

Mauritania

1 May – 25 October 2016

outbreak



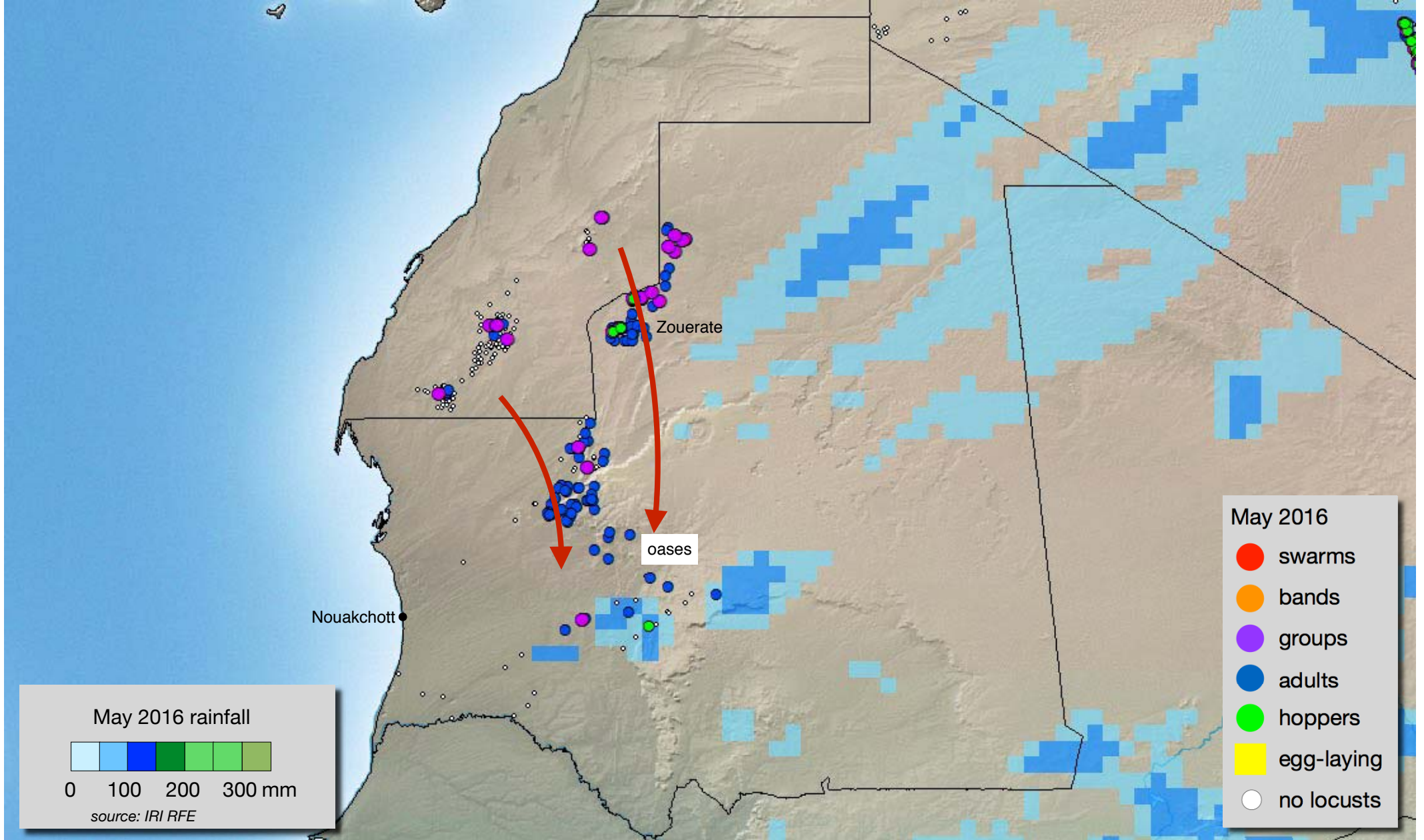
Desert Locust Information Service

FAO, Rome

www.fao.org/ag/locusts

Keith Cressman (Senior Locust Forecasting Officer)

