

# Yemen outbreak

June 2013 - February 2014

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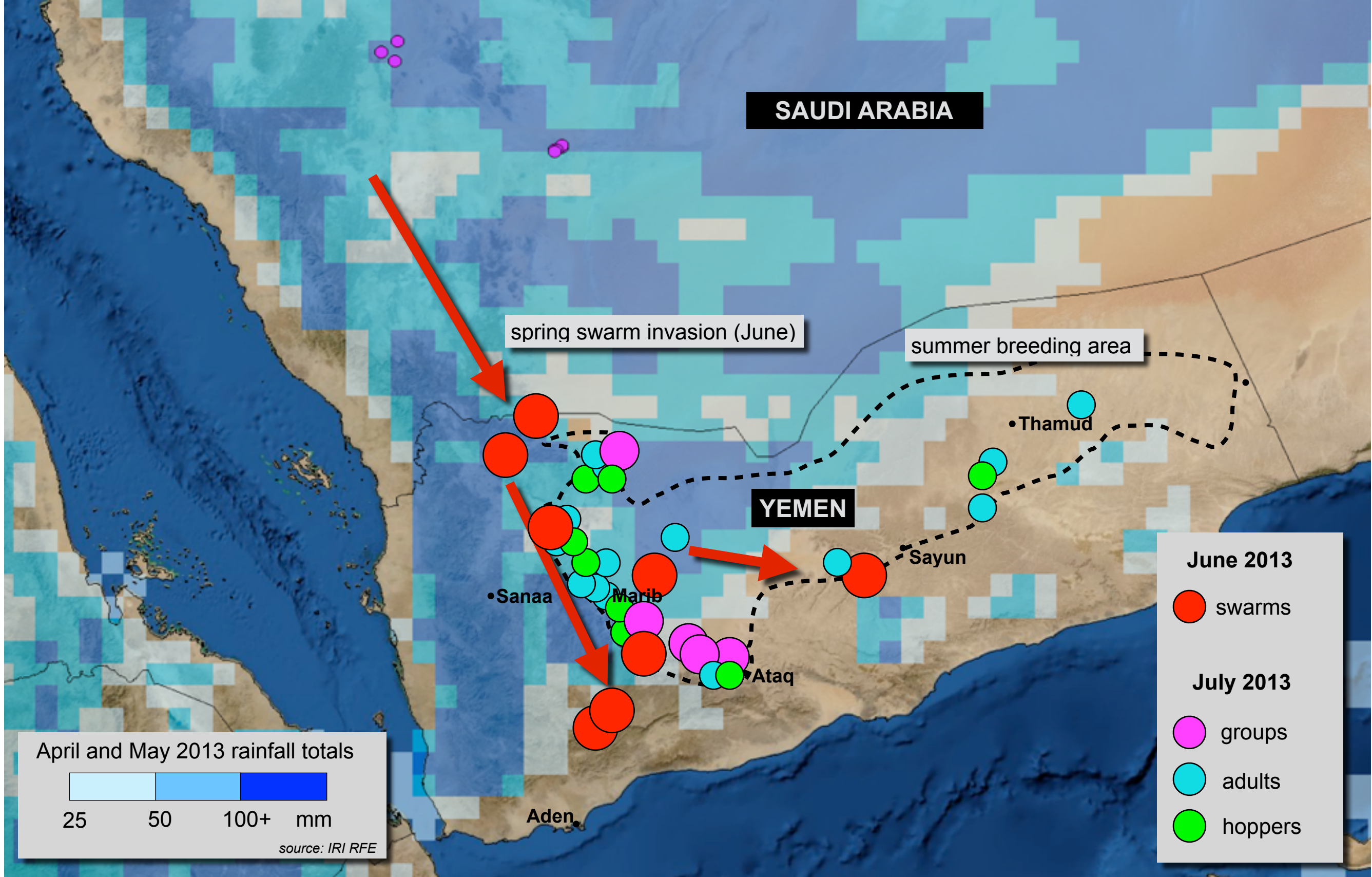


Desert Locust Information Service

FAO, Rome

[www.fao.org/ag/locusts](http://www.fao.org/ag/locusts)

