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Locusts, other migratory pests and emergency operations group

DESERT LOCUST SITUATION SUMMARY AND FORECAST

No. 48 AUGUST - EARLY SEPTEMBER 1982

SUMMARY

Three small mature swarms were controlled in early August in Las Bela district of Pakistan and control operations were mounted against early instar hopper bands in the same area in early September. Later two first generation swarms were aeriually sprayed close to the Indian border. There were also widespread scattered populations in the Indo-Pakistan summer breeding areas. One swarm and several groups of mature adults appeared in the highlands of the Yemen Arab Republic, Najran in eastern Asir of Saudi Arabia and in the interior of the People's Democratic Republic of Yemen. Control operations were mounted against patchy breeding in the latter. Small numbers of adults were reported over the Gulf of Aden and Arabian Sea and from north-west Somalia, Niger and Mauritania. Very considerable numbers of 'yellow locusts' were reported by a ship off the coast of Mauritania and Senegal on 21-22 September.

DESERT LOCUST SITUATION, AUGUST - EARLY SEPTEMBER 1982

INTRODUCTION

The format of this issue has been altered to incorporate two additional types of data which have now become available.

1. Since 12 August 1982 the Centro Nazionale di Meteorologia e Climatologia Aeronautica (CNMCA) (the Italian Meteorological Service) has kindly provided daily synoptic meteorological data in real time received from Global Telecommunication System (GTS) to the Desert Locust Reporting and Forecasting Unit, Rome. The analysis of the weather maps has allowed study of the movements of the Intertropical Convergence Zone (ITCZ). Unfortunately, the Unit does not yet have access to satellite cloud photographs from METEOSAT or NOAA, which allow interpretation of the main monsoon phenomena and assist in explaining some local rainfall anomalies.

2. In cooperation with the U.S. National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA), FAO is currently conducting a semi-operational experiment on the use of the Advanced Very High Resolution Radiometer (AVHRR) data from the polar orbiting NOAA satellites for assessment of seasonal vegetation biomass changes in the key summer breeding areas of the desert locust recession area.

During the experiment (July - December 1982), the 1 - 4 km resolution AVHRR data is acquired for FAO by NOAA through on-board taperecording every nine days. The data is subsequently processed by NASA/Goddard Space Flight Center (GSFC) in a georeferenced vegetation index format and then analyzed and interpreted in combination with the meteorological data coverage and incoming locust reports for the recession area at the Centralized Reporting and Forecasting Unit at FAO in Rome.

WEST AFRICA

Meteorology

The Intertropical Convergence Zone (ITCZ) oscillated around a mean position at about 20°N latitude. A pronounced wave persisted during this period and some well marked troughs developed west of 5° W, mainly coming from Mauritania and Senegal. These instability systems generated several thunderstorms mainly to the south of the ITCZ, that is, in the southern part of the Sahel, and also further south, from Guinea to Nigeria, where the West African monsoon was active. In the Sahelian countries, this special situation was the origin of some rainfall anomalies, mainly during the two first decades of August (confirmation received from the Agrometeorological Group, AGP). Rainfall was above normal at Atar, Aioun el Atrouss, Linguere, San, Maradi, Gao, Zinder and Agades (where the third decade rainfall was also above normal).

Breeding conditions

The AVHRR data coverage acquired during the second/third decades of August confirmed that vegetation biomass in northern Mauritania, the Adrar des Iforas, Tamesna and Air as well as the surroundings of the Tibesti mountains in northern Chad was generally very low. This confirmed the meteorological observations that the seasonal rains in West Africa were late and their northward extension limited. Locally, however, vegetation was developing in Mauritania west of 12° W and south of 18° N, in wadis in Malian Tamesna and in some valleys in Air in Niger.

Locusts

Four adults were seen near Ledfotar in MAURITANIA in early August, and small numbers of adults were seen on surveys in NIGER. No locusts were seen in MALI and there were no reports from CHAD.

