

FOOD AND AGRICULTURE **ORGANIZATION**

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Locusts, other migratory pests and emergency operations group

DESERT LOCUST SITUATION SUMMARY AND FORECAST

NO. JULY-EARLY AUGUST 1986

SUMMARY

The largest populations are probably in Eritrea where there have been numerous reports of swarms, while fifth instar hopper bands have been marching into Sudan. A swarm has also been reported from the Yemen Arab Republic. Breeding has started in PDR Yemen and is probably in progress in Oman. There are widespread adult populations in Pakistan and India where low density breeding has commenced. In Chad hoppers and adults at group density are present around Lake Chad and small populations have been reported from Niger, Mali and Mauritania.

WEST AFRICA

Meteorology

The Intertropical Front reached and even exceeded 20°N by mid-July over Mauritania; over Mali, Niger and Chad it oscillated around 18°N. There were good rains in south-east Mauritania in late July, Aioun el Atrouss recording 22mm on 21 July, but Nema only recorded 7mm during July and the area from Boutilimit northwards was dry. However during the first decade of August Atar received 61mm, Akjoujt 23mm, Boutilimit 25mm, Aioun 41mm, all equal to or above the long-term average. In Mali Tessalit recorded 50mm during July, Kidal 29mm, Aguelhoc 19mm, Tin Essako 18mm and Tin Khar 11mm. During the first decade of August Toumbouctou received 35mm, compared with the long-term average of 25mm. In Niger Agadez recorded 14mm, Anou Arraren 39mm but Iferouane only 0.5mm and Arlit 3mm. There was rain in Tamesna, sandstorms were reported from Mali.

Maximum daily temperatures varied between 35° and 45° C in the interior but were around 30° C in coastal areas.

Breeding conditions

Conditions were suitable for breeding in south-east Mauritania, and parts of Timetrine, the Adrar des Iforas and Tamesna in Mali, in parts of Tamesna in Niger and around Lake Chad in Chad.

Locusts

CHAD

A mixed population of <u>Locusta</u> (75%), <u>Schistocerca</u> (15%) and several species of grasshopper were found at Bol (1328N/1442E) at densities of 40.000 per hectare for hoppers and 10.000 per hectare for adults.

NIGER

Some hoppers were seen near Arlit and Agadez.

MALI

Mature adults were found at densities of 5-10 per hectare over areas of 30-35 hectares in oueds Eleoudj (1928N/0047E) and Tarlit (1937N/0048E). Two mature adults were seen in oued Ratai (1920N/0054E).

MAURITANIA

One mature male was captured at Aioun el Atrouss.

NORTH-WEST AFRICA

Meteorology

The Maghreb was affected by ridges extending from the Azores High and by thundery disturbances but these did not give any significant rain in the Sahara. Maximum temperatures reached 45° C in the Sahara.

Breeding conditions

Conditions were unfavourable for breeding.

Locusts

No locusts were reported from the Region.

EASTERN AFRICA

Meteorology

Over Sudan the ITCZ reached 20°C. As reported in Summary No. 94, rainfall during the first two decades of July improved on the June totals. It again increased during the last decade of July, Gedaref recording 92mm in 3 days and Kassala 64mm in two days. However gaps in the GTS data prevent an assessment of how 1986 rainfall compares with the long-term average.

NOAA/AVHRR imagery up till 10 August suggests that rainfall was below average in the normal summer breeding areas. Heavy rain, however, was reported in eastern and central Sudan on 18 August. There were frequent thunderstorms over the Ethiopian highlands. In Eritrea and Tigrai the rains are said to be good to excellent. No rains were reported from coastal areas along the Red Sea or Gulf of Aden.

Breeding conditions

Breeding conditions do not appear from NOAA/AVHRR imagery to have been particularly favourable in the traditional summer breeding areas in the Sudan or western lowlands of Eritrea. They were unfavourable along the Red Sea and Gulf of Aden coasts.

Locusts

SUDAN

As reported in Summary No. 94 groups of adults were found on 20-22 July at a density of 1500 per hectare over 150 hectares at Khore Arab (1847N/3525E) and at a density of 1000 per hectare over 200 hectares at Khor Habour (1850N/3451E).