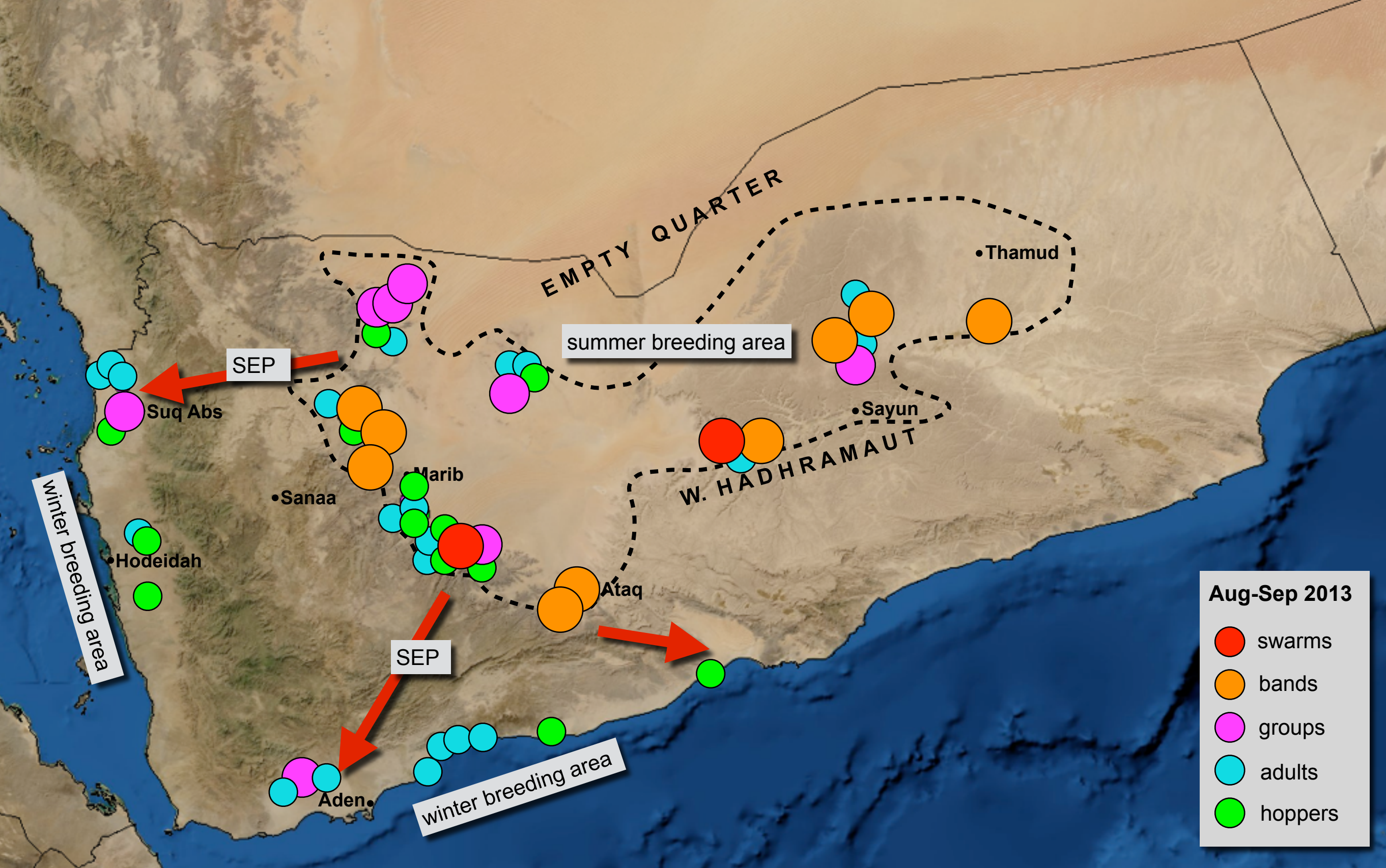
Keith Cressman (Senior Locust Forecasting Officer)



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**JUN-JUL 2013** Several swarms that formed in the spring breeding areas of the interior of Saudi Arabia invaded Yemen in June. Subsequent breeding in the interior due to good rains in April-May led to an outbreak. As control operations were not possible because of insecurity and beekeepers, hopper and adult groups and small hopper bands and adult swarms formed.