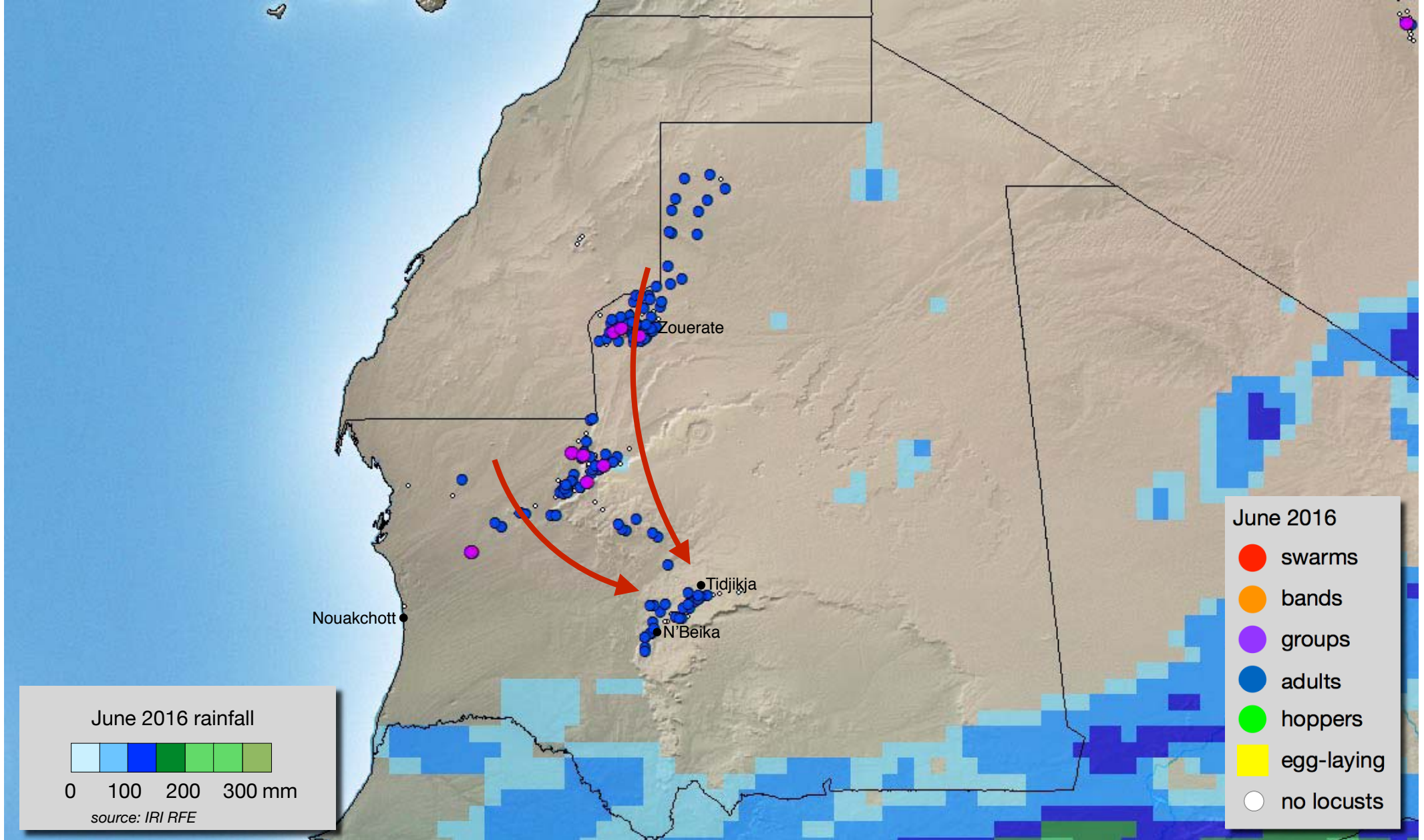
updated: 26 Oct 2016



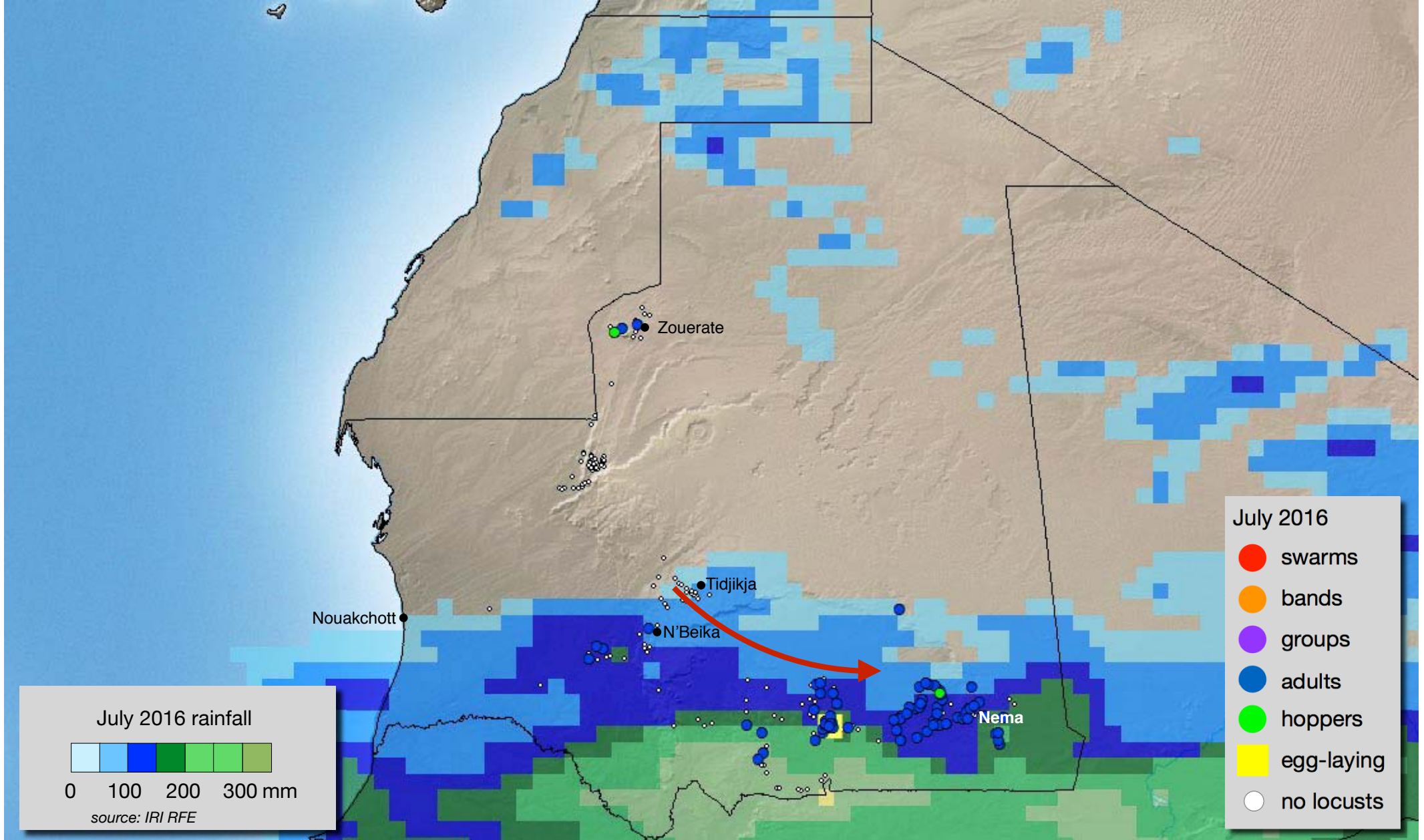
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MAY 2016

