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DESERT LOCUST SITUATION SUMMARY AND FORECAST

NO. 120 AUGUST-EARLY SEPTEMBER 1988

SUMMARY

A serious situation persists in West and Eastern Africa as new generation swarms form. The risk of long distance migration from West Africa to North-West Africa has diminished as many of the new generation swarms appear to be maturing rapidly and breeding in the Sahelian zone. However, there is still a high risk of invasion of Saudi Arabia, Ethiopia and Somalia by swarms from Sudan.

The summary period was characterised by widespread hatching and moderate to large scale formation of hopper bands throughout the summer breeding area. Large scale band formation was reported from Mauritania, Mali, Niger, Chad and Sudan during August with hatching and band formation on a lesser scale in northern Ethiopia and the Yemen Arab Republic. Further laying by mature swarms was also reported from Mauritania, Sudan and Ethiopia during August but on a progressively declining scale.

By late August-early September fledging of hopper bands and the formation of new generation swarms was in progress throughout West Africa and Sudan and swarms were reported to be migrating in a northerly direction by late August. However, it would appear that by mid September many of these swarms had matured rapidly in the favourable conditions present throughout most of the area and second generation breeding was in progress in Niger, Mali and Mauritania and probably also in Chad. By late September mature copulating swarms had invaded northern Senegal.

Moderate to large scale control operations continued in affected countries in West and Eastern Africa.

WESTERN AFRICA

Meteorology

The Inter-Tropical Convergence Zone (ITCZ) was located between 21 and 24 degrees over Mauritania and Mali and between 18 and 21 degrees in Niger and Chad in the first half of August. During September there was a gradual southerly movement and by late September the ITCZ was located around 15 degrees north. The ITCZ has remained stable apart from a brief northerly movement to 20 degrees over Mauritania in early September.

Breeding Conditions

Widespread moderate to heavy rain fell throughout the region in August and September. Generally conditions are described as very favourable south of 18 degrees North and this confirms analysis of NOAA/VHRR imagery for late August-early September. Breeding conditions are also favourable as far north as 20 degrees in the Air region of Niger and the Adrar of Iforhas in Mali.

Locusts

MAURITANIA

Assaba

Early instar hopper bands were reported 45 km east of Kiffa and hatchings were also reported in the Kankossa area in the second decade of August. By early September hopper bands were still present in the Kiffa and Kankossa areas but widespread fledging of new generation adults was also reported. On 23 September there were reports of mature laying swarms west of Kiffa.

Tagant

Low density adults were reported at Belignar, Nimlane and Voumelkou in early August. Swarms were reported near Khatt El Moinane in the second half of August. There was an unconfirmed report of hopper bands in the Tagant-Adrar border area in early September. Between 10 and 16 September moderate to high density mature swarms were reported over a large, approximately 400 sq. km, area near Nbeika (1755N/1220W) and Gabou (1816N/1222W) and low density adults, 2-5 per sq. metre, at Ederoune (1820N/1131W). In late September laying swarms were reported at Moudjeria (1753N/1220W).

Brakna and Gorgol

Several dense mature swarms were reported at Achorgitt, 25 km north-west of Aleg (1703N/1355W), in early August : mating and laying was reported. There were unconfirmed reports of swarms at Dolol (1534N/1304W) in early August and of hopper bands at El Hamdiya, north-east of M'Bout' (1610N/1235W) in early September. In late September laying swarms were reported at Magta Lahjar (1740N/1310W), Mal (1658N/1323W) and Djonaba (1711N/1240W).

Trarza

Low density adults were reported in the R'Kiz area in early August. Hatching was reported in the Agoida area in the second half of August and by late August a small, 50 ha, area of early instar hoppers was present. Mature laying swarms were reported at Boutlimit (1733N/1552W) and Tiguent (1717N/1601W) in late September.

Hodh el Gharbi and Hodh el Chargi

Mature swarms, some of which were laying, hatchings and a large number of small, predominantly early instar, hopper bands were reported in the Djigueni, Timbedra (1615N/0810W), Bousteila and Nema areas of the Hodh Chargi region in the first half of August. A similar situation was reported in the Hodh Gharbi region particularly in the Aïoun El Atrouss, Kobenni and Tintane areas. The situation deteriorated progressively during the second half of August with increased reports of hopper bands and new hatchings and by early September late instar bands and new generation adults were present over a wide area. New generation swarms were seen flying over a substantial area near Timbedra in early September and some localised northward movement was observed : additional swarms formed in mid September, probably supplemented by swarms from the south and south-east, and further northward movement was observed. Mating was also observed in swarms seen in mid September.

