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Locusts, other migratory pests and emergency operations group

DESERT LOCUST SITUATION SUMMARY AND FORECAST

No. 3 NOVEMBER 1978

SUMMARY

The summer breeding areas in India and Pakistan became free of swarms. Groups and large numbers of scattered locusts migrated west along the Mekran coast and reached southern Iran, Oman, the United Arab Emirates and People's Democratic Republic of Yemen. Widespread but generally light gregarious breeding continued in the Somali peninsula. Swarms reached the Red Sea coast of Sudan and laid, and a few immature swarms reached the Tihama of Saudi Arabia. Winter rainfall around the Red Sea and Gulf of Aden was patchy.

The main threats in the continued development of the plague are of breeding in inaccessible areas in the Somali peninsula and along the Red Sea coast of northern Ethiopia, of breeding in other coastal areas bordering the Red Sea and Gulf of Aden, and of breeding in remote areas of eastern Arabia and in coastal areas and interior valleys in the Mekran of Pakistan and southern Iran.

In South West Asia the last swarms were reported from the summer breeding areas in India and Pakistan in early November, two of the swarms flew out to sea. Small groups of adults were seen along the Mekran coast of Pakistan and some adults entered south-eastern Iran in early November.

In the Near East immigration from the summer breeding areas of India and Pakistan continued in early November, some adults reaching the People's Democratic Republic of Yemen in mid-November. A number of small-medium sized immature swarms reached the Tihama of Saudi Arabia between Jizan and Jeddah in late November, almost certainly from northern Ethiopia. There were also groups of adults north of Qunfidah. Scattered hoppers were present on the northern Tihama of Yemen.

In Eastern Africa there was widespread light gregarious breeding in the "Short Rains" breeding area of the Somali peninsula. No hoppers were reported after 20 November. A swarm was seen in northern Ethiopia in early November and breeding was almost certainly in progress on the Red Sea coast of northern

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Ethiopia. In Sudan a number of mature swarms reached the Tokar delta and started to breed. Hatching commenced in late November. Other swarms persisted in the summer breeding area, where late breeding came to an end.

In West Africa late instar hoppers and fledglings were controlled in Tamesna of Niger. Small numbers of adults were seen in Malian Tamesna, the Tilemsi valley and southern Mauritania.

No reports were received from North West Africa, but scattered adults were probably present in many areas in southern and central Algeria.

SOUTH WEST ASIA

INDIA

Ecological conditions There was widespread moderate rainfall in Gujarat and Rajasthan between 12 and 14 November associated with a cyclone. Barmer recorded 32 millimetres, Jaisalmer 11, Jodhpur 16, Sri Ganganagar 18, Bhuj 34 and Deesa 74 millimetres. There was further, light, rain at Udaipur and Kota in the second half of November.

Adults A pink swarm, measuring 5 x 2 km. was reported from several localities in the Mandvi area of Gujarat between 5 and 7 November and was finally reported to have flown out to sea on 8 November. Another pink swarm, measuring 2 x 1 km. was reported from Phalodi on 7 November. Scattered adults were seen in many areas of Rajasthan. In the first half of the month there was one area where the population was "countless", i.e. more than 20,000 per square kilometre, but by the second half of the month the maximum density was 2,520 per square kilometre, near Ghotaru (2719N, 7002E). Elsewhere densities of 60-900 per square kilometre were recorded from Ranao (2739N, 7028E), Nachna (2730N, 7144E), Tanot (2749N, 7022E) and Bahla (2746N, 7125E) areas of Jaisalmer district. *Last week, 9 Oct.*

Hoppers Small numbers of solitarious third to fifth instar hoppers were found during the second half of the month.

Control measures Ground control operations were mounted against the two swarms.

PAKISTAN (Report received for 1 - 15 November)

Ecological conditions Widespread but light rains were reported from Pasni, Nushki, Uthal and a few other localities in the winter-spring breeding areas in the first half of November.

Adults In Lower Sind one swarm was reported from Badin on 2 November and another, which was reported from the suburbs of Karachi on 6 November, later flew out to sea. Small groups of adults were reported from four localities along the Mekran coast between 2 and 7 November. Scattered adults were also recorded at several localities between Kandewari and Hub in Las Bela district and were present at a maximum density of 2,250 per square kilometre at Gadani beach. The summer breeding area was reported clear of adults.