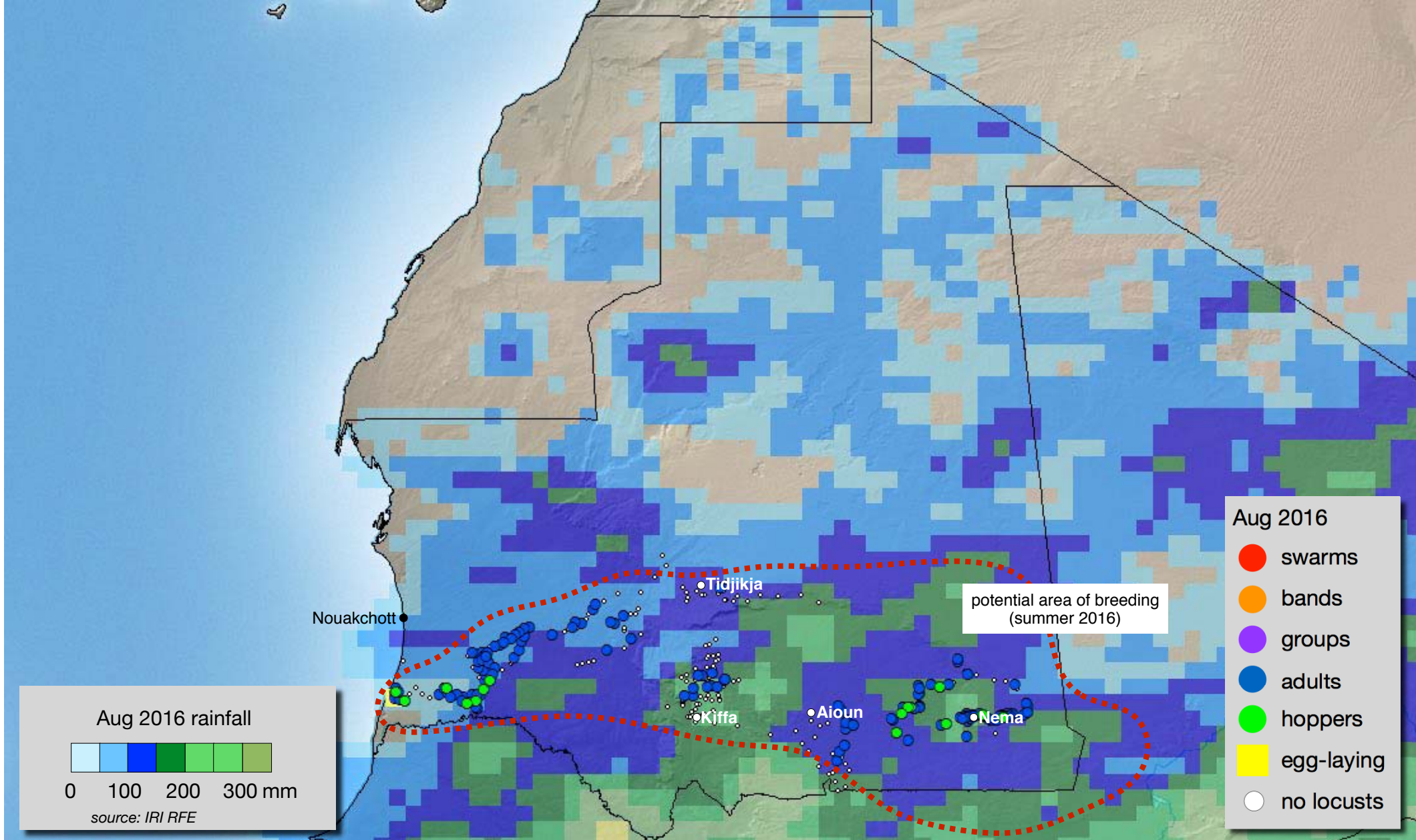
A few small groups of late instar hoppers at densities up to 60 hoppers/m² remained near Zouerate early in the month mixed with immature and a few mature solitarious and *transiens* adults at densities up to 8,500 adults/ha. Ground control operations declined against hopper and adult groups in northern Mauritania and adjacent areas in the southern portion of the Western Sahara in Morocco. As vegetation dried out, adults rapidly increased in density and several groups moved south to oases in western Mauritania. Other groups of immature and mature adults at densities up to 30,000 adults/ha arrived in the north and northwest and moved south to the oases in Adrar.



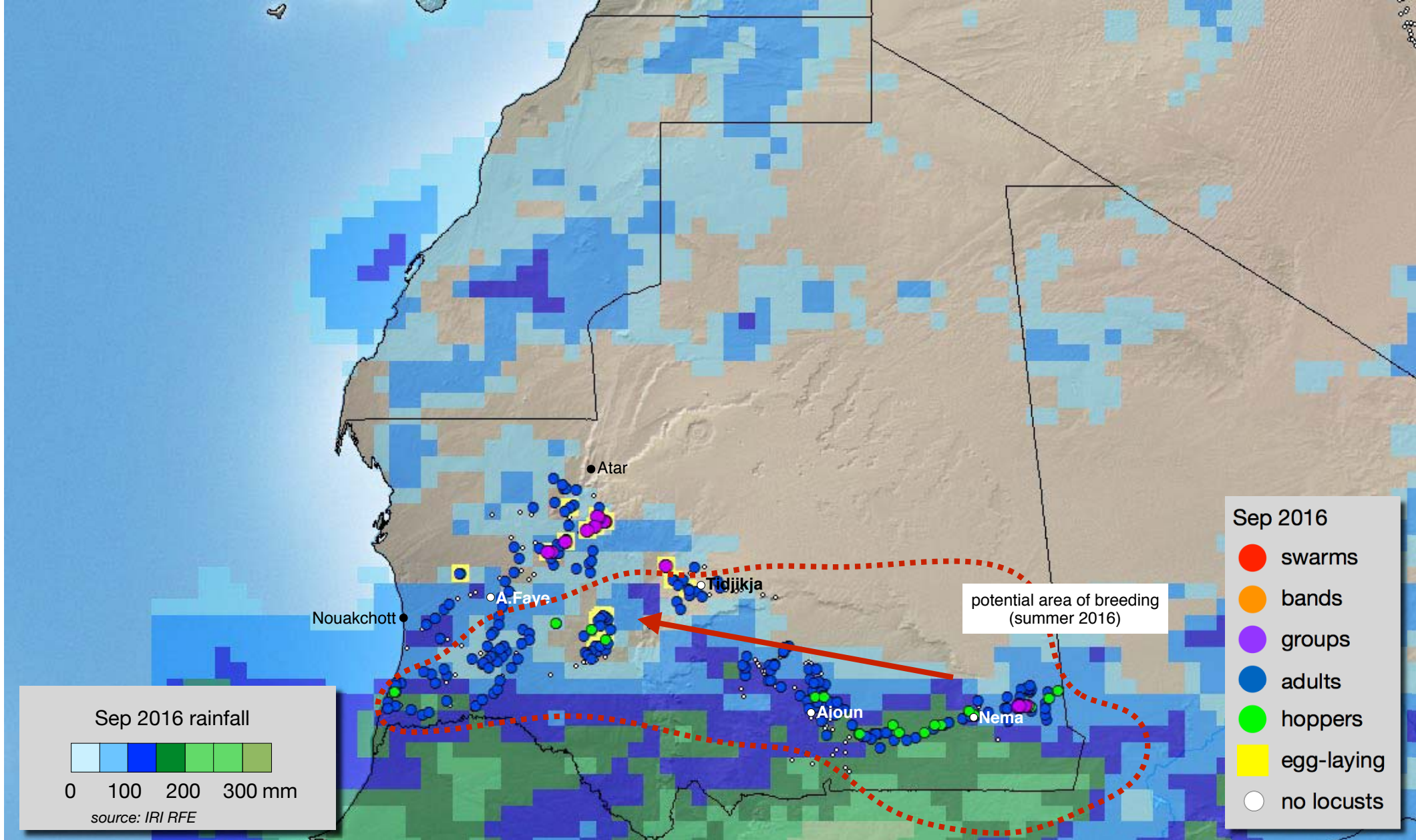
JUNE 2016 Due to drying conditions and control operations, breeding nearly ended in northern Mauritania where only isolated late instar solitary hoppers remained near Zouerate. However, immature and mature solitary and *transiens* adults and a few groups from adjacent areas of southern Morocco mixed with local populations and moved south through several oases in Inchiri and Adrar towards the summer breeding areas. By late June, adults had reached Tidjikja and N'beira in western Tagant. The summer rains began to fall in the extreme southeast of the country.



JULY 2016 During the first decade, residual hopper and adult populations remained near Zouerate and immature solitary adults persisted in western Tagant. During the rest of July, an increasing number of scattered mature solitary adults appeared in the summer breeding areas of southern Mauritania, which coincided with the onset of the seasonal rains throughout the south. Consequently, ecological conditions became favourable for breeding and small-scale hatching commenced in about mid-July near Nema and first to third instar hoppers were reported on the 30th.