Guidimaka

Low density adults were reported from the region in early August.

Adrar

Swarms were reported at Chinguetti (2027N/1222W), Ouadane (2056N/1137W), Adaffer El Abiod and Adaffer El Akhder on 23 September.

SENEGAL

The situation was described as calm during August and early September. Scattered adults were reported at Richard Toll in mid-September. On 26 September five mature swarms were reported to have invaded northern Senegal between Saint Louis and Rosso: mating was observed.

MALI

In early August small areas of hopper bands persisted in the north-west of Mali in the Nioro, Yelimane and Balle areas but these were successfully controlled by mid August. Mature swarms, some of which were laying, were also reported from the Gao area in early August. In mid August substantial areas of the Central (Lake) region were reported to be infested with predominantly early instar hopper bands particularly in the Lere, Soumpi, Niafunke, Lake Horo and Bambara Maounde areas. In addition dense hopper bands together with both immature and mature adults at densities of up to were reported from eastern Mali in the Azaouak Valley-Menaka area in early September. Late instar hopper bands and immature adults were reported in the Lakes region and the Gourma region in mid September and mature laying swarms and hopper bands were also present in the Bourem-Gao-Ansongo area of the Niger river valley. To 15 September 162,671 ha treated.

NIGER

As stated in Summary No. 119 approximately 70,000 ha were estimated to be affected in several areas of southern Niger and western Air in early August. By late August the situation deteriorated further and it became apparent that larger areas were affected than previously reported. In late August the following reports of hopper bands were received :

- Tillabery Area (1455N/0130E) : early instar bands - 120,000 ha
- North Tahoua (1530N/0610) : late instar bands - 400,000 ha

- North Dakoro (1510N/0705E) : late instar bands - 200,000 ha
- North Tanout (1510N/0640E) : 3rd-4th instar bands - 20,000 ha
- North Goure (1430N/1000E) : 3rd-4th instar bands - 500,000 ha
- Diffa (1310N/1220E) : late instar bands - 300,000 ha

Fledgling adults were also reported in the Diffa area and hopper bands were present in Western Air. In the first week of September a large swarm, estimated size 50 km by 5 km, was seen near Agadez flying north-east and several smaller swarms were reported from Tchén Tabaradene also flying in a north-east direction. By late August-early September a number of small swarms, 1 to 7 sq. km in size, had formed in the Tillabery, Tahoua, Maradi, Zinder and Diffa areas, matured rapidly, and were reported to be flying north. In addition small mature and laying swarms were reported from in Air together with late instar bands and fledglings. In early September eight small mature swarms, some of which were mating and laying, were seen south of Agadez and between Agadez and Arlit. Surveys in western Air in mid September found hatchings and small pockets of predominantly 1st instar bands at Egarar Ngouas (1805N/0741E) and 60 km north of Arlit. Low density adults of mixed maturity at densities of up to 300 per ha were also reported from Tamesna in late August. On 20 September two mature swarms were reported at Nguimi in eastern Niger flying west-north-west. Up to 22 September 439,575 ha had been treated and the focus of control operations had moved further north to Air, Talak (1840N/0745E), Elargar (1805N/0741E), Taguelat (1900N/0750E), Ingall (1645N/0645E) and Aderbissinat (1540N/0750E) areas where mature laying swarms and early instar bands were present. Mature swarms were also reported in the Taskar (1220N/0940E), Yogoum (1445N/1225E) and Tanout-Totokou (1502N/0835E) areas in late September.

CHAD

In early August a major infestation of mainly late instar hopper bands was reported in the Abeche-Biltine area of eastern Chad and hatchings were also in progress in the Kanem region of western Chad. Further surveys in the east were severely restricted by heavy rain until late August when a brief aerial and ground survey in the Abeche-Biltine area found only small localised hopper bands. Subsequent reports from the Biltine area in mid September indicated that a large number of late instar bands and new adults were present in the area and that swarms had been reported from Guereda and Iriba near the Sudan-Chad border flying north. There were also unconfirmed reports of a large infestation of hopper bands in the Fada-Kalait area in late August-early September and surveys were in progress.

In late August hopper bands were reported from the Ati and Djedda areas but as in the east surveys were severely restricted by rain. Late instar hopper bands and new generation adults were reported from several localities east of Mao (1415N/1535E) in early September. To 13 September 56,000 ha was reported to have been treated.

NORTH-WEST AFRICA

Meteorology

Analysis of Meteosat imagery suggests that light to moderate rain fell in the Bordj Beji Mokhtar area of the extreme south of Algeria in the first decade of September.