Hoppers No hoppers were reported.

AFGHANISTAN

No locusts were reported during the first half of November.

IRAN

Adults Immature adults were seen at densities of up to 100 per hectare over an area of at least 100 hectares near Chahbahar (2516N, 6041E) on 6 November.

Control measures The adults seen near Chahbahar were baited.

NEAR EAST

OMAN

Ecological conditions No reports of rain have been received.

Adults Many hundreds of pink adults were seen at lights in Muscat on 2 November. Scattered pink adults were also seen at several localities between Muscat and Sohar on 3 November and some were reported from the foothills along the Batinah coast. These almost certainly constituted escapes from the summer breeding areas in India and Pakistan.

Hoppers No hoppers were reported.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Ecological conditions The Mukalla area received good rainfall in the third week of November. There were also light showers in the Dathina valley.

Adults A sudden rise in the number of pink adults was noted in the second week of November in Mukalla, Meifa (1420N, 4735E) and in the Abyan delta. This invasion almost certainly originated in the summer breeding area of India and Pakistan.

GULF OF ADEN

Adults A ship reported a locust at 1432N, 5011E at 12.00 hours on 10 November. The specimen was captured and was a female Desert Locust. The same ship reported another locust at 1427N, 4959E at 08.00 hours on 11 November. Both positions are about 100-120 km. east of Mukalla.

YEMEN ARAB REPUBLIC

Ecological conditions The Tihama received good rainfall, there was abundant soil moisture and the vegetation was reported to be green.

Adults Adults were present at densities of 500 per hectare in Wadi Hayran (1616N, 4300E) and Habl (1609N, 4252E).

Hoppers Solitary hoppers were present in Wadis Hayran and Habl.

Control measures The hoppers in Wadis Hayran and Habl were dusted.

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SAUDI ARABIA

Ecological conditions Until late in the month the only rains reported were a few showers south of Qunfidah and in eastern coastal areas. Late in the month rain was also reported from the Jizan area and from Hail.

Adults There were three reports of pink swarms, measuring 3, 8 and 15 sq. km. from the Lith area on 22 November. The swarms were reported to have arrived from the west and departed to the northeast. One was controlled, the other two were reported to have dispersed. Another small pink swarm was seen in Jeddah on 25 November which also dispersed, and a further pink swarm was reported north of Jizan on 27 November. Large groups of adults were present north of Qunfidah in late November and non-swarving adults at densities of up to 2,000 per hectare were present in Shaqqah ash Shamiyah and Shaqqah al Yamaniyah. Adults at lower densities were present in all areas of the southern Tihama. Solitarious adults were also reported from Hail.

Hoppers Small scale breeding was in progress in many areas along the southern Tihama.

Control measures One of the swarms seen in the Lith area on 22 November was controlled. Aerial and ground control operations were also in progress against groups and high density scattered populations north of Qunfidah.

No locusts were reported from JORDAN.

No reports have been received from BAHRAIN, EGYPT, IRAQ, KUWAIT, LEBANON, QATAR, SYRIA or the UNITED ARAB EMIRATES.

EASTERN AFRICA

SUDAN

Ecological conditions There was light to moderate rainfall on the southern Red Sea coast, where Aqiq received 60 mm up till 25 November. Conditions were suitable for breeding in the Tokar delta and towards the Ethiopian border. Conditions became unfavourable for breeding in the summer breeding area.

Adults 3 immature swarms and one swarm of mixed maturity were seen along the Nile between Shendi and Ed Damer between 3 and 11 November, the largest being 15 sq. km. A small immature swarm was seen along the Atbara on 3 November and two mature swarms were seen along the Atbara on 14 November measuring 19 and 51 sq. km respectively. Most were of thin density. Groups of adults were found between 19 and 23 November between Shendi and Zeidab. There were 6 reports of swarms in the northern part of Kassala Province between 2 and 15 November, two were of mixed maturity and four were immature, the largest swarms were 256 and 128 sq. km. The Red Sea coast was invaded by swarms in mid-November. Between 12 and 18 November mature, copulating and laying swarms were reported from 6 blocks in the Tokar delta, and a 20 sq. km. immature swarm was seen at Khor Mukhan (1811N, 3809E) on 13 November. Groups of laying adults persisted in the Tokar

delta to the end of the month. On 25 November a 6 sq. km. immature swarm was seen at Gebeit (1854N, 3653E) and was seen at Barameiya (1835N, 3646E) on 26 November. Another, mature, swarm measuring 20 sq. km. was seen at Haiya on 26 November. There were also large numbers of immature scattered locusts in the Tokar delta at densities ranging from 1260 to 12180 per hectare over an area of 4,445 hectares. These constituted the results of breeding which commenced in late September.