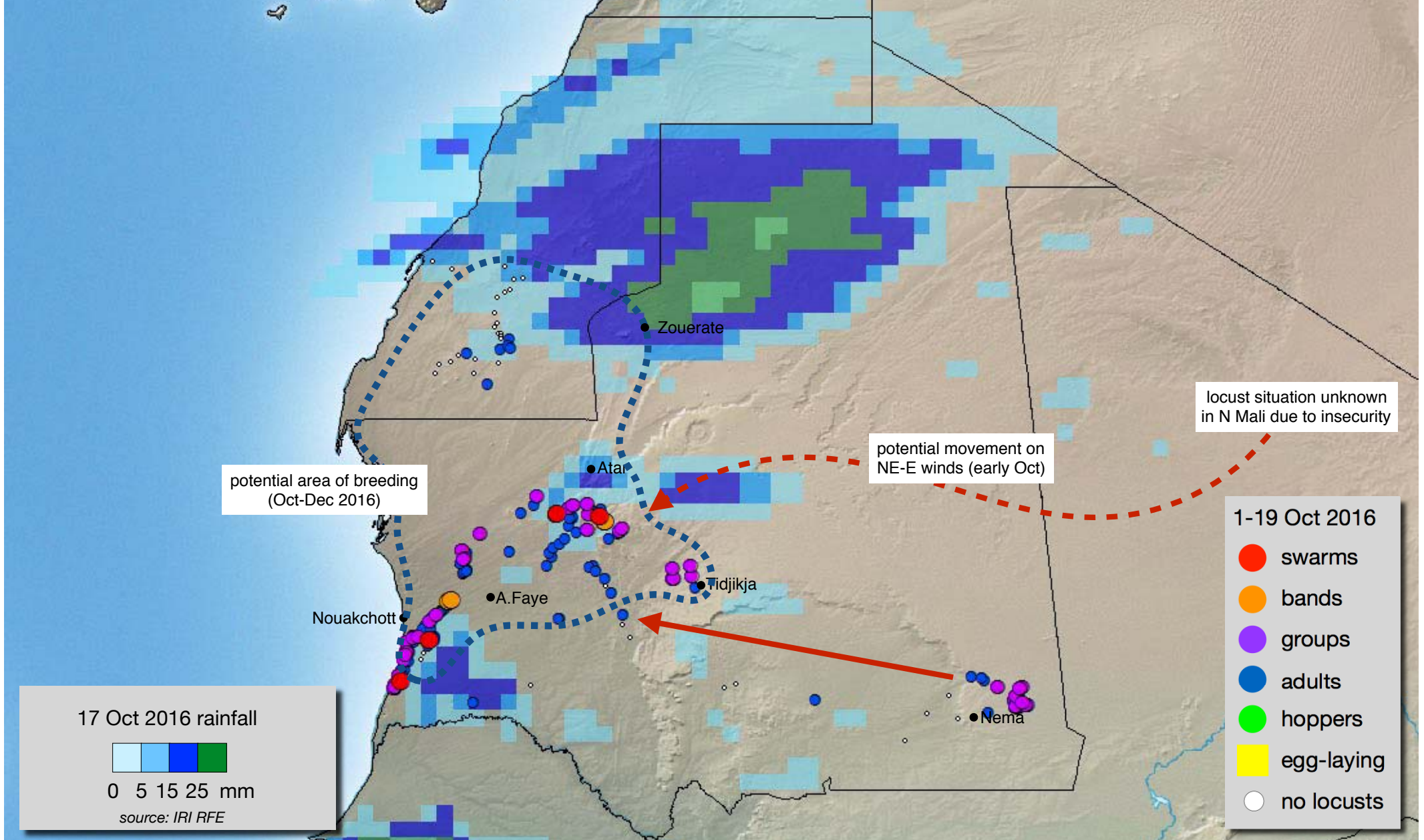


AUG 2016 Good rains fell over a widespread area of southern Mauritania and low numbers of mature solitary adults were well distributed and scattered throughout this area and breeding on a small scale. Hatching was detected early in the month on the Atlantic coast north of the Senegal River and in the southeast, including the plateau east of Nema. It is likely that more locusts were present than reported since several areas where good rains had fallen were not surveyed. Similar to 2003, favourable ecological conditions and breeding may have occurred much further north than usual.