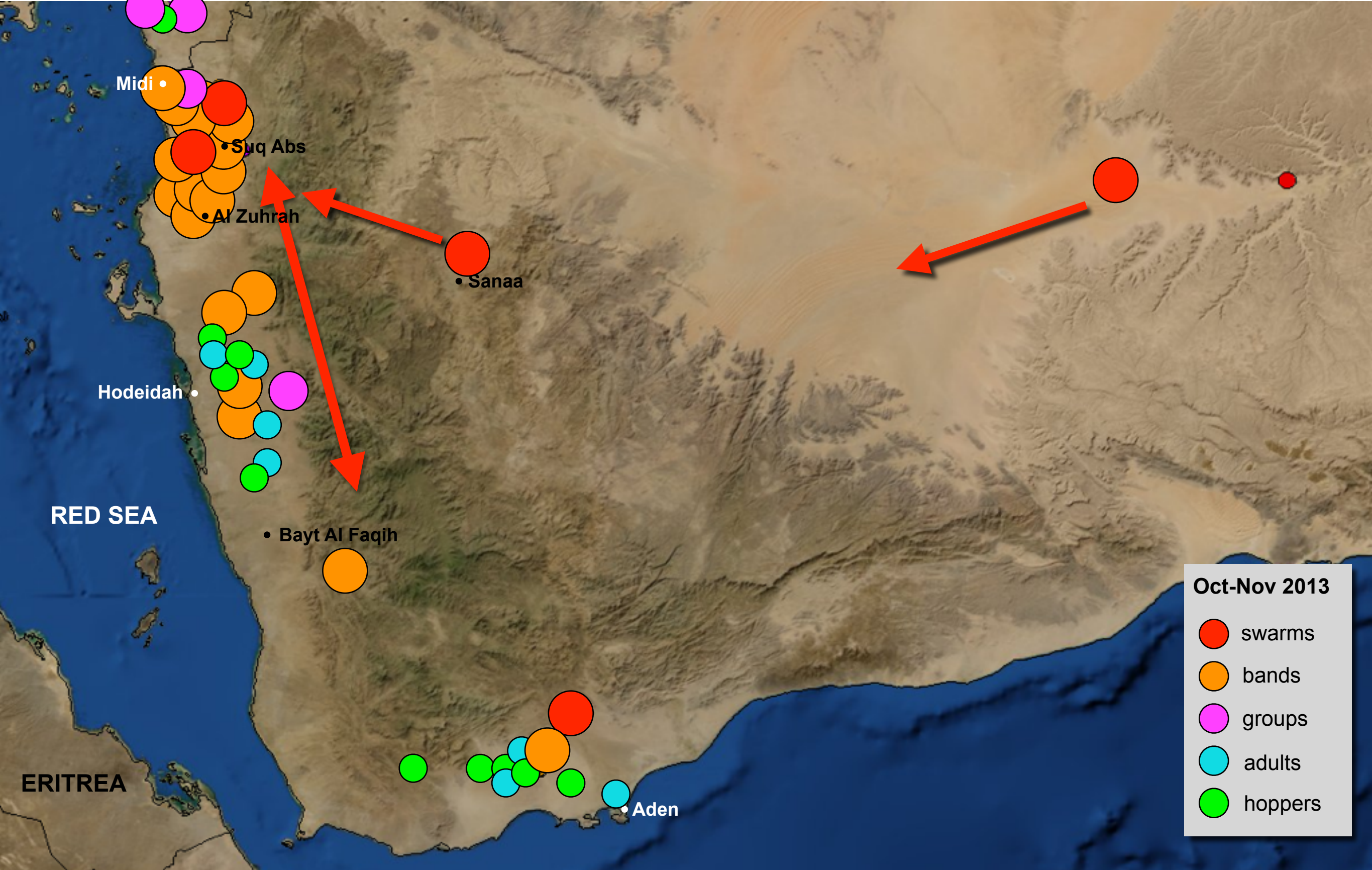




**AUG-SEP 2013** Breeding continued in the interior, giving rise to hopper bands and swarms by September. Survey and control operations were limited due to insecurity and beekeeping and only 5,000 ha could be treated. Large areas could not be accessed where bands and swarms were probably forming. Adults and adult groups moved to the winter breeding areas along the Red Sea and Gulf of Aden coasts where early first generation egg-laying and hatching caused small hopper groups and bands to form. Ground control operations commenced on 27 September.