According to a late report a large group of yellow locusts was seen from a ship between 1745N/1759W and 1441N/1802W between 0800 GMT on 21 September and 0700 GMT on 22 September, i.e. over a distance of 340 kilometres.

NORTH-WEST AFRICA

Meteorology

Weather was mainly dry until the end of August because a ridge of high pressure (associated with the European anticyclone) was predominant in the MAGHREB countries and sandstorms were observed in the Sahara.

In September, a thundery tendency was developing, mainly in northern Libya, Tunisia and Algeria.

Breeding conditions

Vegetation in the seasonal summer breeding areas of southern Algeria was observed to be extremely dry during the middle of August. In southern Morocco between Goutimine and Sidi Ifni, a substantial area was observed to be drying out.

Locusts

No locusts were seen or reported.

EASTERN AFRICA

Meteorology

GTS data received by the Italian Meteorological Service for this area continued to be very erratic and a request to improve data transmission will be addressed to the WMO Regional Association for Africa at their forthcoming meeting in Cairo in November.

Breeding conditions

The coastal plains of Eritrea, Ethiopia, Djibouti and northern Somalia were observed to be extremely dry during late July. In the interior of northern Somalia there was very little development of annual vegetation.

Locusts

Small numbers of adults persisted in wadi Atar in DJIBOUTI and between Silil and Bulhar in north-western SOMALIA up to early August.

NEAR EAST

Meteorology

The position of the Intertropical Convergence Zone (ITCZ) was very complex and variable during the period with turbulent winds coming from the northern sector in the Yemen Arab Republic to the south-west sector in the People's Democratic Republic of Yemen. This cyclonic rotation observed at the synoptic scale was continuously perturbed at the meso-scale and gave good rains over the highlands of the Yemen Arab Republic and in parts of the People's Democratic Republic of Yemen. It is important to emphasize that with the adjacent Horn of Africa there are very important and complex "air - sea - land - orographic" interactions. The ITCZ is in itself also very complex and it will be useful to improve the meteorological observations and transmission in real time in the GTS in the Red Sea, Gulf of Aden areas and adjacent countries.

During the third decade of August the Tihama coastal plains of Saudi Arabia, Yemen Arab Republic and the People's Democratic Republic of Yemen were extremely dry. Substantial areas of green vegetation were observed in the interior of the People's Democratic Republic of Yemen between 45° - 47° E and 13° - 14° N. Also in Yemen Arab Republic between 44° - 45° and 15°40' - 16°20' N a large area of new vegetation development was observed. In Saudi Arabia the area west of the Jabal Tuwayq between 45° - 46° E and 18° - 20° N seemed to have received enough precipitation to support low cover vegetation.

Locusts

GULF OF ADEN/ARABIAN SEA

The following reports were received from ships:

- 2 August 0700 GMT 1330N 4740E Group of grey locusts, red hind legs, wind WSW, force 3
- 4 August 0600 GMT 1237N 4718E to 1330 GMT 1238N 4909E 28 flying light brown locusts, some landed
- 8 August 1400 GMT 1530N 5210E small isolated groups of grey locusts appeared on board, wind SW force 3

10 August 1100 GMT 1300N 4318E to 1300 GMT 1318N 4306E isolated flying grey locusts, wind NNW force 3
15 August 0700 GMT 1230N 4335E to 1100 GMT 1232N 4446E approximately 12 yellow locusts sighted singly on board, wind SW 11 knots.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Following a report received in Aden on 10 August ground surveys undertaken from 16-19 August in the wadi Markhah - Nisab areas revealed the presence of scattered patches of second to fifth instar green, yellowish green and fawn hoppers and young adults over 10 square kilometres at Al-Khadah (1421N/4629E) and 10 square kilometres at wadi Sa'ad (1458N/4620E). During control operations on 20-24 August 213 litres of 20% dieldrin were used.