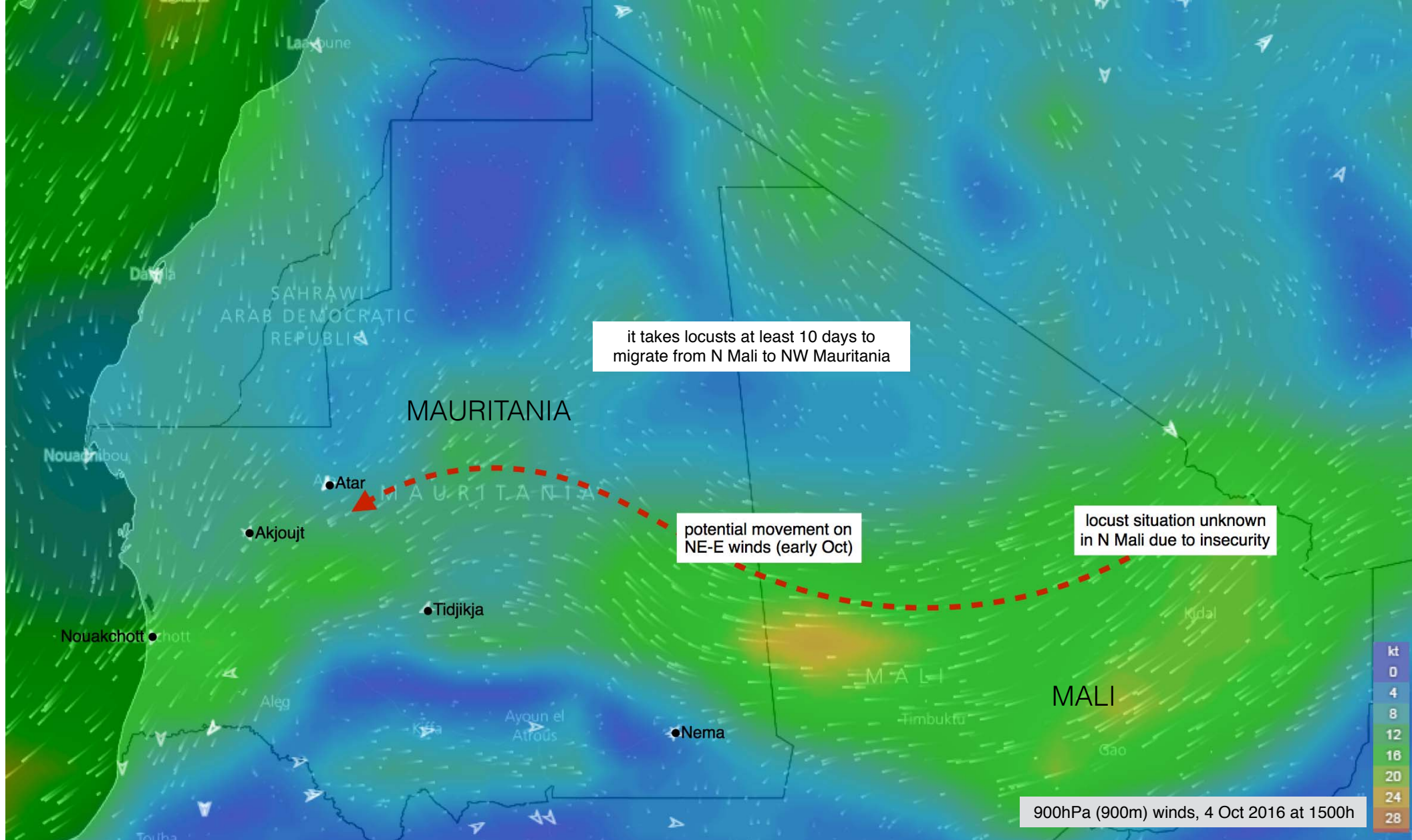


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SEP 2016 Low numbers of scattered solitary adults at densities of less than 200 adults/ha continued to be reported in the south during September. Breeding was detected in the southeast between Aioun El Atrous and Nema and at one place on the Trarza coast. As the month progressed, an increasing number of mature solitary adults appeared in the west, mainly in southwest Adrar. As vegetation dried out in the southeast, there was a sudden increase in densities to 1,500 adults/ha and a few small groups formed during the last week. Other immature and mature groups formed at densities up to 7,000 adults/ha in the west between Aguilal Faye and Atar, and some were laying eggs. Control operations treated 263 ha.



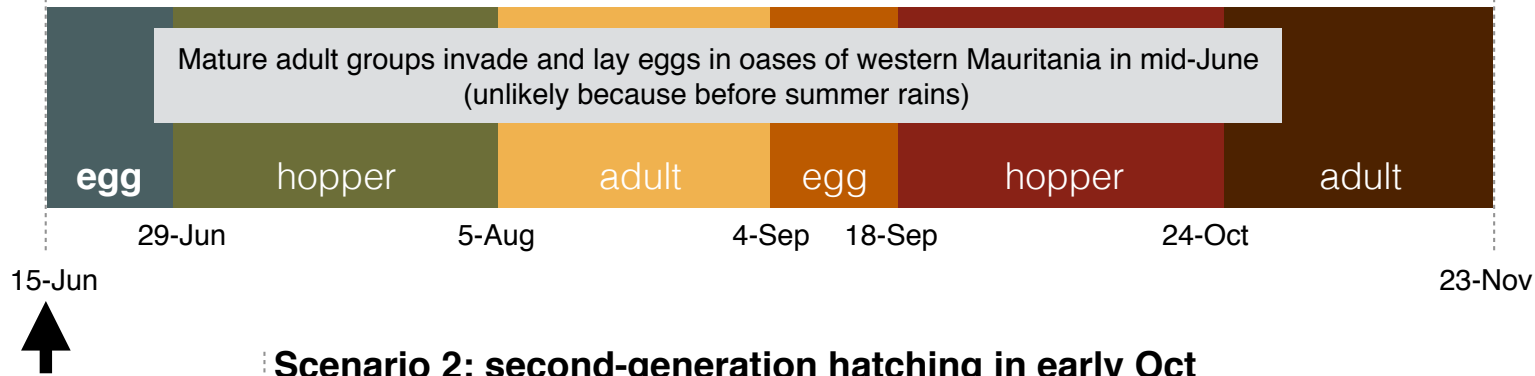
OCT 2016 Several swarms and groups of mature solitary and *transiens* adults at densities up to 35,000 adults/ha (<math><4/m^2</math>) and varying in size from 20 to 140 ha appeared in Trarza, Adrar and Inchiri early in the month. A very small swarm of 50 ha was reported near Nouakchott. Egg-laying was underway and hatching commenced, causing small first and second instar hopper bands to form at densities up to 80 hoppers/m². Adult groups at densities up to 7,200 adults/ha were also present in the southeast near Nema. Ground control operations treated more than 4,200 ha on 1-10 October. In southern Morocco, scattered adults appeared in the Adrar Settouf.



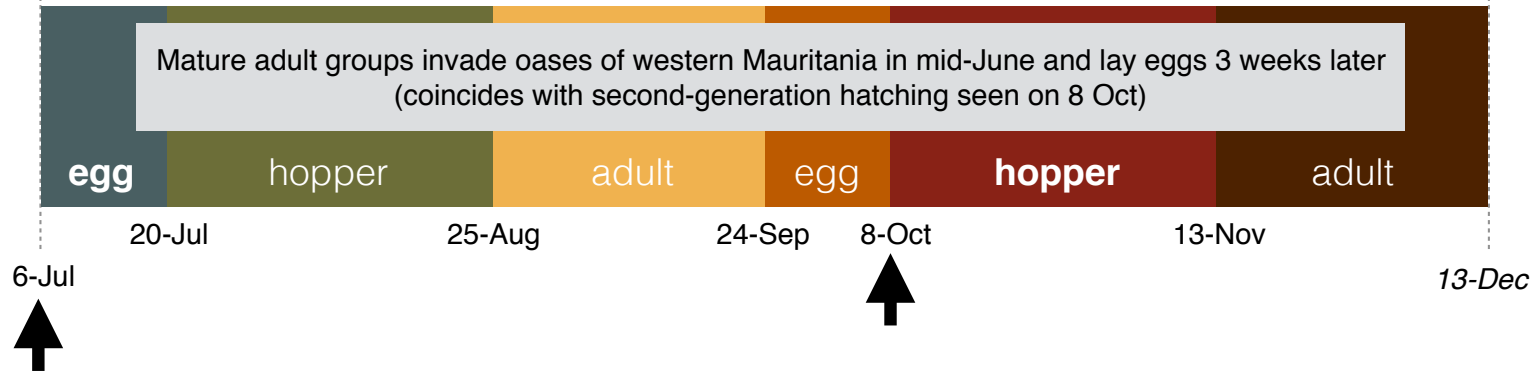
OCT 2016 The appearance of groups and swarms of yellow solitary and *transiens* adults in NW Mauritania may suggest that the current infestations originated from summer breeding that took place in southern Mauritania as well as perhaps northeast Mali. In the latter area, good rains fell from June to September this year that allowed at least one generation of breeding to take place. However, national surveys could not be undertaken to confirm the situation due to insecurity. Nevertheless, if summer-bred adults formed groups by late September when vegetation would be drying out, it is possible that prevailing northeasterly and easterly winds could have carried them to NW Mauritania, a journey of more than 1,500 km over mainly uninhabited areas that would take about 10-14 days. In the absence of data or sightings, it is only possible to hypothesize such a migration.