Breeding Conditions

Analysis of NOAA/VHRR imagery for August indicated that ecological conditions remained favourable in the Atlas area of Morocco and along the coastal plains of Algeria and Tunisia.

Locusts

MOROCCO, ALGERIA, TUNISIA and LIBYA : No reports of locust activity were received during the summary period.

EASTERN AFRICA

Meteorology

The Inter-Tropical Convergence Zone remained north of 20 degrees during August but in early September moved south as far as 15 degrees. Widespread moderate to heavy rain fell during August in central-eastern Sudan and the highlands of northern Ethiopia.

Breeding Conditions

In general breeding conditions were reported to be highly favourable throughout the region. Analysis of NOAA/VHRR imagery indicates generally favourable conditions south of 15 degrees.

Locusts

SUDAN

Darfur (Northern and Southern)

A large number of hopper bands were reported in Northern Darfur during August and early September particularly in the vicinity of El Fasher, Karnoi, Kutum, Kebkebiya and Malha. By 11 September reports indicated that fledging was widespread and that immature swarms had started to form on a large scale, particularly in the El Geneina (1325N/2216E), Meidob (1515N/2630E), and Kebkebiya areas. In southern Darfur several early instar hopper bands were reported between El Fasher and Nyala in the vicinity of Manwashi (1224N/2459E) on 13 August, and by mid September a substantial area of late instar bands was present in this area. Swarms were reported to be maturing in mid September.

Kordofan

A large number of hopper bands were reported in the region during August and early September particularly in the Mughnus (1423N/3043E), Umm Saiyala (1427N/3109E) and Sodiri (1429N/2847E) areas. By early September fledging and swarm formation was reported to be in progress. In mid September there were unconfirmed reports of a large infestation of late instar bands in the Sodiri, Abu Sufyan (1532N/2750E), Damgamad (1371N/2728E) area. Swarms were also reported to be maturing in Kordofan.

Central Sudan (White Nile and Gezira)

Two mature swarms, 0.5 and 20 sq.km respectively, were reported at Esh Shugeig (1428N/3154E) and Mugeirinat (1428N/3142E) in early August. In late August hopper bands were reported from Nabaa (ca 1600N/3300E), Shendi, Ed Dueim and the Khartoum areas. One immature swarm, 26 sq. km in area, was reported near Khartoum on 1 September and another, 18 sq. km in area, from the Gezira area flying north-east on 8 September.

Eastern Sudan (Kassala)

For most of August surveys could not be undertaken in the region due to flooding. However, several mature swarms, one estimated at 120 sq. km, were reported from the Deredub (1730N/3607E), Ungwatiri (1655N/3604E), Nabaslei (1652N/3618E), Haladeid (1544N/3633E) and Taami (1539N/3630E) areas in the last decade of August. In early September two areas of early instar hopper bands, total area 9 sq. km, were reported. By mid September there were increasing reports of hopper bands in the region and there were unconfirmed reports that a large number of early instar bands were present along the Sudan-Ethiopia border between Kassala and Karora.

A total of 93,600 ha was reported treated up to 11 September of which 88,700 comprised hopper bands.

ETHIOPIA

Numerous small mature swarms, average size approximately 5 sq. km, were reported in the Asmara, Ghinda (1526N/3907E), Adi Kaieh (1450N/3925E), Keren (1540N/3825E), Decamere (1505N/3906E) and Mai Habar (1522N/3910E) areas of northern Ethiopia throughout August although the number of reports gradually decreased during the month. In addition there were also confirmed reports of mature laying swarms from the western lowlands near Keru (1533N/3712E) and unconfirmed reports of mature swarms from the northern Red Sea coastal plains at Karora (1742N/3822E), Teklay (1736N/3835E), Abarara (1600N/3904E) and Shieb (1552N/3904E) in the first half of August. In late August-early September hatchings were reported in the Barca (1540N/3730E), Ghinda, Keren, Shieb, Shabah (1540N/3910E), Mekerca (1526N/3844E), Embatkala (1552N/3906E) and Tessenei (1510N/3640E) areas. There were unconfirmed reports of a large number of hopper bands along the Ethiopia-Sudan border in mid September. Ground and aerial control are in progress but no details available.

SOMALIA, DJIBOUTI, KENYA, TANZANIA and UGANDA were reported clear during the summary period.

NEAR EAST

Meteorology

Analysis of Meteosat imagery for the last decade of August suggests moderate to heavy rain fell in the southern Tihama of the Yemen Arab Republic and adjacent areas of Saudi Arabia in this period.