On 31 August groups of adults reached the Shabwa area (1522N/4701E) from the north and during the next fortnight, during extensive ground surveys, a group of copulating adults covering 10 hectares was sprayed at Bannoob (1424N/4649E) on 6 September. Another high density population covering 1 square kilometre was sprayed on 8-9 September at Ahl Ba-Ras in wadi Saddar (1421N/4655E). Yellow adults were also observed migrating westwards at Al-Mashari in wadi Beihan (1506N/4550E) on 8 September. *a Sept*

YEMEN ARAB REPUBLIC

On 21 August a few thin density groups of mature adults reached Sana'a from the east on strong easterly winds. Control operations were mounted using EHC dust and by children who collected females full of eggs for food. In the course of extensive surveys in the highlands a few isolated adults were seen between Saada and Taiz.

KINGDOM OF SAUDI ARABIA

On 21 August a small mature swarm was seen at Najran flying south-east. No other locusts were reported.

No locusts were reported from the UNITED ARAB EMIRATES and no reports have been received from other countries in the Region.

SOUTH-WEST ASIA

Meteorology

The traditional monsoon in India and Pakistan, associated with a quasi-permanent low pressure area, was very intense with frequent thunderstorms mainly to the south of parallel 30°N. Rainfall data were not received regularly through the GTS, but information received from the Agrometeorological Group, AGP, FAO, Rome and the Indian Plant Protection Department indicate that precipitation in west Rajasthan was very variable, while the Pakistan Plant Protection Department reported heavy rain throughout the summer breeding area in the first half of August. There was no significant rain in the summer breeding areas during the first half of September.

Breeding conditions

In late July the Mekran coast and Baluchistan interior of Iran and Pakistan as well as the Tharparkar and Rajasthan deserts of Pakistan and India were observed to be extremely dry. As a result of good and wide-spread rains in parts of the Rajasthan desert and the Las Bela region in Pakistan, vegetation development was observed over substantial areas. At the end of August the border area between India and Pakistan south-west of Barmer from 70°20' - 70°32' E and 25°20' - 25°35' N had excellent breeding conditions. Similar conditions were observed over a large area in the Tharparkar desert between 70°25' - 70°55' E and 25°40' - 25°52' N and in the Las Bela region between 66°40' E - 66°55' E and 25°30' - 25°45' N. A small area of green vegetation development was observed near Chandan west of Jaisalmer. The late August imagery furthermore showed that the critical border areas west of Jaisalmer and the northern part of the scheduled desert areas of India and Pakistan were still predominantly dry.

Locusts

PAKISTAN

In the first week of August a loose swarm measuring 1-2 square kilometres coming from the west was controlled at Ubai (2540N/6637E) in the Pawan valley and two further mature swarms measuring $\frac{1}{2}$ - 2 square kilometres were controlled in the same area in the second fortnight of August. Scattered adults were present in most parts of the summer breeding area, the maximum density being 7 500 per square kilometre at Masitwari in the Nara desert.

On 31 August and 1 September hatching commenced in Ubai Pawan (2540N/6637E) and Wattohora (2536N/6635E) areas of Las Bela. 77 bands were destroyed by dusting and spraying using 350 kg of 12% BHC dust and 150 litres of 20% dieldrin. Solitarious adults continued to be found in all summer breeding areas in the first half of September with a maximum density of 15 000 per square kilometre at Bhorilo (2457N/7002E). Control operations were mounted at Virawah (2431N/7046E), Chachro (2507N/7016E) and Tajjal (2653N/6859E). 489 kg of BHC dust were used.

On 19 September two loose swarms measuring 6 and 4 square kilometres entered Pakistan from India near Khokropar (2542N/2013E) and were sprayed from the air.

