



FAO



EMERGENCY CENTRE FOR LOCUST OPERATIONS

DESERT LOCUST BULLETIN No. 191



The Desert Locust situation requires continuing vigilance in West Africa where swarms were seen in Mali and Niger during the second half of June, although ground survey teams could not locate these swarms in southern and central Niger in early July. Most of these swarms are thought to be a result of the southern circuit migration from Guinea Conakry eastwards through south-western Mali to southern Niger. However, the few swarms reported in western Mali along the Mauritanian border were probably a result of migration from northern Mauritania, while some of the swarms in Niger may have migrated from Algeria. In Mauritania, the swarms that migrated from the north during June dispersed over a widespread area of southern Mauritania upon arrival, and consequently only low densities of scattered adults are present. Extensive aerial and ground surveys in southern Mauritania during June and July failed to detect any significant locust populations with only low density scattered adults observed. Although seasonal rains have now commenced and conditions are improving in most breeding areas of Mauritania, Mali and Niger, there have been no reports of laying. Survey teams continue to monitor the situation primarily in Mauritania, Niger and to a lesser extent Mali. During the forecast period, small, possibly moderate, scale breeding is expected to occur and ground surveys to detect such breeding is necessary.

In South-West Asia, heavy rains fell in July in the summer breeding areas of India and Pakistan where isolated adults are present, and, as a result, breeding has probably already started on a small scale in several places and will continue during the forecast period.

In North-West Africa, control operations in Morocco and Algeria ceased in early July and conditions are generally dry. No additional reports of locusts were received after mid-July, except for one unconfirmed swarm in the extreme south of Algeria. No further significant developments are expected during the forecast period.

No detailed information was received from Eastern Africa and the Near East. However, scattered adults are expected to be present and breeding in western Sudan in areas of recent rainfall.

FAO stresses the necessity of rapid transmission of locust survey results to FAO-HQ by phone, fax or E-mail at the addresses below.

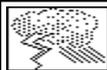
The FAO Desert Locust Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, telex, e-mail, FAO pouch and airmail by the Emergency Centre for Locust Operations, AGP Division, FAO, 00100 Rome, Italy.

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WEATHER & ECOLOGICAL CONDITIONS DURING JULY 1994

Based on field reports, METEOSAT and ARTEMIS satellite imagery, and Météo-France synoptic and rain data. Rainfall terms: light = less than 20 mm of rain; moderate = 20 - 50 mm; heavy = more than 50 mm.

During July, the Inter-Tropical Convergence Zone (ITCZ) continued its northern movement from about 17°N at the beginning of the month to frequently over 20°N during the second half of the month. The ITCZ has reached as far north as 25° N over Tiris Zemmour in Mauritania, north of Adrar des Iforas in Mali and north Air in Niger on the 22nd, and has also reached Tibesti in Chad on the 25th. This affected the winds south of the ITCZ which were generally from the south-west. Cold cloud gradually extended north in south-eastern Mauritania, north-west Mali and north-east Niger, and several depressions and frontal lines were also associated with the ITCZ over the summer breeding areas of West Africa and at times Sudan.

As a result, the onset of seasonal rains in the Sahel continued throughout the month in the cropping regions of the south, whereas some significant rainfall was received further north in the Desert Locust summer breeding areas from the second decade onwards. For example, Kidal received 17 mm on the 16th and 13 mm on the 29th, Agadez 41 mm on the 11th-17th and the northern limit of rainfall in Chad was located by 13°N. During the third decade, light to heavy rains occurred in western and southern Mauritania from Boutilimit (53 mm on the 24th), Kiffa (75 mm in total on the 24th and the 31st) to Nema (67 mm in total). Cumulative rains since the beginning of the summer are slightly above the long term average in several locations (for example up to 140 mm at Nema, 59 mm at Agadez, 54 mm at Boutilimit) and breeding conditions have almost certainly improved over a widespread area. By the end of the month, light rains extended further north in Mauritania, and the first rain of the season was received at Tidjikja (10 mm on the 31st).

A few rains were reported up to the end of July in the summer breeding areas of Sudan; El Obeid in Northern Kordofan received 38 mm on the 12th and again 24 mm on the 31st, as well as El Fasher in Northern Darfur with 47 mm on the 28th-30th, and breeding conditions are expected to improve in some places. Ecological conditions may be improving in the Gezira and eastern parts of the country as a result of widespread light rains primarily on the 20th-23rd.

Conditions are dry in Morocco and Algeria where no significant rains were reported.

In the Near East, conditions are likely to be generally dry and the only cold cloud activity was seen over the southern part of the Arabian Peninsula such as southern Tihama and adjacent highlands of Yemen.