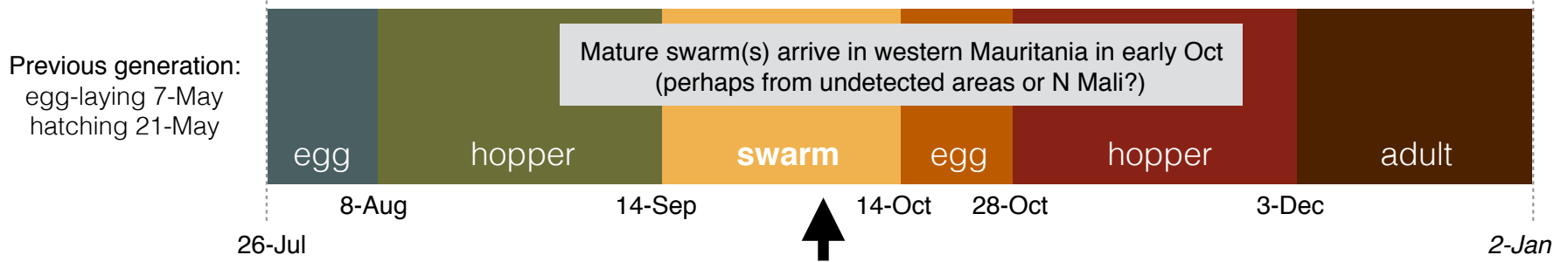
Scenario 1: remnant spring-bred populations in oases



Scenario 2: second-generation hatching in early Oct



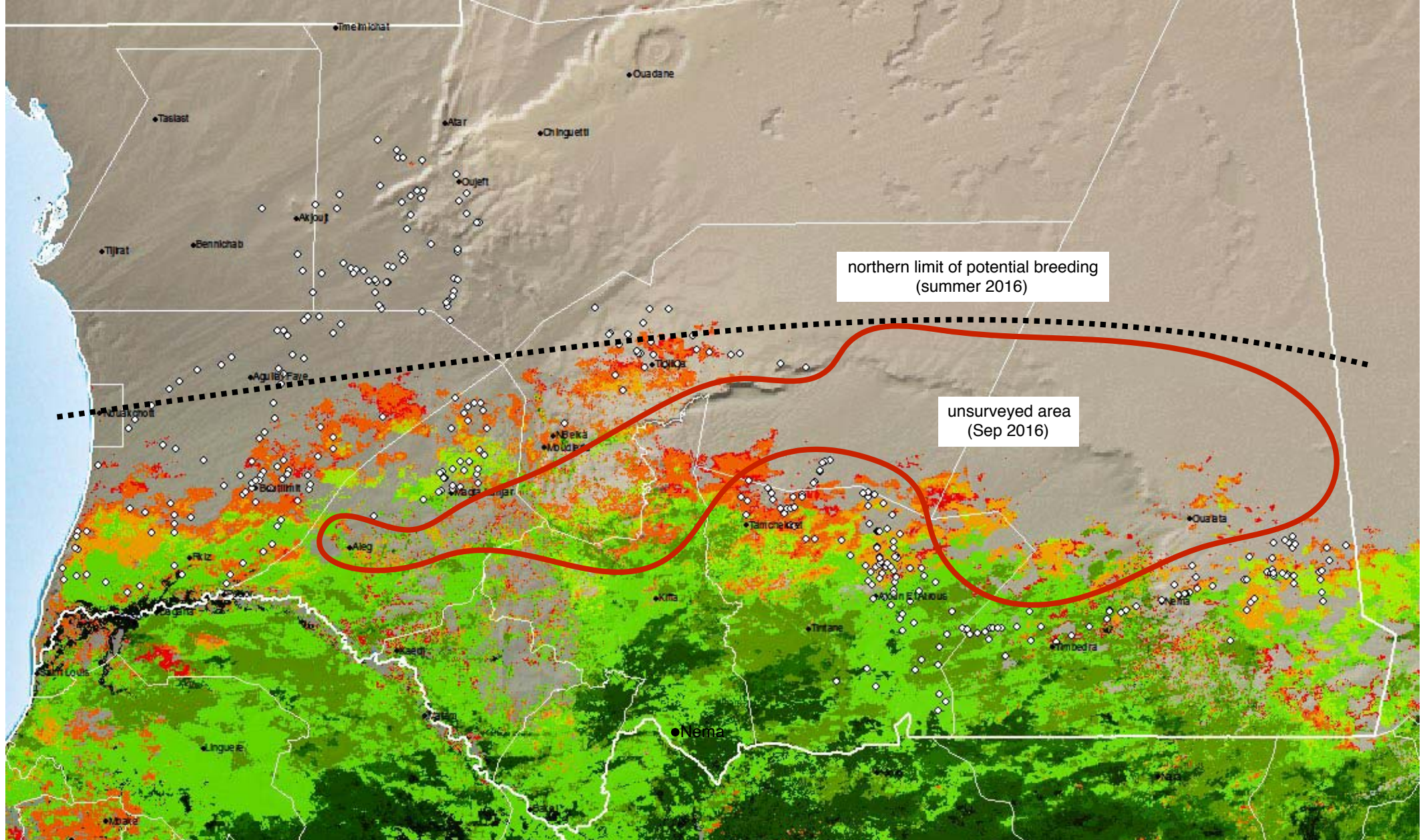
Scenario 3: swarm(s) appear in early Oct



