the summer breeding areas in the northern Sahel during July. Similar to last month, its average position between Mauritania and Chad was substantially further north than usual by some 125–350 km during the first two decades, reaching southwest Adrar in central Mauritania, Taoudenni in northwest Mali, southern Algeria, Dirkou in Niger, and Fada in Chad. Consequently, widespread low to moderate rains fell throughout all summer breeding areas in the northern Sahel and conditions were favourable for breeding.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) continued to move northwards over the interior of Sudan during July, reaching Abu Uruq in North Kordofan during the second decade, which is normal for this time of year. Consequently, good rains fell in the summer breeding areas between Darfur and Kassala where ecological conditions were favourable for breeding. In Eritrea, good rains fell in the western lowlands that should allow breeding conditions to improve. In Yemen, good rains fell on the Red Sea coast south of Hodeidah during the first decade while additional rain fell in these areas during the second decade and extended over a widespread portion of the interior between Marib, Ataq, and Wadi Hadhramaut as well as on the southern coast near Lahij. Flooding was reported in some places. As a result of these rains and those in June, ecological conditions are likely to be favourable for breeding in the interior and parts of the coast. Elsewhere in the region, mainly dry conditions prevailed.

In the **Eastern Region**, good monsoon rains continued to fall in the summer breeding areas along both sides of the Indo-Pakistan border in Rajasthan, India and from Tharparkar to Cholistan in Pakistan. The rains were heaviest and most widespread during the second and third decades. Cumulative seasonal rainfall in Rajasthan was up to 400% above normal in some areas. In Iran, very little rain fell in the southeast during July, however small areas of vegetation remained green in the Jaz Murian Basin near Halil River from runoff.



Area Treated

Algeria	3 ha (July)
Iran	8,500 ha (July)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During July, isolated mature solitarious adults appeared in the summer breeding areas of the southeast between Aioun El Atrous (1639N/0936W) and Oualata (1717N/0701W), and in the centre between Aguilal Faye (1827N/1444W) and Tidjikja (1833N/1126W). No locusts were seen elsewhere during surveys.

• FORECAST

Small-scale breeding will cause locust numbers to increase in southern and central areas.

Mali

• SITUATION

No surveys were carried out and no locusts were reported during July.

• FORECAST

Low numbers of adults are likely to be present and breeding on a small scale in parts of the Adrar des Iforas, Timetrine, Tilemsi Valley and Tamesna. This will cause locust numbers to increase during the forecast period.

Niger

• SITUATION

No surveys were carried out and no locusts were reported during July.

- **FORECAST**

Low numbers of adults are likely to be present and breeding on a small scale over a large portion of the Tamesna Plains and the central pasture zone as well as in parts of the Air Mountains. This will cause locust numbers to increase during the forecast period.

Chad

- **SITUATION**

No surveys were carried out and no locusts were reported during July.

- **FORECAST**

Small-scale breeding will cause locust numbers to increase in central and eastern areas.

Senegal

- **SITUATION**

No locust activity was reported during July.

- **FORECAST**

No significant developments are likely.

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

- **FORECAST**

No significant developments are likely.

Algeria

- **SITUATION**

During July, scattered mature solitary adults persisted at a few places near irrigated farms in the Adrar (2753N/0017W) valley of the central Sahara. Scattered mature solitary adults mixed with solitary hoppers of all instars were present between Reggane (2643N/0010E) and In Salah (2712N/0229E). Ground teams treated 3 ha. No locusts were seen west of Tamanrasset (2250N/0528E).

- **FORECAST**

Small-scale breeding is likely to occur in the south between Tamanrasset and the Mali/Niger border, causing locust numbers to increase slightly.

Morocco

- **SITUATION**

No surveys were carried out and no locusts were reported during July.

- **FORECAST**

No significant developments are likely.

Libya

- **SITUATION**

No reports received.

- **FORECAST**

No significant developments are likely.

Tunisia

- **SITUATION**

No locust activity was reported during July.

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During July, low numbers of immature and mature solitary adults were present in the Nile Valley near Dongola (1910N/3027E), Karima (1832N/3148E), Abu Hamed (1932N/3320E), Atbara (1742N/3400E) and Shendi (1641N/3322E). Similar populations were also present in the summer breeding areas of North Kordofan near Sodiri (1423N/2906E) and Umm Saiyala (1426N/3112E), and in the east near Derudeb (1731N/3607E). Adults were seen laying eggs at one place near Karima on the 11th.

- **FORECAST**

Small-scale breeding will cause locust numbers to increase slightly between West Darfur and the Red Sea Hills, and to a lesser extent in the Nile Valley.

Eritrea

- **SITUATION**

No reports received.

- **FORECAST**

Low numbers of adults may be present in areas of previous rainfall on the Red Sea coastal plains between Mehimet and Ibb. Similar populations are likely to be present in the western lowlands where small-scale breeding is expected to cause locust numbers to increase slightly.