Breeding Conditions

Analysis of NOAA/VHRR imagery indicates that suitable breeding conditions were present along the southern Red Sea Tihama of southern Saudi Arabia and the Yemen Arab Republic.

Locusts

KINGDOM OF SAUDI ARABIA

Low density mature adults were reported in the Abu Arish (1658N/4250E) area of the southern Tihama on 5 August. The situation was reported calm on 12 September.

EGYPT

Egypt was reported free of locust activity in August.

YEMEN PDR

Low density mature adults were reported from western coastal areas in early August as reported in Summary No. 119.

YEMEN ARAB REPUBLIC

On 24 August early instar hopper bands were reported in the southern Tihama region at Zabid (1412N/4319E), Hais (1356N/4329E) and Al Khokh. Scattered laying was also reported between Sadah and Taiz in late August. On 28 August locusts were reported on the islands of Fatimah and Zobar Jananah in the Red Sea. Ground control was reported to have been undertaken.

IRAQ

Iraq was reported free of locusts in July.

SOUTH-WEST ASIA

Meteorology

Moderate to heavy rain fell in traditional locust breeding areas in early August with light rain reported in late August.

Breeding Conditions

Breeding conditions are likely to be becoming less favourable.

Locusts

AFGHANISTAN

A report of locusts in the western provinces in mid September was unconfirmed and the situation was reported to be calm.

IRAN

Iran was reported free of locusts throughout July.

PAKISTAN

Scattered adults, maximum density 1125 per sq.km, were reported at Tinkanda (2533N/6636E) on 7 August and 13 September and at Saka (2529N/7026E) on 28 August.

INDIA

Isolated to scattered adults, maximum density 75 per sq.km were seen at Buikapar (2602N/7015E) on 8 August. In the second half of August low density adults were reported from a total of thirty three localities of Bikaner, Barmer, Jodhpur and Jaisalmer districts of Rajasthan with a maximum density of 1650 adults per sq. km at Dholia (2702N/7134E) on 10 September.

FORECAST FOR OCTOBER-NOVEMBER 1988

New generation swarms formed throughout the summer breeding areas of Western Africa and Sudan during late August and early September and further swarm formation will continue until early October. It would appear that many of these swarms matured rapidly under the generally very favourable conditions present.

This is likely to continue over the next month and result in widespread second generation summer breeding. The threat of an immediate invasion of North-West Africa in particular has therefore been substantially reduced as the ITCZ has moved gradually south and most further migrations in West Africa are likely to be southerly in direction. However, there is still a high risk of swarm migration into Saudi Arabia, Ethiopia and Somalia from Sudan from early October onwards and the risk of invasion of North-West Africa by second generation swarms will again be high in late November.

In North-West Africa there is a low risk of large scale swarm invasion of southern Morocco, Algeria, Tunisia and Libya from the south and south-east until mid-November when the probability of invasion by second generation swarms from West Africa and possibly western Sudan will be high.

In West Africa large scale hatching and hopper band formation is expected to occur during October as first generation swarms continue to mature and lay. However, some swarms forming in late September-early October may encounter unsuitable breeding conditions and migrate to the south and south-west into Burkina Faso and northern Nigeria. Further swarm invasion of northern Senegal with subsequent breeding is also highly likely. The risk of invasion of North-West Africa is assessed as low until late November. Hopper bands are expected to form on a large scale from early October onwards in Niger, Mali, Chad and Mauritania as a result of breeding of first generation swarms in situ. Fledging of these bands will commence in late October-early November with second generation swarms beginning to form by mid November. These swarms may then migrate in a northerly to north-westerly direction late in the forecast period particularly during periods of eastward moving mid latitude depressions.

