FAO DESERT LOCUST BULLETIN No 135

GENERAL SITUATION DURING NOVEMBER1989
FORECAST UNTIL MID JANUARY 1990

The only significant Desert Locust populations reported during November was a small infestation of hopper bands and a few small immature swarms in India and Pakistan. However, by mid month populations had been reduced by control operations and the situation was improving. Two small groups of locusts were reported from north-eastern United Arab Emirates. The only other locusts reported were scattered adults and isolated groups of hoppers and fledglings in West Africa and a few locusts in the winter breeding areas along the Red Sea coast.

A few immature swarms, adult groups, and hopper bands were present along the Indo-Pakistan border. By mid November, no further breeding was reported and adult numbers have declined steadily. Small numbers of adults will persist during the forecast period. Some gregarious populations may continue to move toward the Mekran of Baluchistan and perhaps into adjacent parts of Iran.

Only a few scattered adults have been reported in winter breeding areas of the Red Sea coast, specifically on the Tihama of Saudi Arabia and Yemen AR and on the southern coastal plain of Sudan. Significant migration into these areas is unlikely because of overall low numbers of adults in adjacent areas. However, small scale breeding along parts of the coastal plains on both sides of the Red Sea is likely to occur.

A few groups of adults and hoppers were present in Tamesna of Mali where small scale laying was in progress. Scattered immature adults and hoppers were present in Tamesna of Niger and scattered adults were also reported from central Mauritania and in Air in Niger. Small numbers of adults will persist and breed on a small scale in wadis where green vegetation is still present. Some of these adults may move northwards into the recession winter-spring breeding areas of southern Algeria and Morocco but only during periods of warm southerlies that precede eastward moving cold fronts. Otherwise, evening temperatures are now too cold to allow night flight.

WEATHER AND ECOLOGICAL CONDITIONS

During November, the ITCZ was located between 10°N and 13°N. Winds north of the ITCZ were cold and predominantly from the east. As a result of the southern position of the ITCZ, no significant rainfall was reported in the Sahel region of West Africa. Vegetation conditions were reported to be dry in most areas and thus unsuitable for Desert Locust breeding. However, patches of green vegetation were present in some wadis and runoff areas of central Mauritania, the Adrar des Iforas of Mali, the Tamesna of Mali and Niger, and Air of Niger. In these areas, some breeding may be possible on a small scale.

METEOSAT and ARTEMIS satellite imagery suggest that rain fell in the Atlas mountains of North-West Africa and along both sides of the Red Sea coast. In Algeria, Bechar received 15 mm on 17 November. In late October and early November, heavy rains were reported from Port Sudan to Karora. METEOSAT imagery indicated that light rains may have fallen along the northern coast at the end of the month. Vegetation conditions were reported to be improving in southern areas of the Red Sea coast of Sudan and in the eastern lowlands of Eritrea. Widespread moderate to heavy rains were reported in northern and eastern Somalia from 25 October to 3 November and in northern Saudi Arabia during mid November.

METEOSAT imagery suggested that heavy rain fell on the Saudi Tihama north of Jeddah on the 28th. This was confirmed by reports from Jeddah and Mecca. As a result of recent rains, breeding conditions are likely to be favourable in some areas along the Tihama of Saudi Arabia and Yemen AR.

In Rajasthan and Baluchistan, no rainfall was reported in November and vegetation was reported to be drying.

AREA TREATED IN NOVEMBER 1989

India (16-31 October)	5,949 ha
India (1-15 November)	28 ha
Pakistan (October)	ca. 53,000 ha
Pakistan (1-15 November)	ca. 1,900 ha
United Arab Emirates	2-3 ha

DESERT LOCUST SITUATION

WEST AFRICA

MAURITANIA
In late October, scattered adults were reported near Aioun El Atrous and north of Nema.

During the first half of November, a few scattered adults were present north-west of Tamchekket and in Inchiri. Low densities of hoppers were seen south-west of Oujeft at Tanamrourt (1945N/1325W) on the 12th. Isolated adults were also found in Nouakchott.