Ecological conditions started improving in the summer breeding areas of Pakistan and Rajasthan of India during the second half of June, and the summer monsoon rains have commenced in July. During the first half of July, heavy rains fell in numerous places in the summer breeding areas of Pakistan such as Tharparkar (cumulative 250 mm), Bahawalpur (67 mm), Rahimyar Kijhan (60 mm). In Rajasthan, light to heavy rains were frequently reported throughout the month in most districts from Ganganagar to Bhuj, in which cumulative rains totals were similar to Pakistan. As a result, breeding conditions are certainly favourable on a widespread area.



AREA TREATED IN JULY 1994

Algeria	959 ha	25 June - 7 July
Morocco	77 ha	21-30 June



DESERT LOCUST SITUATION

WEST AFRICA

MAURITANIA

During the two last decades of June, there were isolated to scattered adults sometimes gregarious in appearance reported at several places in Assaba, Tagant and the two Hodhs. The maximum infestation observed consisted of small numbers of adults along about 62 km of wadi (by 50-100 m wide) in the El Khatt area (1850N/1143W to 1907N/1148W) in northern Tagant on the 17th-27th. Several swarms were seen by nomads, but none could be confirmed.

Low density adults, some of them yellow, were reported in numerous locations of Assaba, Tagant and the two Hodhs during July; these adults were widespread over a large area, suggesting that the swarms from the north dispersed. A total of 2,700 ha and 4,500 ha were estimated to be infested during the first and the second decades respectively, with densities generally ranging from 10-110 adults per hectare and with one location of 236 adults per ha over 6 ha. There was an unconfirmed report of one yellow swarm seen at Lacraa (1654N/0728W) on the 7th.

MALI

In addition to the southern circuit swarms reported in Bulletin no. 190, there were two new reports of immature swarms seen further east near Segou at Farako (ca. 1327N/0615W) and near Mopti at Kolokanda (1420N/0331W) on 16 June. On the same day, another immature swarm was seen near the Guinean border at Kouroukouto (1236N/1024W).

A late report stated that nomads saw numerous red and yellow adults between In Afarak (2119N/0040E) near the Algerian border and Asler (1853N/0015E) west of the Tilemsi Valley during the last decade of June.

Swarm movements were also reported near the Mauritanian border in the Yelimane (1507N/1035W) region during the last decade of June. These are probably the result of southwards swarm migration from Mauritania. Isolated adults were seen in Mourdiah (1429N/0729W) and Gossi (1549N/0117W) regions.

NIGER

Additional information was received from the Tahoua region where about a dozen villages reported swarms in late June moving towards the north and north-west, within an area roughly between Bagaroua (1439N/0421E), Samia (1401N/0628E), Tabalak (1506N/0540E) and Takanamat (1507N/0447E). These swarms are likely to be a continuation of the southern circuit migration reported during in June in Mali, although some may have also come from North-West Africa.

During the first decade of July, isolated immature adults, some of them transiens and gregarious in appearance, were reported over limited areas in several regions of the south. Infestations were reported on a total of 1,500 ha and were concentrated mostly along the Nigerian border: two locations near 1355N/0430E south-west of Tahoua, one location north of Zinder (1338N/1016E), four locations south of Gouré (1359N/1016E), one location north of Diffa (1335N/1230E) and four locations near Maine (1313N/1202E). No locusts were seen during a survey at Ourafan (1408N/0857E) where a swarm was reported flying eastward on 27 June.

There was no indication that breeding has started in these places. No locusts were found in Tillabery (1412N/0125E), Ouallam (1425N/0202E), Filingue (1421N/0320E), Loga (1337N/0314E), and Maradi (1329N/0705E) regions by ground surveys up to 10 July.

CAPE VERDE

No locust activity was reported up to 10 July.

No locust information had been received from other countries in the region up to 31 July.

NORTH-WEST AFRICA

MOROCCO

During the last decade of June, 12 ha of immature adults at densities ranging from 3-5 per sq. m were treated at two locations south of Errachidia, primarily at El Ouada (3131N/0417W) and 65 ha south of Tata, primarily at Khang Ideldel (2843N/0839W). No other locust activity was reported up to 31 July.

ALGERIA

In Bechar region, 250 ha of pink immature adults at densities ranging from 5,000-10,000 per ha, were treated in Oued Zousfana (3136N/0147W) on 25 June; similarly in southern Algeria near Silet, a total of 512 ha of immature adults up to 20 per sq.m. were treated at four places, primarily in Oued Ahmed (2245N/0419E) on 26-27 June.

In irrigated cropping areas of the Adrar region, pink adults possibly from southern migration from the Bechar region were treated over a total of 197 ha at eight places from 27 June to 7 July.

During July, there was an unconfirmed report of a swarm in the south at Oued Tin Berrouine (2015N/0412E) on the 11th-25th. Control operations were concluded in the Bechar region and no further locusts were reported up to the 25th.

No locust information had been received from other countries in the region up to 31 July.