In a telex from Khartoum dated 23 August fifth instar hoppers and adults were reported over an area of 2 square kilometres at Molassa (1526N/3635E) and hoppers of different instars over an area of 30 square kilometres at Hafra (1524N/3634E). Control measures were in progress using posioned bait and Diazinon. ETHIOPIA

There have been numerous reports, many probably substantially delayed, of locusts in Eritrea and Tigrai Provinces. As stated in Summary No. 94 there were reports of "serious" locust infestations from Adigrat (1412N/3932E), Sechet (1327N/3455E), Afdera (1310N/4058E), Mersa Cuba (1615N/3912E) and Algena (1719N/3822E) but the species was not mentioned. At the same time populations of Desert Locust mixed with grasshoppers were found at Ailet (1535N/3909E) and Met Calabat (1540N/3910-3920E).

In late July there were further reports of locusts and serious damage to crops in coastal areas from Massawa to Mersa Gulbub and inland from Cam Cewa to Fil Fil. The species were a mixture of Desert Locusts, Locusta, Phymateus (not Zonocerus as stated in error in Summary No. 94) and unidentified grass-hoppers. Similar infestations were reported damaging young crops east of Makalle. Locusts were also reported from Dalol in the Danakil depression.

On helicopter surveys starting on 18 August, locusts were seen at Afabet (1612N/3845E) and hoppers were reported at a density of about 5 per hectare. A DLCO-EA aircraft sprayed hoppers within an area of 2400 square kilometres on the Red Sea coast and two Ministry of Agriculture ground teams sprayed 400 hectares close to the Asmara-Massawa road on the Red Sea coast.

There were no reports from SOMALIA, DJIBOUTI, KENYA, UGANDA or TANZANIA.

RED SEA - GULF OF ADEN

As reported in Summary No. 94, a ship reported "olive brown locusts 1.5 inches (38 mm) long with pink inner leg" from 1648N/4048E at 12:00 hours GMT on 30 June to 1225N/4529E at 10:00 hours on 1 July, i.e. on a front of some 600 kilometres. From the description and the synoptic chart it appears there was a wide-ranging invasion of south-west Arabia from Eastern Africa by grass-hoppers, of which Catantops probably predominated.

At 19:00 hours GMT on 11 July a single grey brown locust was found on board a ship at 1219N/4747E at a time when the surface wind was WSW 10 knots (240 degrees, 18 kilometres per hour).

At 11:00 hours GMT on 8 August a ship reported one live locust (5cm, beige, with brown spots) at 1227N/4415E, when the surface wind was westerly 25 knots.

NEAR EAST

Meteorology

The heat low pressure area centred over the Arabian peninsula gave very hot weather, with daily maximum temperatures reaching $50^{\circ}\text{C}_{\bullet}$. Scattered thunder showers were reported from the Asir mountains, where Al Baha reported 47mm of rain on 1 August, and from the Ataq-Nisab-west Hadhramaut area of PDR Yemen where good rains were reported on 28–30 July.

Breeding conditions

Breeding conditions were favourable in the Ataq-Nisab, west Hadhramaut and coastal areas around Ahwar.

Locusts

KINGDOM OF SAUDI ARABIA

Isolated adults were reported from Taif, Quwaiya, Hariq and Madrakah(2159N/4000E) areas during July.

YEMEN ARAB REPUBLIC

In early August a swarm was reported from Zebid. It was said to have come from across the Red Sea and flew eastwards towards Jebel Wisab (1416N/4336E) and scattered.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

A medium density population of mature adults was observed copulating and laying at Ash-Shubaykah (1440N/4648E) on 3 August. On the same day a low density population of mature adults was observed in Wadi Qaudah (1546N/4817E).

On 16-17 August medium density mature adults and patches of mixed solitarious and gregarious hoppers of different instars were seen in wadis north of Hush Bilad (1332N/4647E) and in Wadi Maseb (1330N/4632E). Ground control was in progress.

SULTANATE OF OMAN

Scattered congregans maturing adults were found at several localities in the Ramlat al Wahibah (21-22N/58E) during July.

IRAQ was reported clear in July and there were no other reports from the Region.

SOUTH-WEST ASIA

Meteorology

The large multicellular thundery depression, typical of the summer monsoon, persisted over the summer breeding areas, giving very variable rainfall in the second half of July and intermittent medium-heavy rainfall throughout the summer breeding area during the first fortnight of August. In July Barmer recorded 47mm

of rain, Jaisalmer 48mm, Jodhpur 149mm, Ganganagar 120mm, Sikar 84mm and Bikaner 146mm.
Breeding conditions

Breeding conditions will have become very favourable.