Hoppers Early in the month there were third - fifth instar hoppers over an area of 15,000 hectares at Khor Langeb (1730N, 3654E). Scattered hoppers were present throughout the month in the Tokar delta at densities of up to 10 per dutha plant. On 24 November a new wave of hatching commenced, and by early December there were first and second instar bands over an area of 900 hectares, in the area bounded by latitudes 1828N . 1910N and longitudes 3631E - 3652E. Groups of hoppers were also found between Shendi and Zeidab between 19 and 23 November.

Control measures Groups of adults and hoppers between Shendi and Zeidab were sprayed from the air with 1,350 litres of 96% Malathion between 19 and 23 November. Ground control continued throughout the month against hoppers and adults in the Tokar delta and arrangements were being made for four aircraft to spray remaining groups of adults and hopper bands.

ETHIOPIA

Ecological conditions Heavy rain was reported along the northern Red Sea coast during the first week. Other parts of the country were generally dry during the first decade, Neghelli reported 3 mm. In the second decade there was widespread generally light rain; Asmara recorded 50 mm., Massawa 15, Awash 2, Jigjiga 7, Neghelli 34 mm. No rain was reported from Assab or Diredawa. Figures for the third decade are not yet available.

Adults The swarms which had been present in the Tacazze valley, Averghelle, Fenaroca and Samre areas throughout October emigrated in early November for aerial surveys flown off Macalle to the Tacazze valley, Axum, Adua, Averghelle and Mai Cen areas between 14 and 20 November failed to locate them. The direction of the movement was not recorded but was probably to the north as a swarm was seen flying from Tigray Province on 2 November and the swarms which reached the Tihama of Saudi Arabia may have originated in northern Ethiopia. No reports of swarms have been received from the Red Sea coast, Dankalia, the Railway Area or the Ogaden.

Hoppers No reports of breeding on the Red Sea coast or in the Ogaden have yet been received.

SOMALIA

Ecological conditions Rainfall was reported from the Dusa Mareb, El Bur and El Dere (0351N, 4711E) areas in early November.

Adults There was an unconfirmed swarm 75 km. southwest of El Dere on 6 November. A thin density mature swarm measuring 0.5 x 0.5 km settled at Gawan (approximate position 0540N, 4835E) on 12 November. Scattered mature adults,

mainly males, were seen from Adado (0608N, 4636E) to El Bur (0442N, 4636E) on 2 November, and between Dusa Mareb, El Bur, El Dere, Adado and Adeniaval on 11 November. Scattered locusts were also seen between Kataban (0512N, 4531E), Ferfer, Belet Uen and Bulo Burti on 2 November. No locusts were seen or reported on a ground survey along the route Mogadiscio-Uarsheik-Itala-El Dere-Harardera on 24 November. An egg-field was found around Galkayo on 7 November; the density of the egg-pods was 25-30 per square foot. Unconfirmed egg-fields were reported 60 km. northeast of El Bur on 2 November.

Hoppers Small numbers of first to third instar hopper bands were present at Ban Adde (0915N, 4625E) north of Ainabo, 12-20 km. south of Hidihi (0307N, 4655E) southwest of Las Anod, Ghelinsor, Adado, Bali Busle (0540N, 4643E) and from several localities between Galkayo and Harardera. Hatching continued up to 16 November north of Harardera. There were no reports of hoppers after 20 November.

Control measures Ground control operations using exhaust nozzle sprayers were undertaken against many of the hopper infestations but some north of Harardera could not be controlled because of thick bush. A total of 1 very large, 5 large, 24 medium and 113 small bands were controlled.

No report was received from DJIBOUTI. KENYA, TANZANIA and UGANDA remained clear.

WEST AFRICA

NIGER

Ecological conditions There were areas of green Schouwia, Tribulus and Boerhavia between dunes in Tamesna. There were also areas of green vegetation around Arlit in western Air. No rain was recorded.