EASTERN AFRICA

SUDAN

No locusts were reported in Northern Kordofan during the first half of July.

ETHIOPIA

A late report stated that during June, no locusts were seen in the Hararghe region.

KENYA, TANZANIA, UGANDA

A late report stated that there was no locust activity during June.

No locust information had been received from other countries in the region up to 31 July.

NEAR EAST

KUWAIT

No locust activity was reported during July.

No locust information had been received from other countries in the region up to 31 July.

SOUTH-WEST ASIA

PAKISTAN

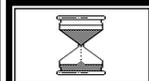
During the second fortnight of June, isolated adults were reported from 7 locations of Lasbela, Tharparkar and, for the first time this summer, Nara, with a maximum density of 300 per sq. km at Kud Chunda Chah (2610N/6615E) in Lasbela on the 27th.

During the first half of July, isolated adults were reported at 19 locations over a widespread area from the Lasbela district to Tharparkar, Nara and Cholistan deserts; this is also the first report of locusts in Cholistan. However, these are low density infestations, with a maximum of 450 adults per sq. km at Jera (2518N/6645E) on the 12th.

INDIA

During the first half of July, isolated adults were reported from four locations of Jalore, Jaisalmer and Bikaner districts of Rajasthan, with a maximum density of 750 per sq. km at Sanchore (2446N/7150E) in Jalore district.

No locust information had been received from other countries in the region up to 31 July.



FORECAST UNTIL MID-SEPTEMBER 1994

WEST AFRICA

MAURITANIA

As a result of low numbers of scattered adults and substantial rainfall in the south-east, small scale breeding is almost certainly in progress and will continue during the forecast period over a wide area of Assaba and the two Hodhs, where small numbers of hoppers are expected to appear from mid-August onwards. Small scale breeding is likely to commence in some areas of recent rains in the Tagant. Although infestations are not likely to represent adequate targets for control, surveys are required to monitor the situation.

MALI

Despite the lack of detailed information, it is likely that small scale breeding is in progress and will continue in some areas of recent rains in Adrar des Iforas and perhaps Tamesna, where some hoppers may commence to appear from the first half of August onwards. In the south-west near Niore and along the Mauritanian border, breeding on a small, and possibly moderate, scale may occur in areas that have received recent rains.

NIGER

Scattered adults are expected to persist in the southern regions near Diffa and may breed on a small scale in areas of green vegetation. No additional incoming adults are expected from the southern circuit during the forecast period. Adults are almost certainly present in Tamesna and perhaps Air, where they are likely to breed on a small, possibly moderate, scale in areas of recent rains.

CHAD

A few isolated adults may be present in BET and perhaps in adjacent areas to the south and breeding on a small scale is likely in areas of recent rains.

BURKINA FASO, CAMEROON, CAPE VERDE, GAMBIA, GUINEA BISSAU, GUINEA CONAKRY and SENEGAL

No significant developments are likely.

NORTH-WEST AFRICA

ALGERIA

Scattered adults may persist in previously infested areas near Oued Saoura and west of Tamanrasset; however, infestations in both regions will continue to decline as a result of unfavourable conditions. In the Adrar region, some scattered adults may persist and breed locally in irrigated areas.

MOROCCO, TUNISIA and LIBYA

No significant developments are likely.

EASTERN AFRICA

SUDAN

Scattered adults are likely to be present and breeding on a small scale in areas of recent rains primarily in Northern Kordofan near El Obeid and in Northern Darfur near El Fasher. There is a small possibility of isolated adults persisting in the eastern regions where they may take advantage of recent rains to breed.

ERITREA

A few isolated adults may be present on the Red Sea coastal plains, but no significant developments are likely.

ETHIOPIA

A few isolated adults may be present in the Railway Region, but no significant developments are likely.

SOMALIA

A few isolated adults may be present on the northern coastal plains, but no significant developments are likely.

DJIBOUTI, KENYA, TANZANIA and UGANDA

No significant developments are likely.

NEAR EAST

SAUDI ARABIA

A few isolated adults may be present on the southern Tihama, but no significant developments are likely.

YEMEN

A few isolated adults may be present on the Tihama and on the coastal plains east of Aden and breed if significant rainfall occurs.

BAHRAIN, EGYPT, IRAQ, ISRAEL, JORDAN, KUWAIT, LEBANON, OMAN, QATAR, SYRIA, TURKEY and UAE

No significant developments are likely.

