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# Locusts, other migratory pests and emergency operations group

DESERT LOCUST SITUATION SUMMARY AND FORECAST

N. 94 JUNE-EARLY JULY 1986

### SUMMARY

There have been numerous reports of dense swarms in northern Eritrea which are likely to be of Desert Locusts and gregarious hatching was reported in late July. Another swarm was reported in an adjacent area of Sudan and high density populations have been reported causing damage in Eritrea and Tigrai provinces of Ethiopia. Two immature swarms reached Yemen Arab Republic in early June and split up as they moved south. Control operations against patchy gregarious breeding terminated in Saudi Arabia. Small scale under control operations were also mounted in south—eastern Morocco. Considerable numbers of adults were reported from Chad, mixed with Locusta and grasshoppers. Scattered adults were also reported from Algeria, Somalia, Pakistan and India.

#### WEST AFRICA

#### METEOROLOGY

The Intertropical Front oscillated between 14° and 20° N during June and early July, reaching higher latitudes over Mauritania and Mali but remaining at the level of Lake Chad in the east. Meteosat infra-red imagery showed the development of the thermoconvection associated with the monsoon. Rainfall, however, was generally below average during June although there was some significant rain in northern areas: Arlit received 31 mm in 1 day, Oum Ararene 23 mm in 2 days and Agades 11 mm in one day. There were better rains in some areas during the first decade of July, Aioun el Atrouss recording 15 mm in comparison with the long term mean of 24 mm, GAO recording 24 mm (15 mm), Zinder 48 mm (39 mm) but Atar, Akjoujt, Boutilimit and Nouakchott remained dry while Tidjikja received 1 mm.

Maximum daily temperatures exceeded 40°C in interior areas.

## BREEDING CONDITIONS

Breeding conditions will have become suitable for breeding in areas which have received some 25 mm of rain or equivalent run-off.

# LOCUSTS

CHAD

In mid-July in a mixed population of nymphal and adult locusts and grasshoppers in the Bol area (1330N/1430W) 15% were Desert Locusts.

## NORTH WEST AFRICA

#### METEOROLOGY

Several thundery disturbances affected the Maghreb but there was little significant rainfall associated with them according to GTS data, particularly in the recession area. Between the thundery periods ridges of high pressure associated with the Azores anticyclone affected all of the Maghreb, which resulted in generally dry weather. Maximum temperatures were in the range  $30\text{--}40^\circ\text{C}$  in the Sahara.

## BREEDING CONDITIONS

Conditions were unfavourable for breeding in Morocco except for a few areas where green vegetation persisted.

# LOCUSTS

#### MOROCCO

As reported in Summary No 93, fifth instar hoppers and immature solitarous adults were found over an area of 400 hectares at Merzouga (3120N/0417W) in early June; the density of the adults being 150-200 per hectare. The population was controlled using DDVP and BHC and by the end of June the density had been reduced to 2 individuals per hectare.

## **ALGERIA**

Isolated adults were reported from Ghardaia and Laghouat in June.

## EASTERN AFRICA

## METEOROLOGY

The Intertropical front reached 15°N by the end of June and in July it moved further north to around 20°N. Rainfall was below average over most of central and northern Sudan during June but improved during the first two decades of July. There were moderate showers over the Ethiopian Highlands. There were further widesprad rains in Somalia during the first fortnight of June but the weather then became dry.

# BREEDING CONDITIONS

Conditions were favourable for breeding north-west of Massawa in early June but later became dry. They were also favourable in northern Somalia east of Mait in early June but these areas also became dry in July. Conditions were becoming favourable for breeding in the interior of Sudan in late July.

# LOCUSTS

#### SUDAN

A swarm was seen at Musmar (1814N/3532E) on 25 June flying south-west. During a ground survey on 20-22 July groups of adults were found at a density of 1500 per hectares over 150 hectares at Khore Arab (1847/3525E), and at a density of 1000 per hectare over an area of 200 hectares at Khore Habour (1850/3451E). Both Khores were in flood on 17 July.

#### **ETHIOPIA**

Following reports of breeding over large areas of the Red Sea coast and north-west Ethiopia during June ground and aerial surveys were launched in mid and late July respectively.

In mid-July there were reports of serious" locust infestations from Adigrat (1421N/3932E), Sechet (1327N/3255E), Afdera (1310N/5058E); Mersa Cuba (1615N/\$912E) and Algena (1719N/3833E) but the species involved were not indicated. At the same time populations of Desert Locusts mixed with various species of grasshopper were found at Ailet (1535N/3909E) and Met Calabat (1540N/3910-3920E). In late July there were further reports of locust and extensive damage to crops in coastal areas from Massawa (1537N/3828E) to Mersa Gulbub (1632N/3908) and inland from Cam Ceua (1625N/3840E) to Fil Fil (1530N/3900E). The species were Desert Locusts, Locusta, Zonocerus and unidentified grasshoppers. Similar infestations were reported damaging young crops east of Makalle in Tigrai Province. There were also reports of dense swarms and widespread hatching in northern Eritrea but the former had not been detected by aircraft by the end of July.

## SOMALIA, DJIBOUTI

No swarms were seen in the course of aerial surveys from 31 May to 18 June in the following areas: the Nogal Valley, Scusciuban, Meleden, Bender Beila, Cape Guardafui, Alula, Bossaso Ligavo Las Khoreh and the coastal plains west to Berbera, Bulhar, Silil and Djibouti.

# RED SEA/GULF OF ADEN

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 1000 hours GMT 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 grasshoppers of which Catantops probably predominated.

At 09:00 hours 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 km/h ( $240^{\circ}$ , 18 kilometres per hour).