Locusts Fifth instar hoppers and fledglings at densities of 3-5 and 10-15 per square metre respectively were present over an area of 4,650 hectares at In Akarbai (1848N, 0540E). Adults were seen departing to the west at night on 12 November. In western Air the population was reported to be very scattered.

Control measures The population at In Akarbai was controlled using 400 litres of 5% dieldrin and 385 litres of 20% dieldrin.

MALI

Ecological conditions No rain was recorded north of 17°N, and ecological conditions were unfavourable for breeding. There were still patches of green vegetation in wadis in the north of the Adrar des Iforan and in southern Tamesna.

Adults Immature and mature adults were found at densities of 25-100 per hectare over areas of 150-500 hectares in wadis In Oumfassen (1755N, 0315E) and Tin Baden (1740N, 0300E to 1730N, 0252E). Isolated immature and mature adults were found in the southern part of the Tilemsi valley.

MAURITANIA

Ecological conditions Unusual and heavy rain fell in southern Mauritania on 28-30 November. The vegetation was dry except in the Faye, Amlil and If-zoutine depressions north of the 17th parallel and south of the Adrar.

Adults A few immature adults were seen between 1657N, 1040W and 1638N, 1052W.

NORTH WEST AFRICA

No reports have been received from ALGERIA, LIBYA, MOROCCO or TUNISIA.

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FORECAST FOR LATE DECEMBER 1978 - JANUARY 1979

In South West Asia groups of adults and perhaps a few small swarms which may have escaped detection will remain in coastal areas of the Mekran of Pakistan and southern Iran. Breeding may commence towards the end of the forecast period.

In the Near East further swarms could arrive on the Tihama of Saudi Arabia and the Yemen Arab Republic from northern Ethiopia and possibly Sudan throughout the period. Swarms could also reach the People's Democratic Republic of Yemen, Yemen Arab Republic and Saudi Arabia from the "Short Rains" breeding area in the Somali peninsula during January. The adults which reached the People's Democratic Republic of Yemen from the east in November could move further west and north and augment populations already on the Tihama of the Yemen Arab Republic and Saudi Arabia. Breeding will continue along the Tihama of Saudi Arabia and the Yemen Arab Republic and commence in coastal areas and inland valleys in the People's Democratic Republic of Yemen. Hopper bands will occur in Saudi Arabia from laying by the swarms which arrived in late November and are likely to form in the Yemen Arab Republic and the People's Democratic Republic of Yemen. Fledging will start in late January and could lead to the formation of swarms unless control operations are mounted in all infested areas. Breeding may commence towards the end of the forecast period by any locusts which remain in Oman and the United Arab Emirates.

In Eastern Africa any swarms still in the interior of Sudan and northern Ethiopia will move on to the Red Sea coastal plains and start to breed, and breeding by locusts already on these coastal plains will continue. In the Somali peninsula fledging will commence in mid-December. Some of the new generation adults may move southwest into northern Kenya in early January and some could even reach the central highland area towards the end of the forecast period. Others are likely to reach the Rift Valley and will then move into southern Ethiopia and may reach the Railway Area at the end of January. Swarms produced in the more northerly parts of the "Short Rains" breeding area are likely to move northwest towards the Railway Area and may reach coastal areas of northwest Somalia, Djibouti and southern Eritrea, and perhaps also Yemen Arab Republic, People's