SOUTH-WEST ASIA

PAKISTAN

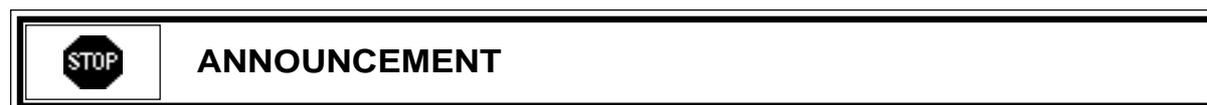
Small scale breeding is likely to be in progress over a widespread area of Tharparkar, Nara and Cholistan deserts and will continue during the forecast period. Small numbers of hoppers can be expected to appear in these areas from the first half of August onwards. Small scale breeding is also likely to occur in Lasbela district as a result of recent rains and persisting adults. Although none of these infestations are expected to represent a serious threat, surveys should continue to monitor the situation.

INDIA

Small scale breeding will occur in the desert areas of Rajasthan, where widespread rains recently occurred and small numbers of hoppers can be expected to appear during the second half of the forecast period.

AFGHANISTAN and IRAN

No significant developments are likely.



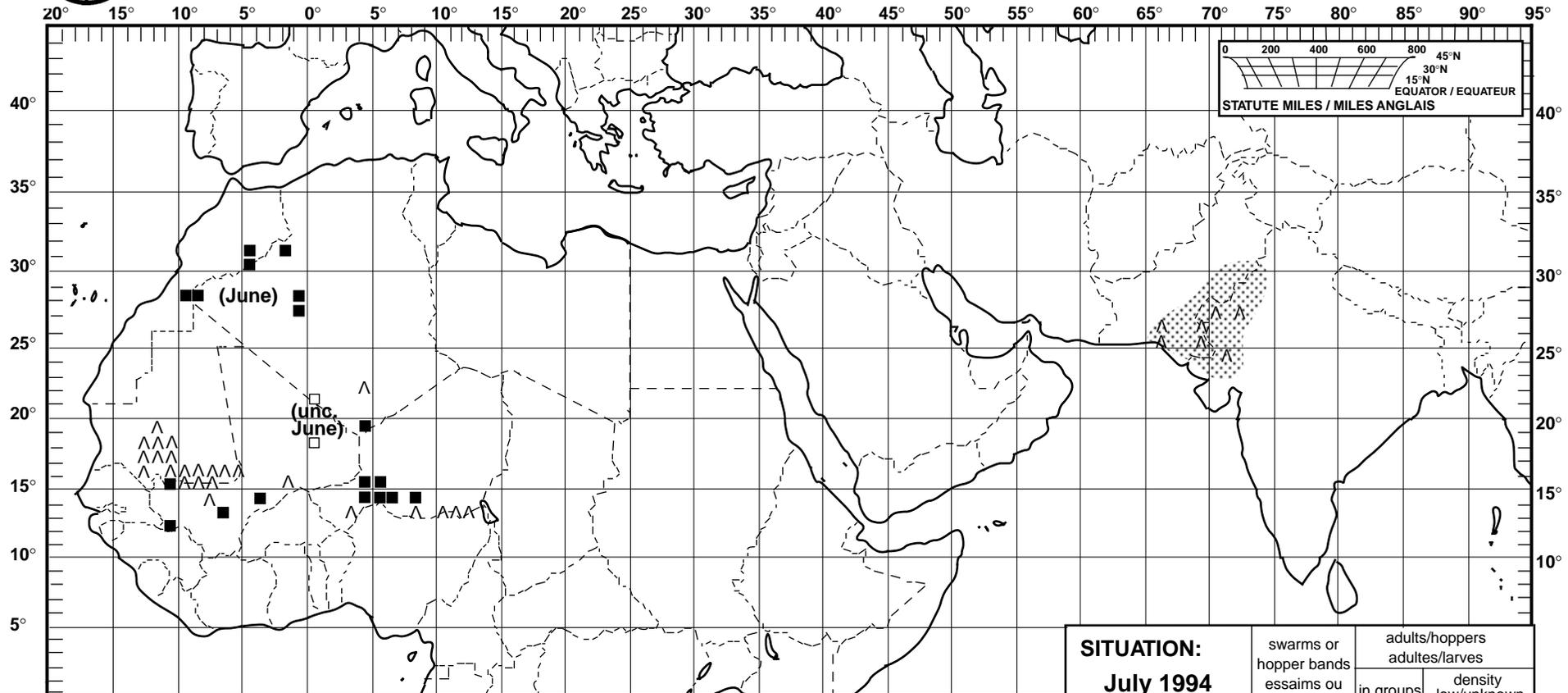
We wish to announce with deep regret the death of Ms. Elizabeth Betts on 19 July 1994, who joined the Anti-Locust Research Center in 1951 and worked for 35 years on Desert Locust and Armyworm forecasting and biogeography. FAO expresses its condolences to her family and her Government.

2 August 1994



Desert Locust: summary No. 191

Criquet pèlerin: situation résumée



FORECAST TO: PREVISION AU: 15.9.94	LIKELY PROBABLE	POSSIBLE POSSIBLE
current undetected breeding reproduction en cours et non détectée		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: July 1994 juillet 1994	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)			