MALI
During the first half of November, scattered immature adults at densities up to 1,000 per ha were reported at four locations within an area of 5,000 ha north of Menaka. High density first to fifth instar hopper groups and fledglings were present within 300 ha at Ouan Karha (1750N/0252E) and within 2,000 ha at Tagorast (1743N/0254E). Low density fledglings and a few hopper groups were reported at two locations within an area of 5,500 ha. On the 17th, small scale laying was seen at Aereideide (1716N/0305E).

Scattered adults were also reported in the Adrar des Iforas during the month.

NIGER
In late October, scattered fourth and fifth instar hoppers, at densities up to 2,000 per ha, together with isolated adults were reported at several locations in Tamesna.

During the first half of November, immature and mature adults together with second to fifth instar hoppers at densities of 100-1,000 per ha were reported in Tamesna. Scattered adults were present in the Anou Mekkerene Valley and at several other locations in Air during the month.

CHAD
The Desert Locust situation was reported calm during the first half of November.

No locust information had been received from other countries in the region up to 30 November.

NORTH-WEST AFRICA

ALGERIA
No Desert Locusts were found by surveys in Tamanrasset and Tindouf areas during October and November.

No locust information had been received from other countries in the region up to 30 November.

EASTERN AFRICA

SUDAN
During the first half of November, ground surveys from Suakin to Tokar and aerial surveys from Port Sudan to Abu Ramad did not detect any locusts in coastal and subcoastal areas. However, solitary adults were found south and south-west of Port Sudan. No further details are available.

ETHIOPIA, DJIBOUTI, and SOMALIA
The Desert Locust situation was reported calm up to 15 November.

NEAR EAST

KINGDOM OF SAUDI ARABIA
Isolated adults were reported near Jizzan in early November at a density of less than 1 per ha.

YEMEN AR
In late October, scattered adults at densities of 20-40 per ha were reported in millet at three locations north of Hodeidah on the Tihama.

In November, scattered adults were reported in the Eastern Region near Marib and Al Jawf. A few adults were also seen between Zuhra (1544N/4300E) and Wadi Mour on the Tihama.

UNITED ARAB EMIRATES
On October 30, small groups of immature adults which may have come from South-West Asia were reported along the eastern coast north of Fujayrah and in Wadi Hatta (2450N/5610E).

IRAQ
During October, Iraq remained free of Desert Locusts.

No locust information had been received from other countries in the region up to 30 November.

SOUTH-WEST ASIA

PAKISTAN
During the second half of October, fifteen small immature swarms were reported in Khipro, Tharparkar, and Nara and large numbers of adults were present in southern Cholistan. About 40 small to medium size third to fifth instar hopper bands were present in the Khipro desert near the Indo-Pakistan border. Ground and air operations were in progress.

During the first half of November, three immature swarms of about 1 sq. km. in size were reported from Khipro. Groups of immature adults were present in Nara and Khipro. Control operations were concluded by 10 November.

INDIA
In late October, the locust situation improved with only one 2 sq. km. immature swarm reported in Barmer district of Rajasthan. Hopper bands and fledglings were treated in several areas in Jaisalmer, Barmer, Bikaner, and Jodhpur districts. A total of 5,625 ha were treated by air and 324 ha by ground during the second half of October.

During the first half of November, locust reports continued to decline. One immature swarm was treated in Jaisalmer over an area of 28 ha at Nayatala (2655N/6958E). Solitary adults were reported near Khavda (2351N/6943E) in Kutch Bhuj district of Gujarat.

No locust information had been received from other countries in the region up to 30 November.

NEW ASSISTANCE REQUESTED

No requests for assistance against Desert Locusts had been received up to 30 November.

NEW ASSISTANCE PLEDGED

Luxembourg pledged vehicles, survey equipment, and aircraft for 3 months for emergency locust operations in **Mauritania**.

The **EEC** pledged two Micronair sprayers for installation on aircraft and training of national pilots to **Mauritania**.

ANNOUNCEMENTS

TRAINING COURSE
A training course on "Biology, Ecology, and Management of Migrant Pests" will held in Nairobi, Kenya on 7-19 May 1990 and on 12-25 November 1990. For further information, contact W.F. Meinzingen, DLCO-EA, P.O. Box 30470, Nairobi, Kenya. Telex: 23016 FOODAGRI (KENYA).