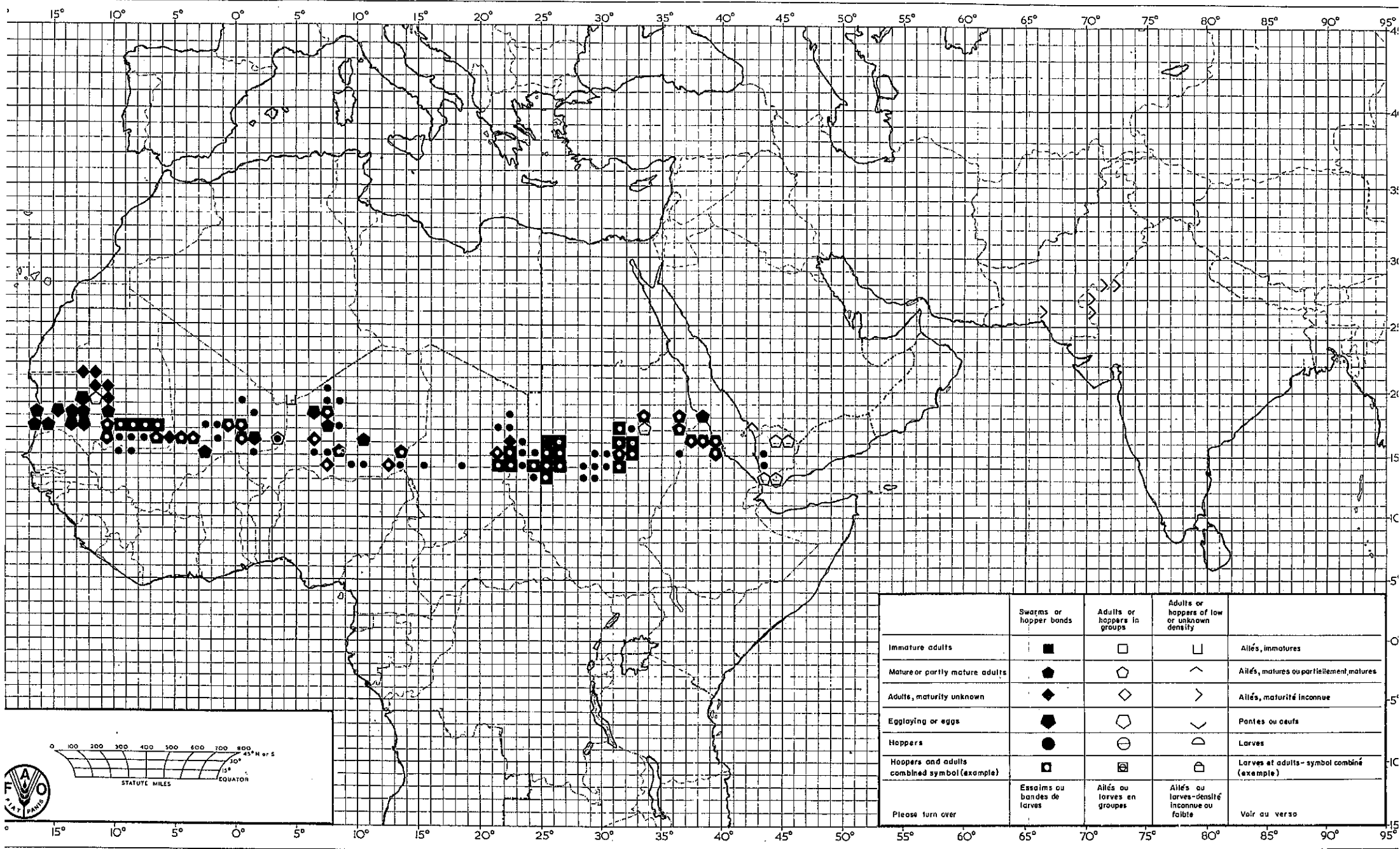
In Eastern Africa moderate to large scale swarm migration from central and eastern regions of Sudan into the traditional winter breeding areas along the Red Sea coast of Sudan and Ethiopia is virtually certain to commence early in the forecast period. Re-invasion of northern Ethiopia by swarms from Sudan is also highly likely from early October onwards. Successful breeding is then likely to occur with hatching and band formation starting in the second half of the forecast period. However, given the highly favourable conditions in central Sudan further breeding in situ is almost certain. This reduces the risk of swarms invading eastern Ethiopia and Somalia during October and subsequent breeding in these areas. However, should an invasion of Somalia occur and breeding conditions are unsuitable, swarms may continue to migrate and reach north-east Kenya from late October onwards.

In the Near East there is a high risk of swarms invading the central and southern Tihamas of Saudi Arabia and the Tihama of the Yemen Arab Republic from early October onwards with subsequent winter breeding in these areas. In addition there is a low to moderate risk of swarm invasions of Egypt, Jordan and northern Saudi Arabia from Sudan during the forecast period.

In South-West Asia further small scale breeding by low density adult populations is likely in Rajasthan and adjacent areas of Pakistan where conditions are suitable. No major change in the situation is expected in the forecast period.

Rome, 26 September 1988

Desert Locust Situation Summary No. 120 AUGUST-EARLY SEPTEMBER/AOUT-DEBUT SEPTEMBRE 1988



	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
Egglaying 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	Ailés ou larves en groupes	Ailés ou larves - densité inconnue ou faible	Voir au verso