Ethiopia

- **SITUATION**

No surveys were carried out and no locusts were reported during July.

- **FORECAST**

No significant developments are likely.

Djibouti

- **SITUATION**

No surveys were carried out and no locusts were reported during July.

- **FORECAST**

No significant developments are likely.



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Somalia

- SITUATION

No reports received.

- FORECAST

No significant developments are likely.

Egypt

- SITUATION

During July, no locusts were seen during surveys in the Lake Nasser area near Abu Simbel (2219N/3138E) and Tushka (2247N/3126E).

- FORECAST

No significant developments are likely.

Saudi Arabia

- SITUATION

During July, no locusts were seen during surveys carried out on the southern coastal plains of the Red Sea near Jizan (1656N/4233E) and in the interior near farms on the northern edge of the Empty Quarter south of Al Hofuf (2523N/4935E).

- FORECAST

No significant developments are likely.

Yemen

- SITUATION

No surveys were carried out and no locusts were reported during July.

- FORECAST

Low numbers of adults are likely to be present and breeding in the interior on the edge of Ramlat Sabatyn between Marib and Ataq, and in Wadi Hadhramaut where good rains fell recently. Similar populations may be present on the southern coastal plains of the Red Sea and on the southern coast near Lahij.

Oman

- SITUATION

During July, no locusts were seen during surveys carried out in the northern interior near Buraimi (2415N/5547E), Nizwa (2255N/5731E) and Adam (2223N/5731E).

- FORECAST

No significant developments are likely.

Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda

- FORECAST

No significant developments are likely.

EASTERN REGION

Iran

- SITUATION

During July, isolated solitary hoppers of all instars mixed with isolated and scattered immature and mature solitary adults persisted in the Jaz Murian Basin east of Ghale Ganj (2731N/5752E) where ground teams treated 8,500 ha in the first decade. Isolated mature solitary adults were seen on the southeast coast at Ramin (2515N/6049E) near Chabahar (2517N/6036E). No locusts were seen on the coast near Jask (2540N/5746E).

- FORECAST

No significant developments are likely.

Pakistan

- SITUATION

During July, isolated mature solitary adults were seen at a few places in Lasbela west of Karachi (2450N/6702E) and in Cholistan near the Indian border and Islamgarh (2751N/7048E).

- FORECAST

Small-scale breeding will cause locust numbers to increase slightly in parts of Tharparkar, Nara and Cholistan as well as in the Lasbela area.

India

- SITUATION

During July, isolated solitary mature adults were seen at two places in Rajasthan near Bikaner (2801N/7322E) and Phalodi (2706N/7222E).

- FORECAST

Small-scale breeding will cause locust numbers to increase slightly in parts of Rajasthan and Gujarat.

Afghanistan

- SITUATION

No reports received.

- FORECAST

No significant developments are likely.



Announcements

Desert Locust warning levels. A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Locust reporting. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (ecllo@fao.org). Reports received by the first two days of the new month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, they will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

New information on Locust Watch. Recent additions to the web site (www.fao.org/ag/locusts) are:

- **WMO/FAO Weather and Desert Locusts booklet.** Publications – Documents
- **CRC/SWAC Desert Locust Information Officers workshop.** Publications – Reports 2017
- **SWAC Iran/Pakistan Joint Survey results.** Publications – Reports 2017

RAMSES training videos. New training videos are available on YouTube for Rv4.1 users – see Useful tools and resources section of this bulletin.

2017 events. The following activities are scheduled or planned:

- **CLCPRO.** 16th EMPRES liaison officers meeting and 13th Steering Committee meeting, Agadir, Morocco (1–9 December)
- **SWAC.** Desert Locust Information Officer workshop, Tehran (December) [tbc]
- **CRC.** 10th Subregional training course on Desert Locust campaigns (December) [tbc]



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 AREAS

- July–September/October (Sahel of West Africa, Sudan, western Eritrea; Indo-Pakistan border)

WINTER RAINS AND BREEDING AREAS

- October–January/February (Red Sea and Gulf of Aden coasts; northwest Mauritania, Western Sahara)

SPRING RAINS AND BREEDING AREAS

- February–June/July (Northwest Africa, Arabian Peninsula interior, Somali plateau, Iran/Pakistan border)

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

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



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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.

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.

WARNING LEVELS

GREEN

- Calm. No threat to crops. Maintain regular surveys and monitoring.

YELLOW

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

ORANGE

- Threat. Threat to crops. Survey and control operations must be undertaken.