FORECAST UNTIL MID JANUARY 1990

WEST AFRICA

MAURITANIA
Small numbers of adults are likely to persist in the central region. Scattered adults may be present in the north and these may breed on a localised scale where green vegetation persists.

MALI
Small numbers of adults are likely to persist in wadis in the Adrar des Iforas and Tamesna and small scale breeding may occur in areas where green vegetation persists.

NIGER
Small numbers of adults are likely to persist in wadis of Air and Tamesna and may breed on a small scale in areas where green vegetation persists.

CHAD
Small numbers of adults may be present in areas of green vegetation in the central region.

BURKINA FASO, CAMEROON, GAMBIA, GUINEA BISSAU, GUINEA CONAKRY, and SENEGAL
No significant developments are likely and no invasions are expected.

NORTH-WEST AFRICA

MOROCCO
Adult migrations from the south are unlikely to occur due to cold night temperatures. However, small numbers of adults may move into winter breeding areas south of the Atlas during periods of warm southerly winds. Some of these may lay but breeding will be on a limited scale.

ALGERIA
Adult migrations from the south are unlikely to occur due to cold night temperatures. However, small numbers of adults may move into winter breeding areas of southern and south-western Algeria during periods of warm southerly winds. Some of these may lay but breeding will be on a limited scale.

TUNISIA and LIBYA
No significant developments are likely and no invasions are expected.

EASTERN AFRICA

SUDAN
Small numbers of adults may be present along the Red Sea coast from Karora to the Egyptian border and in northern subcoastal areas such as Wadi Oko/Diib. Small scale breeding in these areas is likely.

ETHIOPIA
Small numbers of adults may occur in wadis and green areas along the Eritrean coast.

DJIBOUTI, SOMALIA, KENYA, UGANDA, and TANZANIA
No significant developments are likely and no invasions are expected.

NEAR EAST

KINGDOM OF SAUDI ARABIA
Due to recent rainfall, small scale breeding is likely to occur in wadis and other green areas on the Tihama.

YEMEN ARAB REPUBLIC
Due to recent rainfall, small scale breeding is likely to occur in wadis and other green areas on the Tihama.

OMAN
It is possible that some adults may be present along the northern coastal plain as a result of earlier small scale migrations from South-West Asia.

UAE
Some adults may persist in northern and eastern areas as a result of earlier small scale migration from South-West Asia.

EGYPT
It is possible that some adults may be present in the extreme south-east.

BAHRAIN, IRAQ, ISRAEL, JORDAN, KUWAIT, LEBANON, QATAR, SYRIA, TURKEY, and YEMEN PDR
No significant developments are likely and no invasions are expected.

SOUTH-WEST ASIA

PAKISTAN
Small numbers of adults will persist along the Indo-Pakistan border in Cholistan, Khipro, Nara and Tharparkar. Gregarious adults may continue to move west during the day toward the Mekran of Baluchistan; however, evening temperatures are too cold to allow night flight of solitarious adults.