INDIA

During the first half of August scattered adults were found at 37 localities in Barmer, Bikaner, Churu, Ganganagar, Jaisalmer and Jodhpur districts of Rajasthan and at one locality in Gujarat, at a maximum density of 1 950 per square kilometre, at Munabao in Barmer district on 7 August. Small numbers of first to fifth instar green hoppers were found at two localities in Bikaner district. In the second half of August scattered mature or maturing adults at a maximum density of 4 725 per square kilometre were found at 124 localities in Jaisalmer, Barmer, Bikaner, Jodhpur, Nagaur, Churu and Banaskantha districts and low density first to fifth instar solitarious hoppers were found at 28 localities in Barmer, Bikaner and Jaisalmer districts.

There was no information from AFGHANISTAN or IRAN.

FORECAST FOR OCTOBER - NOVEMBER 1982

Rainfall in the summer breeding areas of West Africa, South-West Arabia, Pakistan and India has been patchy, and early indications are that there was little rain in Pakistan in early September. First generation monsoon breeding in the Indo-Pakistan border produced two swarms and a second generation of breeding may occur in areas which have received good rains. Further hopper bands and some small swarms may be produced. These adults will move west into Baluchistan of Pakistan and some may reach south-east Iran and eastern Arabia. Adults from patchy breeding in south-west Arabia are likely to move to the coastal plains of the Red Sea and Gulf of Aden, as will adults from summer breeding in Sudan. Small numbers of adults will reach central and western Algeria and perhaps southern Morocco. The ships report of yellow locusts off the coast of Mauritania and Senegal probably does not refer to the desert locust, but to the Senegalese grasshopper, Oedaleus senegalensis, of which there have been heavy infestations in Senegal recently.

In South-West Asia a second generation of breeding is likely to occur in areas which received good rains in August notably around Gadra Road, south-west of Gadra Road, west of Jaisalmer, east of Bikaner and in Las Bela district. Unless controlled, hopper bands and some small swarms may be produced. Any escapes and considerable numbers of scattered adults will move west to Baluchistan in Pakistan and some may reach south-east Iran.