RED

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

REGIONS

WESTERN

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during plagues only: Benin, Burkino Faso, Cameroon, Cape Verde,



Useful tools and resources

FAO Locust Watch. Information, maps, activities, publications, archives, FAQs, links

<http://www.fao.org/ag/locusts>

IRI RFE. Rainfall estimates every day, decade and month

http://iridl.Ideo.columbia.edu/maproom/.Food_Security/.Locusts/index.html

IRI Greenness maps. Dynamic maps of green vegetation evolution every decade

http://iridl.Ideo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html

IRI MODIS. Vegetation imagery every 16 days

http://iridl.Ideo.columbia.edu/maproom/Food_Security/Locusts/Regional/MODIS/index.html

Windy. Real time rainfall, winds and temperatures for locust migration

<http://www.windy.com>

eLocust3 training videos. A set of 15 introductory training videos are available on YouTube

<https://www.youtube.com/playlist?list=PLf7Fc-oGpFHEdv1jAPaF02TCfpcnYoFQT>

RAMSESv4 training videos. A set of basic training videos are available on YouTube

<https://www.youtube.com/playlist?list=PLf7Fc-oGpFHGyzXqE22j8-mPDhhGNq5So>

RAMSESv4 and eLocust3. Installer, updates, videos, inventory and support

<https://sites.google.com/site/rv4elocust3updates/home>

FAOLocust Twitter. The very latest updates posted as tweets

<http://www.twitter.com/faolocust>

FAOLocust Facebook. Information exchange using social media

<http://www.facebook.com/faolocust>

FAOLocust Slideshare. Locust presentations and photos

<http://www.slideshare.net/faolocust>

eLERT. Online database of resources and technical specifications for locust emergencies

<http://sites.google.com/site/elertsite>

Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierra Leone and Togo.

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, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



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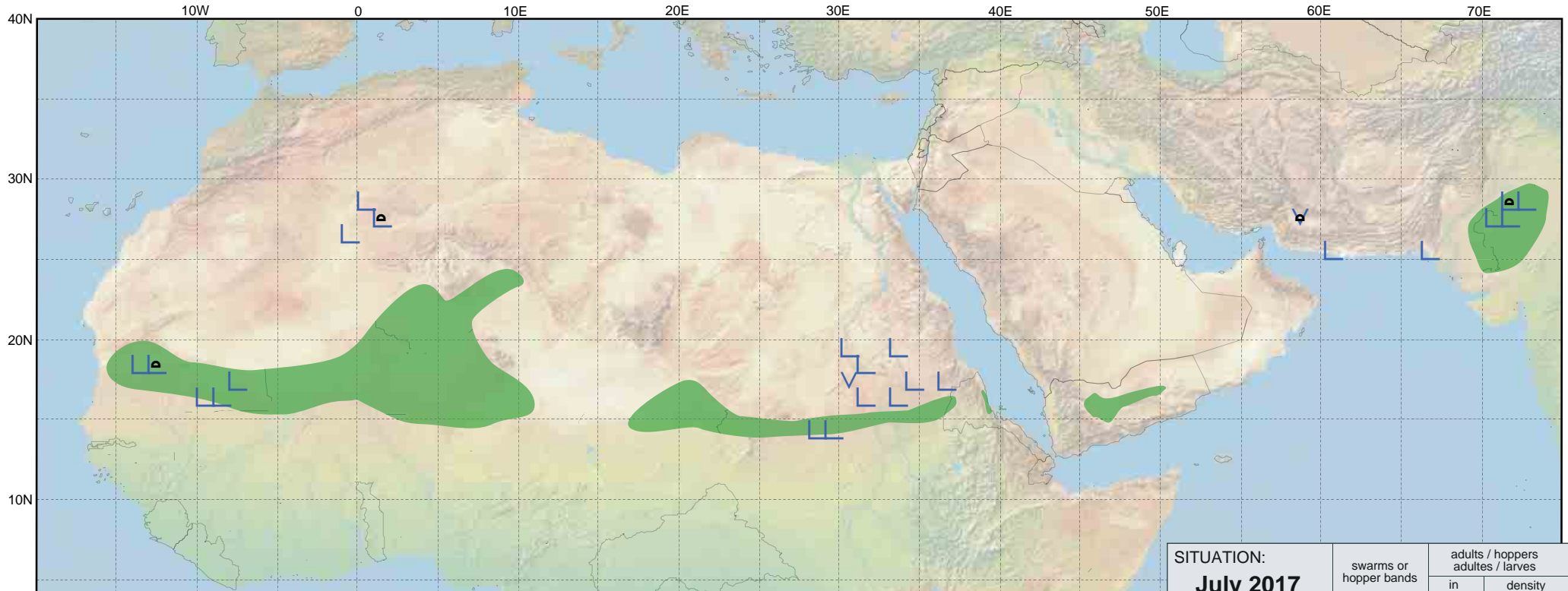
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	15.9.17	LIKELY PROBABLE	POSSIBLE POSSIBLE
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: July 2017 juillet 2017	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)			