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BREEDING

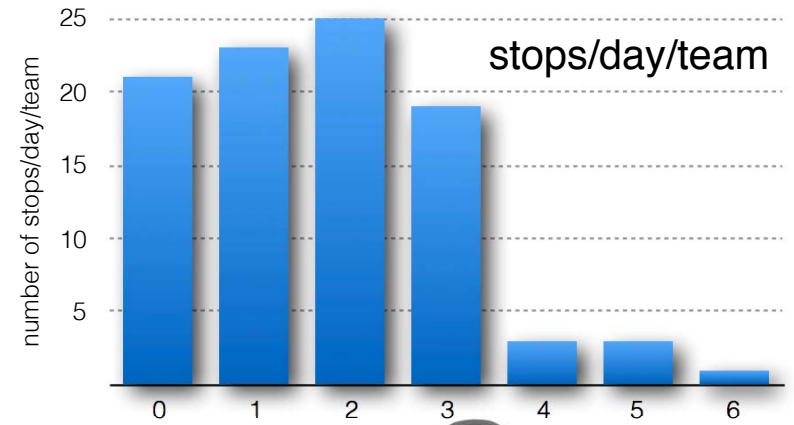
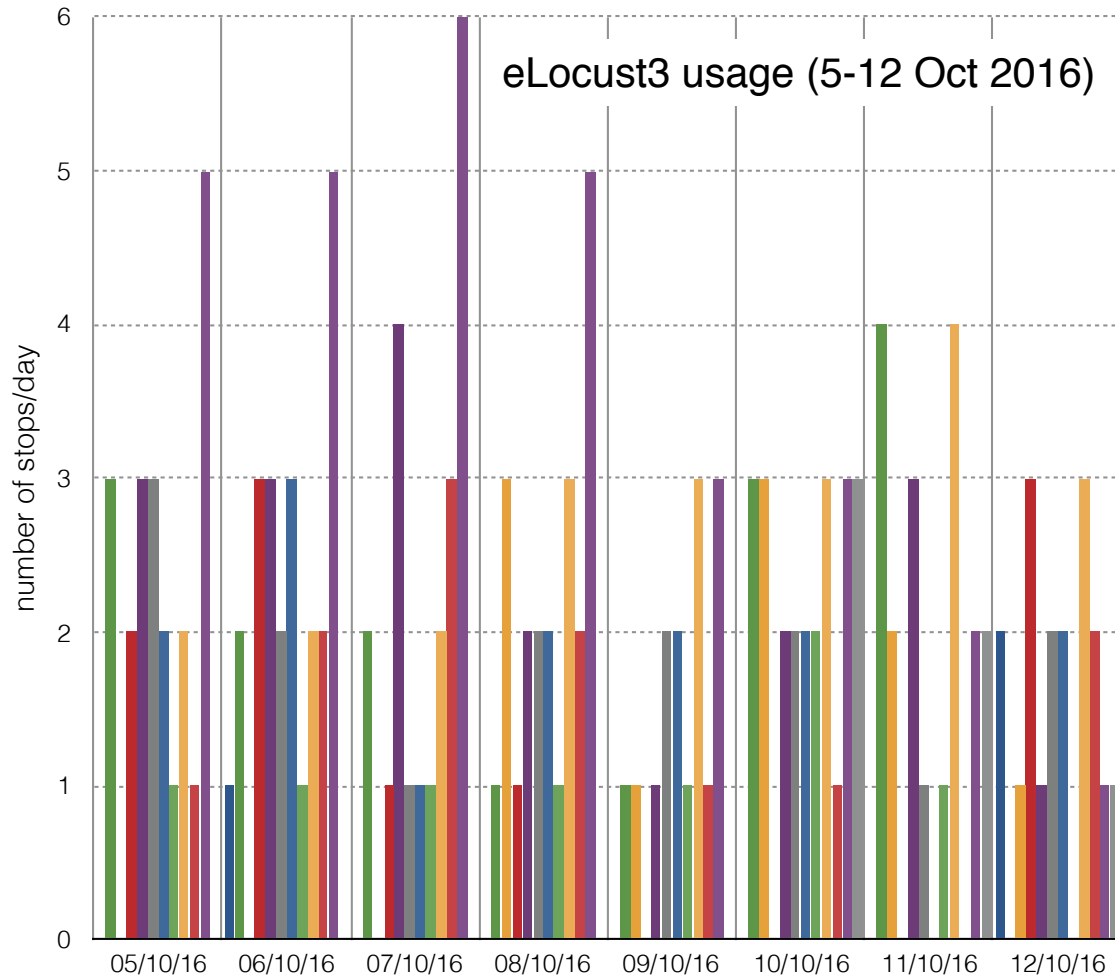
Three different scenarios are proposed in explaining the appearance of mature adult groups and swarms in NW Mauritania in early October: (1) spring-bred adults laid eggs in western oases as soon as they arrived from the north in mid-June but this is not very likely because it is before summer rains; (2) more likely is that they waited until early July when rains fell and the timing coincides with second generation hatching in early October; (3) groups and swarms that formed from egg laying and hatching in late July and early August respectively in southern Mauritania and perhaps northeast Mali are likely to have contributed to the early October infestations in NW Mauritania.



SURVEYS

Green annual vegetation development in the summer breeding areas of southern Mauritania peaked in September. Similar to 2003, green vegetation was located much further north than usual because of good, widespread rains this summer. Consequently, there were relatively large areas that were not surveyed in which Desert Locust populations may have been present, breeding and concentrating. This may also partially explain the appearance of mature adult groups and swarms in NW Mauritania in early October.

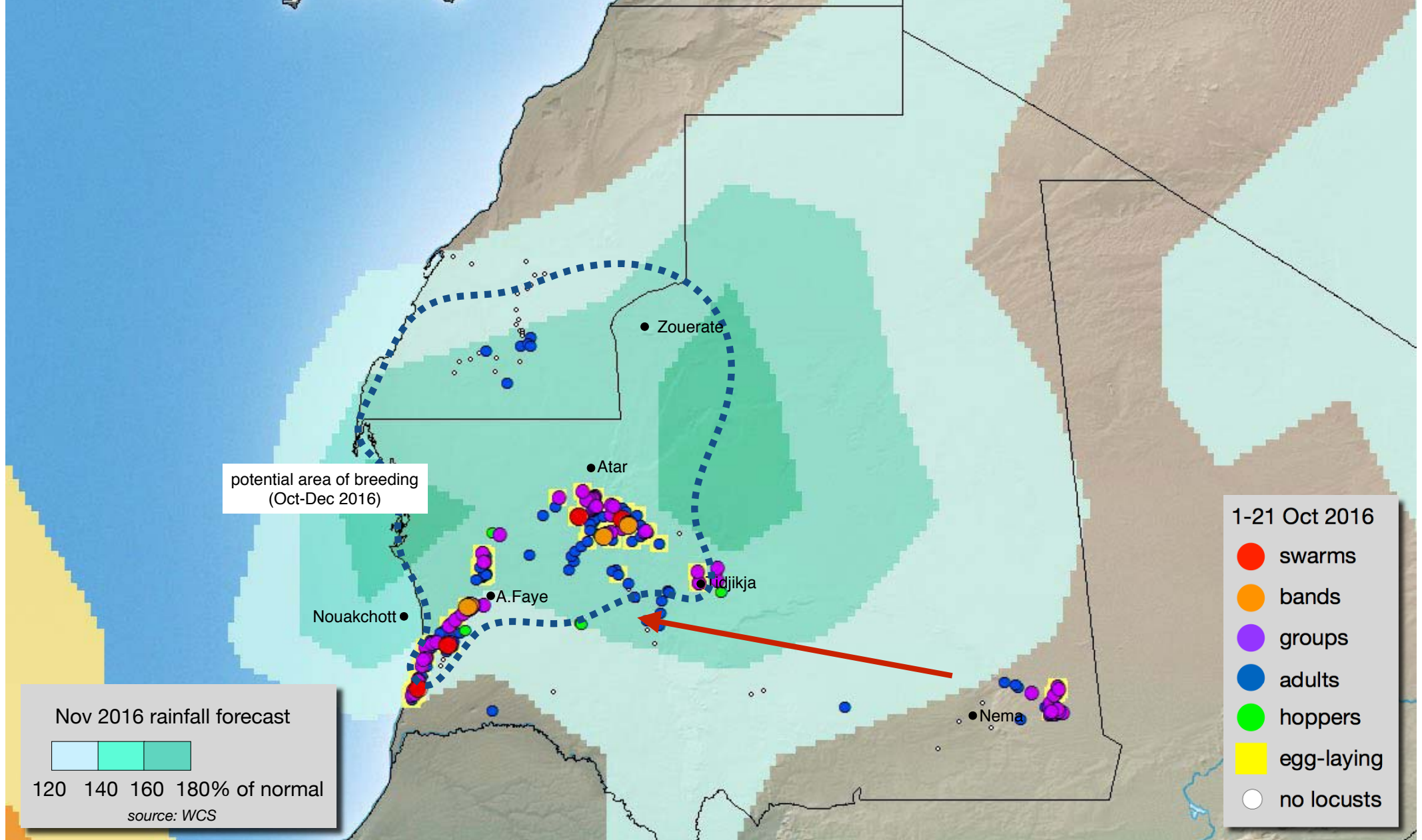
eLocust3 ID 01 03 05 06 07 09 12 18 20 25 26 30