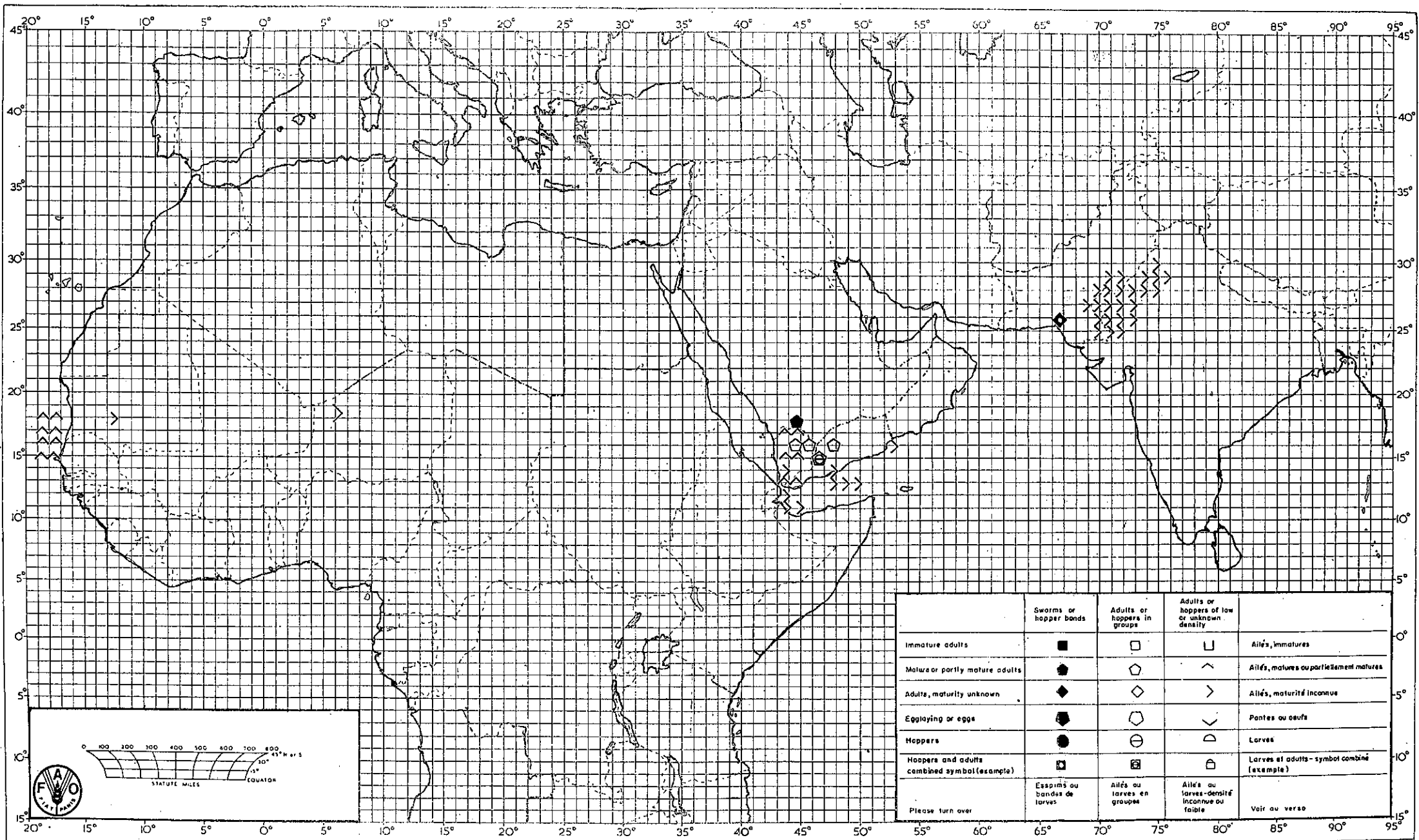
In the Near East patchy breeding is likely to continue in the interior of the People's Democratic Republic of Yemen and may be in progress in the eastern lowlands of the Yemen Arab Republic and adjacent areas of south-west Saudi Arabia. Any escapes, which could include a few small swarmlets, are likely to move to the coastal plains along the Red Sea and Gulf of Aden. Breeding could commence towards the end of the forecast period in areas which have received summer rains or floods, or early winter rains. Adults, possibly in considerable numbers, may reach Oman and the United Arab Emirates from the east.

In Eastern Africa considerable numbers of adults may reach southern Eritrea, Dankalia, Djibouti and north-west Somalia from Arabia and breeding may commence if there are good early winter rains. Adults will start to accumulate along the Red Sea coast of Sudan and northern Ethiopia and breeding may commence in areas which have received summer floods or early winter rain.

In West Africa only small numbers of adults have been reported from Mauritania and Niger and even if there is a second generation of breeding it is unlikely that hopper bands or swarms will be produced. This assumes that the 'yellow locusts' reported by a ship were not desert locusts and is based on the latest information from OCLALAV.

In North-West Africa small numbers of adults will reach central and western Algeria from the south and some may reach southern Morocco and Western Sahara.

Rome
23 September 1982



	Swarms or hopper bands	Adults or hoppers in groups	Adults or hoppers of low or unknown density	
Immature adults	■	□	▭	Ailés, immatures
Mature or partly mature adults	●	◊	∧	Ailés, matures ou partiellement matures
Adults, maturity unknown	◆	◇	>	Ailés, maturité inconnue
Egg laying or eggs	⬤	◉	∨	Pontes ou oeufs
Hoppers	●	⊖	◐	Larves
Hoppers and adults combined symbol (exemple)	⊞	⊠	⊡	Larves et adultes - symbol combiné (exemple)
Please turn over	Essaims ou bandes de larves	Ailés ou larves en groupes	Ailés ou larves - densité inconnue ou faible	Voir au verso

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