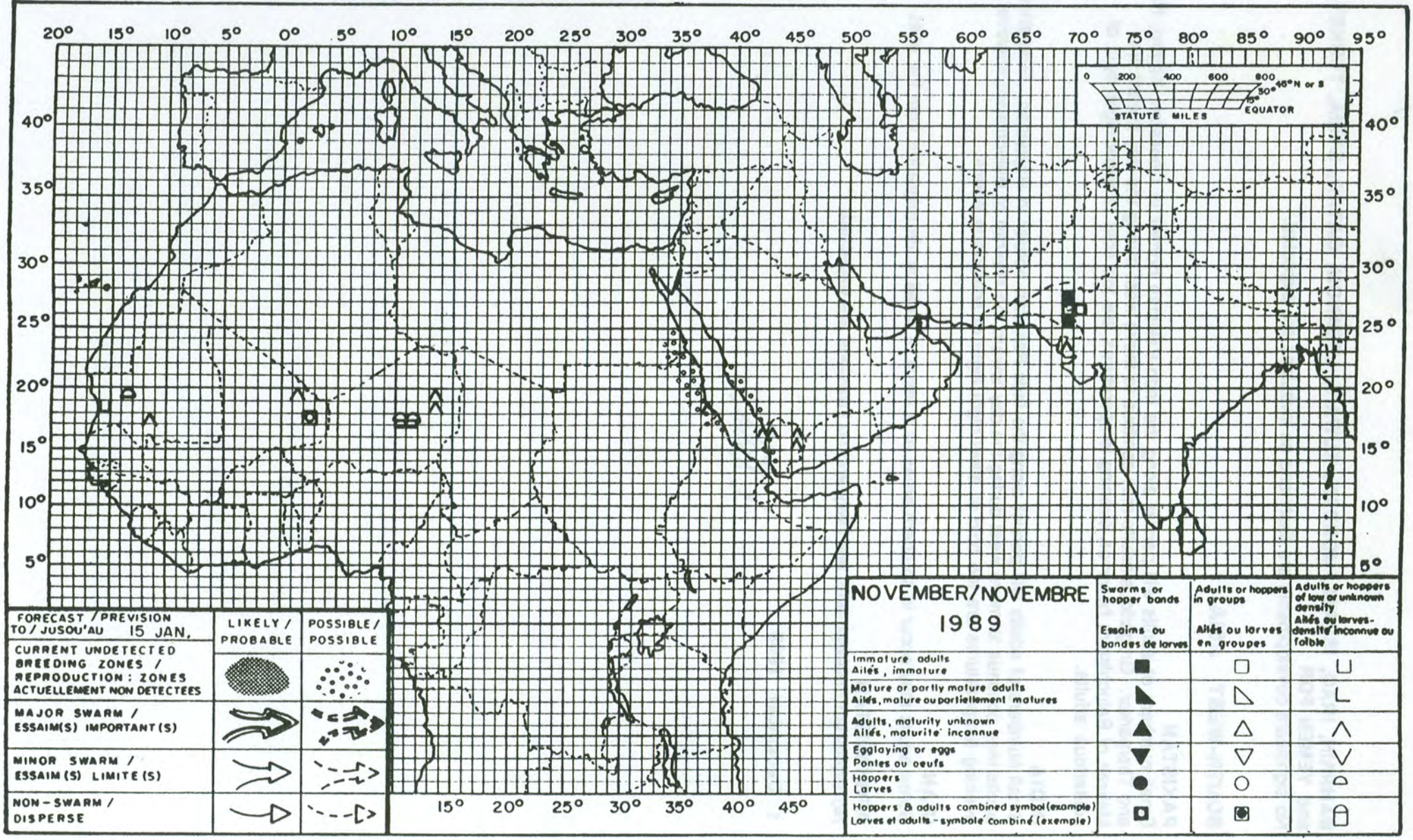
INDIA
Small numbers of adults will persist along the Indo-Pakistan border in Rajasthan. Gregarious adults may continue to move west during the day toward the Mekran of Baluchistan; however, evening temperatures are too cold to allow night flight of solitarious adults.

IRAN
Some adults may occur in southern areas as a result of small scale migration from the east.

AFGHANISTAN
No significant developments are likely and no invasions are expected.

1 December 1989

DESERT LOCUST SUMMARY NO. 135
CRIQUET PELERIN : RESUME



FORECAST / PREVISION TO / JUSQU'AU 15 JAN.	LIKELY / PROBABLE	POSSIBLE / POSSIBLE
CURRENT UNDETECTED BREEDING ZONES / REPRODUCTION : ZONES ACTUELLEMENT NON DETECTEES		
MAJOR SWARM / ESSAIM(S) IMPORTANT(S)		
MINOR SWARM / ESSAIM (S) LIMITE (S)		
NON - SWARM / DISPERSE		

NOVEMBER/NOVEMBRE 1989	Swarms or hopper bands Essaims ou bandes de larves	Adults or hoppers in groups Ailés ou larves en groupes	Adults or hoppers of low or unknown density Ailés ou larves-densité inconnue ou faible
Immature adults Ailés, immature	■	□	⊔
Mature or partly mature adults Ailés, mature ou partiellement matures	◣	◺	L
Adults, maturity unknown Ailés, maturité inconnue	▲	△	∧
Egglaying or eggs Pontes ou oeufs	▼	▽	∨
Hoppers Larves	●	○	⌓
Hoppers & adults combined symbol (example) Larves et adults - symbole combiné (exemple)	◘	◙	⌷