Locusts

PAKISTAN

Scattered adults were reported from many localities in the Uthal, Mirpurkhas, Bahawalpur, Sukkur areas during the first half of July, the maximum density being 1200 per square kilometre at Charwali Moro (2641N/6936E) on 7 July. In the second half of July the maximum density had reached 2400 per square kilometre at Ghorowari (2641N/6936E) on 21 July. Small numbers of first and second instar hoppers were seen at Ghorowari and Shomonki (2712N/6930E) on 27 July. In the first half of August further scattered adults were seen, the highest density being 1500 per square kilometre at Renhal (2813N/7158E) on 4 August. Small numbers of first and second instar hoppers were seen at Ghorowari and Jangitori (2746N/7005E) on 6 August.

INDIA

As reported in Summary No. 94, scattered locusts were found at 63 localities in Bikaner, Jaisalmer, Jodhpur, Churu, Jalore Nagaur, Mohindergarh and Banaskantha districts during the first fortnight of July, the maximum being 1950 per square kilometre at Banasar (2759N/7246E). One green third instar hopper was found at Agnao (2806N/7247E). In the second half of July maturing and mature adults were found at 65 localities in Jaisalmer, Barmer, Bikaner, Nagaur, Jodhpur and Banaskanthadistricts, the maximum density being 2000 per square kilometre at Bhalikhal (2512N/7135E) on 27 July. First to third instar solitary hoppers were found at Kanarar (2808N/7249E), Bassi (2657N/7132E) and Phalodi.

There were no reports from AFGHANISTAN or IRAN.

FORECAST FOR SEPTEMBER-OCTOBER 1986

The largest populations are probably in Eritrea Province of Ethiopia, where there have been numerous reports of swarms, and fifth instar hoppers have been entering Sudan from across the border. The scale of breeding is unknown but it is likely to result in the production of swarms. These are most likely to move south—east and south along the Dessie escarpment to the Railway Area and reach the Short Rains breeding area in the Ogaden, adjacent areas of Somalia and perhaps north—eastern Kenya. Others may move into the Red Sea trench. If breeding is also occurring in Sudan and swarms are produced, some could cross the Sahara and reach Morocco in October.

Breeding is likely to become more widespread in Yemen PDR and could result in the formation of groups. Breeding leading to group formation could occur in Oman. Breeding will be widespread in Pakistan and India and could result in group formation. Initially low density breeding will occur in Mauritania, Mali, Niger and perhaps southern Algeria. Group formation could occur in Chad.

In <u>West Africa</u> there will be initially low density breeding in central and southern Mauritania, Timetrine, the Adrar des Iforas and Tamesna in Mali and Tamesna and Air in Niger, but groups could form in October. In Chad breeding will continue and groups will form. Swarms from the east may cross Chad, Niger and Mali in late September or early October.

In North-West Africa there may be breeding in the extreme south of Algeria and some groups may form. If there is substantial breeding in Sudan swarms may reach southern Morocco and the Souss Valley in October.

In <u>Eastern Africa</u> gregarious breeding has been in progress in the western lowlands of Eritrea and may have been widespread. Some swarms are likely to form at the beginning of the forecast period. They will probably move southeast and south along the Dessie escarpment and then south-east to the Ogaden and may reach adjacent areas of Somalia and north-east Kenya. Others may move north-east to Red Sea coastal areas. If breeding is also in progress in Sudan and is not adequately controlled further swarms may be produced. If the breeding is in eastern Sudan the swarms will join those from Eritrea, but if it is in the west, the swarms will fly across the Sahara and reach Morocco in October. Congregans breeding will probably occur in coastal and subcoastal areas of northern Ethiopia and Sudan. There may be low density breeding on the northern coastal plains of Somalia.

In the Near East breeding is likely to become more widespread in Yemen PDR and may result in the formation of groups. Breeding has probably commenced in Oman and groups may form. Generally low density breeding will probably occur in the eastern lowlands of the Yemen Arab Republic and may result in the formation of groups. It is possible that some swarms may reach the Tihama of Saudi Arabia and the Yemen Arab Republic at the end of the forecast period.

In <u>South-West Asia</u> there will be widespread breeding in the summer breeding areas of <u>Pakistan</u> and India. If there is a second generation some groups will form and possibly some hopper bands and even some small swarms.

Rome 27 August 1986