#### NEAR EAST

# METEOROLOGY

A large heat low pressure area centred over eastern Arabia resulted in very hot dry weather giving maximum temperatures of up  $50^{\circ}$ C. Several dust storms were reported by the GTS. The Red Sea Convergence Zone had a mean position of  $15^{\circ}$ N with temporary shifts to the north when thermoconvective cells developed over the Yemens, where there were some thunderstorms. There was some light rain in Onan.

## BREEDING CONDITIONS

Conditions were favourable for breeding in Yemen PDR following rains and some flooding in April - May and in the highlands of Yemen AR. Conditions became unfavourable in Saudi Arabia.

#### LOCUSTS

#### KINGDOM OF SAUDI ARABIA

Control was mounted gregarious hopper and adult populations on the Quwaiya area (2403N/4514E) from 27 May to 4 June, in the Dawadmi area (2430N/4423E) from 1-13 June, in the Taif area from 24-31 May and in the Hail area from 27 - 29 May using Sumithion ULV, Malathion ULV, and BHC dust. The population in the Yembu area were cleared. There were also scattered locusts during June in Taima, Tebuk, Medina and Najran areas.

#### YEMEN ARAB REPUBLIC

Additional information states that two immature swarms entered Yemen AR from the north in early June. These scattered as they moved south reaching Sana'a, Anis (1445N/4400E), Dhamar and Rada'a (1430N/4455E) where they were present at 50-100 per hectare. Solitary adults were also found in Al-Jaff, Marib and Harib in the eastern lowlands.

# PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Scattered solitarious adults were found at Ja'ar (1313N/4520E), Al-Fajrah (1300N/4419E) and in Sorghum cultivations at Am-Waday (1345N/4600E) on 25 June.

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

# SOUTH-WEST ASIA

## METEOROLOGY

The weather was generally dry over the summer breeding areas in the first fortnight of June, although an easterly low pressure system reached Punjab and gave 33 mm of rain at Ganganagar, and 19 mm at Bikaner. During the second half of June a seasonal low pressure through formed over Sind and gave rise to medium-rainfall, Bikaner recording 96.5 mm, Bahawalpur 14,4 mm but Barmer received only 0.3mm, Jodhpur traces and Jaisalmer 0.

In the first fortnight of July there were widespread but scattered showers in the summer breeding areas; Bikaner reported 93 mm of rain, Ganganagar 93 mm but Barmer only 4 mm, Jaisalmer 3 mm and Jodhpur 10mm.

# BREEDING CONDITIONS

Conditions will have become favorable for breeding in areas which have received substantial rainfall.

## LOCUSTS

#### **PAKISTAN**

As reported in Summary No. 93, no locusts were reorted during the first fortniht of June.

In the second fortnight a total of 45 adults were seen in localities of Uthal, Turbat, Pasni and Nushki areas of the spring breeding areas.

During the first fortnight of July only five locusts were seen in the spring breeding area and only 22 in the summer breeding areas, the maximum density being only 3 per hectare, and by the second fortnight the maximum density of adults had risen to 2400 per hectare (at Glorowari, 2641N/6936E). Solitarious first hopper were reported and second instar hoppers were reported from Ghorowari and Shomonki (2712N/6930E) on 27 July.

### INDIA

In the second fortnight of May scattered adults were found at one locality in Jaisalmer district. No locusts were reported in the first half of June and there were only seven reports in the second half of the month; the maximum density being 150 per square kilometre at Tokla (2739N/7244E) in Bikaner district.

By the first half of July, however, the maximum density reported had risen to 1950 per square kilometre, at Banasar in Bikaner district. One instar hopper was also found at Agnao on 2 July.

There were no reports from AFGHANISTAN or IRAN.

### FORECAST FOR AUGUST-SEPTEMBER 1986

The largest populations appear to be in northern Eritrean province in Ethiopia, where there have been several reports of dense swarms. If they prove to be Desert Locusts there will probably be heavy gregarious breeding in northern Eritrea and eastern Sudan and a strong likelihood of swarms being produced towards the end of the forecast period. Most will probably move south-east and south along the Dessie escarpment, others may move west and invade Chad while others may move to the Red Sea. In other areas there will be widespread initially low density breeding in India, Pakistan, Yemen PDR, Somalia, possibly in Southern Algeria, Niger, Mali and Mauritania, while in Yemen AR some hopper groups may be produced.

In <u>West Africa</u> there will be initially low density breeding in central and southern Mauritania, the Adrar des Iforas and Tamesna in Mali, Tamesna and Air in Niger, and around Lake Chad in Chad. At the end of the forecast period Chad may be invaded by swarms from the east.

 ${\hbox{\footnotesize In North-West Africa}}$  there may be small scale breeding in southern Algeria.

In Eastern Africa there are apparently numerous Desert Locusts swarms in northern Eritrea and gregarious hatching started in late July. As there have been some good rains, breeding is likely to be successful and it may be difficult to control. As a result it is probable that numerous swarms will be formed towards the end of the forecast period. Most are likely to move south-east and then south along Dessie escarpment in late September, others may move towards the Red Sea coast but others may move west across Sudan. In eastern Sudan there will probably be widespread breeding, some of it gregarious. Control should be more effective but the possibility of some swarms forming cannot be excluded. There will be initially low density breeding on the coastal and sub-coastal plaines in northern Somalia.

In the Near East, there will probably be low density breeding in the eastern low lands of the Yemen Arab Republic and in coastal and interior areas of Yemen PDR.

In South-West Asia there will be widespread initially low density breeding in the Tharparkar, Khipro, Nara and Cholistan deserts of Pakistan and in Rajasthan in India.

Rome 5 August 1986

