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DESERT LOCUST SITUATION SUMMARY AND FORECAST

NO. 85 SEPTEMBER - EARLY OCTOBER 1985

SUMMARY

The overall Desert Locust situation remains calm. Small numbers of adults were reported in India, Pakistan and Mali. A small infestation of hoppers and fledglings was controlled in Saudi Arabia and another was reported from northern Ethiopia.

# WEST AFRICA

# Meteorology

As reported in Summary No. 84, some significant rain fell in the first half of September: Nema received 27 mm on 1 September, on 2 September Bilma reported 21 mm, Gao 17 mm and Rosso 13 mm. On 7 September Agadez reported 18 mm and on the same day cyclogenesis developed along the ITCZ near the Cape Verde Islands and resulted in 47 mm of rain at Sal. Atar reported 17 mm on 11 September. A period of fine weather continued until 19 September, but on 20 September heavy rains ranging from 20 to 37 mm were reported from Senegal and again on 21 September ranging from 24 to 39 mm. There were further rains, ranging from 26 to 42 mm, on 27 September over Senegal and the Gambia.

At the beginning of October, Meteosat imagery indicated some rain over Mauritania; according to GTS data this did not exceed 4 mm daily. From Meteosat imagery the weather was generally fine north of 15 N over Mali and Niger, although Gao reported 7 mm on 4 October.

The mean portion of the ITCZ moved perceptibly south, in spite of some undulations, its mean position being about 15  $^{\rm N}$  in early October.

. Maximum temperatures ranged from  $30^{\circ}$  to  $40^{\circ}$ C in the interior, and between  $25^{\circ}$  and  $30^{\circ}$  in coastal areas.

# Breeding conditions

According to OCLALAV ecological conditions were favourable for breeding over large parts of the recession breeding areas following the good rains in July and August.

### Locusts

MAURITANIA

In August one mature male was captured at 1702N/0817W.

SENEGAL

In August a mature male was captured near Rosso at 1615N/1548W.

MALI

During August mature adults at a density of 5 per hectare were found over an area of 5 hectare mixed with high density hopper and adult populations of Oedaleus senegalensis and Oedaleus johnstoni.

NIGER

Two mature adults were found, one at Takriza (1850N/0745E), the other at Tazourouft (1955N/0820E).

In early October adult Desert Locusts were widely dispersed at densities of up to 40 hecate over large areas, with maxima of 200 per hectare in restricted areas. Details are awaited.

There were three reports from ships. On 21 September isolated flying yellow locusts were seen from 06:30-08:00 GMT from 1857N, 1747W to 1915N, 1745W, surface wind easterly, 10 knots. On 23 September intermittent groups of flying yellow locusts were seen from 01:00 to 07:00 GMT, position 1510N, 1737W to 1635N, 1737W, and some landed on board, surface wind northerly 19 knots. From 12:00 GMT on 27 September, position 2100N, 2142W, to 12:00 GMT on 28 September, position 1648N, 2325W, yellow-brown locusts were seen singly in flight, and some landed on board. In view of the absence of reports of Desert Locust from surrounding countries and the presence of large grasshopper infestations (see below) it is very doubtful whether these reports referred to the Desert Locust.

There have been widespread heavy infestations of grasshoppers, in particular of Oedaleus senegalensis, in the Nara-Dilly area of Mali, where 98.000 hectare have been controlled by aerial and ground spraying, in the Yelimane area of western Mali, in the western Hodh, Assaba and Guidimaki areas of Mauritania, the Louga, Diourkel and Ziguinchor areas of Senegal and the Aribinda and Djibo areas of Burkina Faso.

# NORTH-WEST AFRICA

# Meteorology

As reported in Summary No. 84, the first fortnight of September was generally dry. Later in the month rainfall increased. For example, a thundery Mediterranean depression gave 58 mm of rain at Monastir on 15 September and 18 mm at Annaba and 15 mm at Bejaia on 16 September. On several other days stations in the northern Maghreb received more than 10 mm in a day. There were further rains associated with a thundery Mediterranean depression over the northern Maghreb in the first decade of October. On 12 October a typical Saharan disturbance resulted in 14 mm of rain at Adrar and 20 mm at Timimoune. The depression later fragmented into isolated cumulonimbus but the station density in the Sahara is too low to provide information on the extent of the rains.

Maximum daily temperatures were in the region of  $40^{\rm O}{\rm C}$  in the Sahara and between 25  $^{\rm O}$  and 30  $^{\rm O}{\rm C}$  in coastal areas.

### Breeding conditions

According to NOAA/AVHRR imagery there were no significant areas providing favourable breeding conditions.

# Locusts

There were no reports of Desert Locusts.

# EASTERN AFRICA

# Meteorology

Over Sudan, thermoconvective activity continued up to  $20^{\circ}$ N during the first two decades of September, particularly over eastern Sudan. Meteosat infra-red imagery inc cated the probability of rain but no GTS data were available. This was only partly compensated for by the regularity of METAR and TAF data from ICAO (codified civil aviation observations and forecasts). In Khartoum maximum temperatures frequently exceeded  $40^{\circ}$ C when dry north-easterly winds became established.

In Ethiopia there were frequent thunderstorms over the highlands, but the influence of the ITCZ was weakened by an anti-cyclonic ridge of about 1015 mb over the western Indian Ocean.

# Breeding conditions

According to NOAA/AVHRR imagery for early September conditions were favourable for breeding in Kassala Province of Sudan up to within about 50 km of Kassala, in the highlands of northern Ethiopia as far north as Nacfa, south-east of Berbera and east of Mait in northern Somalia.