eLocust3 National survey and control teams record their field observations in a rugged handheld tablet that transmits this data in real time by satellite to the National Locust Centre (CNLA) in Nouakchott. The data is the foundation of the global early warning system and preventive control strategy. It is used by CNLA for decision-making and by FAO DLIS for analysis and forecasting. In early October, there were 12 CNLA teams in the field using eLocust3. By evaluating the use of eLocust3, it is possible to identify any shortcomings in survey efficiencies, timing and coverage. Using eLocust3 effectively contributes to good monitoring, early warning and control.



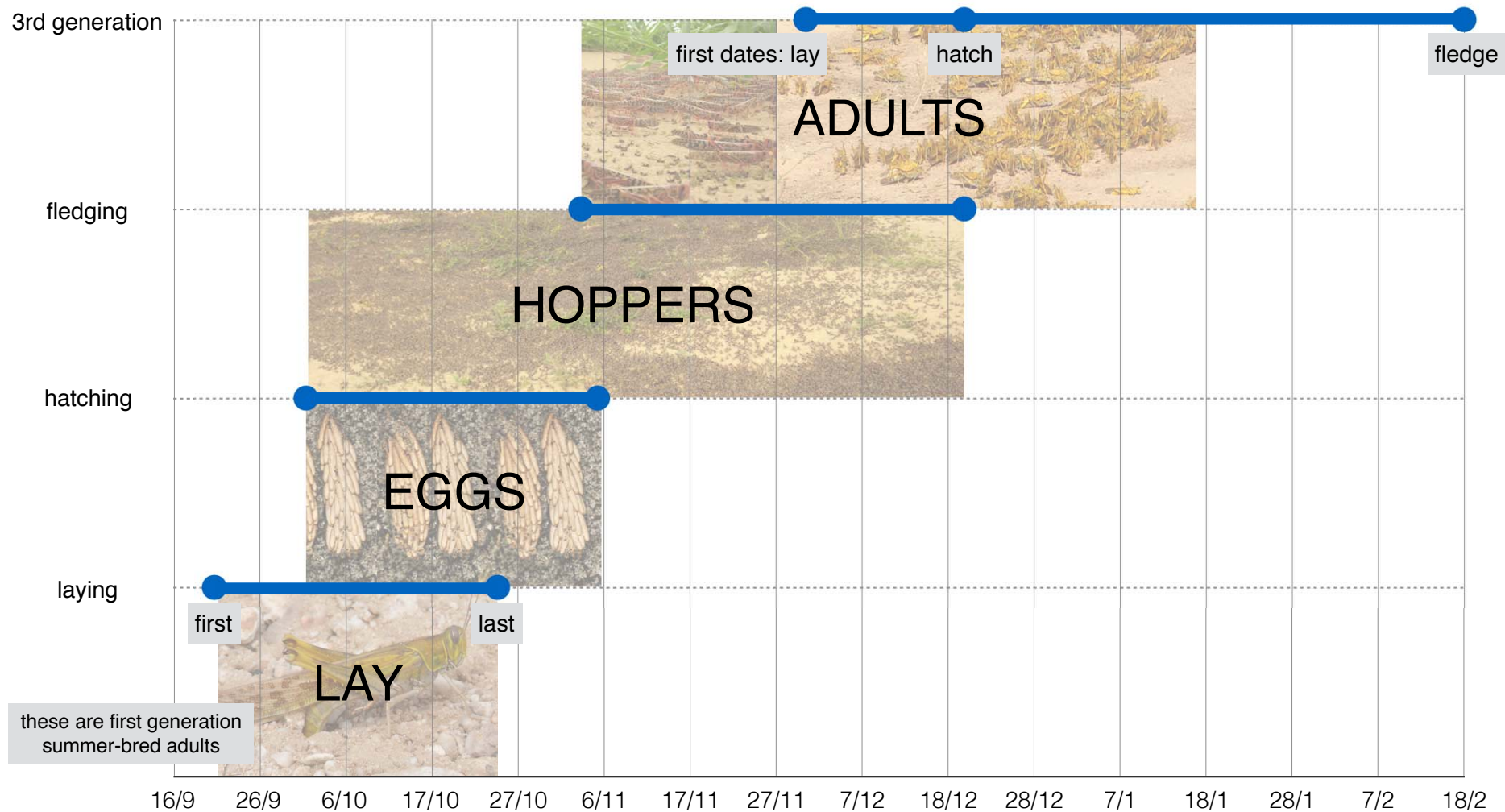
Control operations against mature adult groups
and small swarms in western Mauritania
(7-10 Oct 2016)



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NOV 2016 FORECAST

Locusts will decline in southeast Mauritania as a few remaining groups form and move to the northwest where they will supplement egg-laying that started during the last week of September. Second-generation hatching that commenced in early October will continue until about early November, giving rise to hopper groups and bands throughout November. Fledging is expected to commence during the first week of November and continue until about mid-December, giving rise to immature adult groups and swarms from about mid-November onwards. Seasonal rainfall predictions suggest slightly above average rainfall in November and December that should allow the continuation of favourable conditions for locust breeding and survival.



NOV-DEC 2016 FORECAST Estimated egg and hopper development rates suggest that 2nd generation hatching should conclude in early November. This means that hoppers will continue to form groups and small bands throughout November to about the third week of December. The hoppers should start fledging about the first week of November and new immature groups and small forms could start forming from about mid-November onwards. If conditions remain favourable, 2nd generation adults will be ready to lay eggs from about 1 December onwards that would result in a 3rd generation of hatching after mid-December.