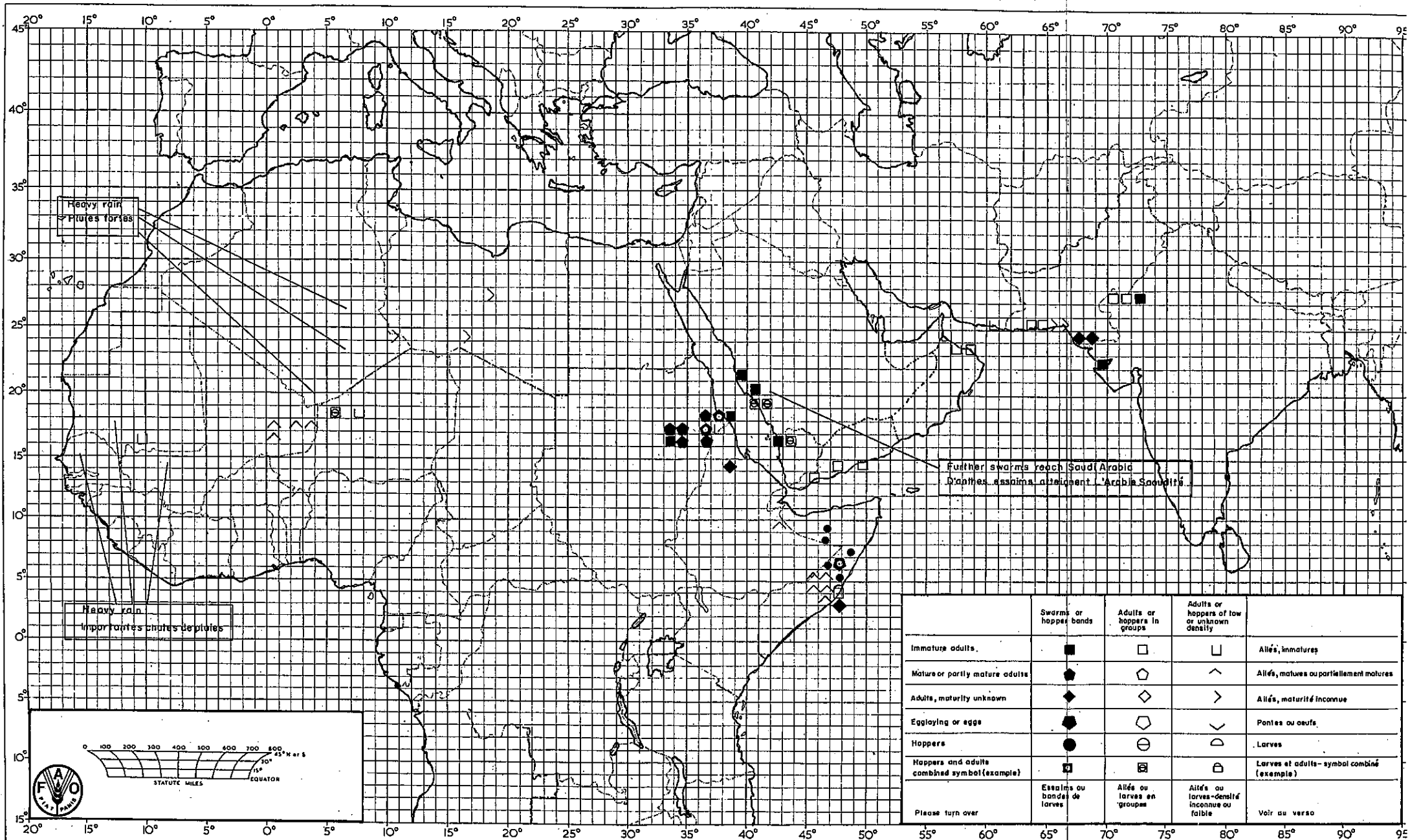
Democratic Republic of Yemen and Saudi Arabia. Adults which have reached the coastal plains of northern Somalia will start to breed.

In West Africa small numbers of adults will persist in areas of greener vegetation in Air and Tamesna of Niger, and Tamesna, Adrar des Iforas, Tilemsi and Timetrine of Mali. Breeding may commence in Mauritania and Western Sahara but is likely to be on a small scale.

In North West Africa small numbers of adults will persist in areas of greener vegetation in southern and central Algeria and breeding could occur on a small scale.

The Summary maps for September and October are enclosed with this Summary. The November Summary Map will be despatched with the December Summary.

Rome
14 December 1978



| | Swarms or hoppers bands | Adults or hoppers in groups | Adults or hoppers of low or unknown density | |
|--|-----------------------------|-----------------------------|--|--|
| Immature adults | ■ | □ | ◻ | Allés, immatures |
| Mature or partly mature adults | ● | ◐ | ◑ | Allés, matures ou partiellement matures |
| Adults, maturity unknown | ◆ | ◊ | ◈ | Allés, maturité inconnue |
| Egg laying or eggs | ◆ | ◐ | ◑ | Pontes ou oeufs |
| Hoppers | ● | ◐ | ◑ | Larves |
| Hoppers and adults combined symbol (example) | ◐ | ◑ | ◒ | Larves et adultes - symbol combiné (exemple) |
| Please turn over | Essaims ou bandes de larves | Allés ou larves en groupes | Allés ou larves - densité inconnue ou faible | Voir au verso |