### Locusts

### ETHIOPIA

On 17 September further reports were received of locust infestations from the Afabet area (1613N/3845E) of Eritrea.

SUDAN

According to a late report, copulating greyish-brown and yellow adults were seen at El Dour (1435N/2533E) on 15 July at a density of 480 per hectare over 500 hectares (cf. Summary No. 84).

### NEAR EAST

# Meteorology

The Arabian peninsula was under the influence of a large multicellular depression to the south of which the ITCZ was very complex and fragmented and brought moist air from the Indian Ocean to south-west Arabia and Oman. As reported in Summary No. 84, there was strong instability over South-West Arabia, where Jizan recorded 141 mm of rain on 8 September. GTS data for the area are intermittent but confirmed that Taiz received 38 mm of rain on 8 October and 11 mm on 9 October. The Red Sea Convergence Zone occupied a mean position around 15 N. There were several sand-storms in the vicinity of the convergence zones.

Maximum temperatures were frequently around  $40^{\circ}\mathrm{C}$  in the interior, while in coastal areas they were around  $30^{\circ}\mathrm{C}$ .

# Breeding conditions

According to NOAA/AVHRR imagery conditions were favourable for breeding in the highlands of Yemen PDR, Yemen AR and the Asir as far north as Bisha.

### Locusts

### SAUDI ARABIA

The hoppers and fledglings reported from Najran (Summary No. 84) were completely controlled by 18 September.

### PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

According to a late report scattered adults were present in the Al-Fajrah area (1258N/4418E) on the western plains during the first week of August.

There were no other reports from the Region.

# SOUTH-WEST ASIA

# Meteorology .

During the first two decades of September the weather was generally dry over the summer breeding areas due to quasi-permanent anti-cyclonic ridges over the Indian Ocean. By contrast, during the last decade of September and the first decade of October continental depressions and associated thunderstorms resulted in some very heavy rains over northern India. Guna reported 227 mm and Lucknow 137 mm on 24 September. After a period of dry weather there were further rains between 4 and 9 October due to cyclogenesis which reached Bombay and resulted in pressures of less than 1000 mb. This constituted a reactivation of the monsoon even though continental high pressure (exceeding 1025 mb) had developed north of the Himalayas.

According to the Indian Locust Bulletin, Ganganagar received 19 mm of rain during September, Jodhpur 7 mm while there was no rain at Barmer, Jaisalmer or Bikaner.

Maximum temperatures were around  $40^{\circ}\mathrm{C}$  over Rajasthan, but  $30\text{--}35^{\circ}\mathrm{C}$  in coastal areas of Pakistan.

### Breeding conditions

As a result of the virtual absence of rain in late August and September, breeding conditions were generally unfavourable.

### Locusts

### PAKISTAN

In the second half of August scattered adults were seen in 31 localities in Uthal, Mirpur Khas, Sukkur, Bahawalpur and Rahimyar Khan districts, the maximum density being 3 per hectare at Tinkenda on 22 August. Small numbers of first and second instar hoppers were seen at two localities in the Tajjal area of Khairpur on 23–24 August.

In the first half of September scattered adults were seen in 15 localities in Uthal, Mirpur Khas, Sukkur, Bahawalpur and Rahimyar Khan districts the maximum density being 2-3 per hectare at Kun (2758N/6956E), in Sukkur on 6 September and at Badalwala (2745N/7031E) of Rahimyar Khan on 2 September.

In the second half of September the maximum density of adults was 5-6 per hectare at Lundi (2825N/7120E) in Cholistan.

In the first half of October the maximum density of adults was 2-3 per hectare at Mirzawala (2806N/7030E) and Bijnot (2806N/7141E).

### INDIA

In the second half of August low density first to fifth instar hoppers were seen over an area of 3 km  $\times$  3 km in the Saddrao area of Jaisalmer (2723N/7104E) and adults were seen in four localities of Jaisalmer and Bikaner districts.

In the first half of September scattered adults were found at 30 localities in Jaisalmer, Bikaner and Barmer districts, the maximum density being 1200 per square kilometre at Saddrao on 11 September. Seven solitary hoppers were found in Jaisalmer and Bikaner districts.

In the second half of September scattered adults were found at four localities in the Jaisalmer and Bikaner districts, the maximum density being 225 at Seora in Bikaner on 18 September.

There were no reports from AFGHANISTAN or IRAN.

# FORECAST FOR NOVEMBER-DECEMBER 1985

Generally small numbers of adults will start to breed in the winter breeding areas around the Red Sea and Gulf of Aden. Elsewhere small numbers of adults will reach coastal areas of Baluchistan and some may reach central Algeria and northern Mauritania.

In South-West Asia small numbers of adults will reach coastal areas of Baluchistan and possibly Baluchistan-Seistan in south-east Iran. Others will remain in the summer breeding areas of Rajasthan and the adjacent deserts in Pakistan.

In the <u>Near East</u> small scale breeding is likely to occur in coastal areas along the Red Sea and Gulf of Aden and may continue in interior areas of southwest Arabia. A few adults may reach eastern Oman and the United Arab Emirates.

In <u>Eastern Africa</u> adults will concentrate in Red Sea coastal areas which receive <u>late</u> summer floods or early winter rainfall and will start to breed. Groups of hoppers may form. Small scale breeding is also likely to occur in coastal areas of northern Somalia and Djibouti receiving winter rainfall.

In North-West Africa small numbers of adults may reach central and western Algeria and even southern Morocco.

In West Africa generally low density breeding may continue in Timetrine, the Adrar des Iforas and Tamesna of Mali and in Tamesna and western Asir in Niger but some small groups of hoppers could form in areas providing particularly favourable conditions.

Rome 21 October 1985