#### Oct-Nov 2013

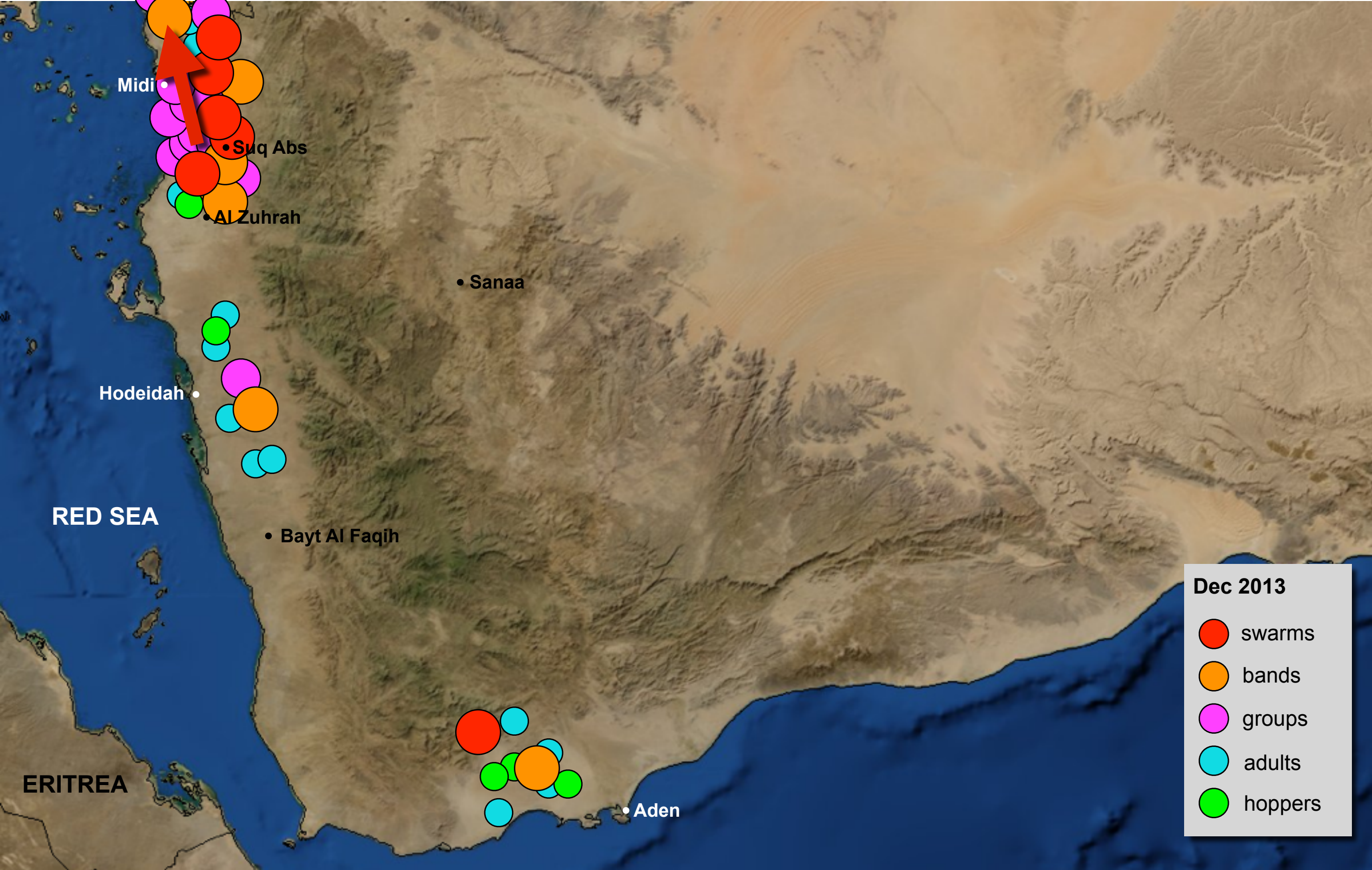
- swarms
- bands
- groups
- adults
- hoppers



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**OCT-NOV 2013** Control teams treated 1,400 ha of hopper bands, until 8 October, on the Red Sea coast where egg-laying continued to about the third week. An increasing number of hopper groups and bands formed in October and November. Fledging began by mid-October and new swarms formed. Some adults moved north to Jizan while others matured and started to lay eggs by mid-November. Control teams treated 16,000 ha. Smaller infestations were present on the Gulf of Aden coastal plains.





Dec 2013

swarms

bands

groups

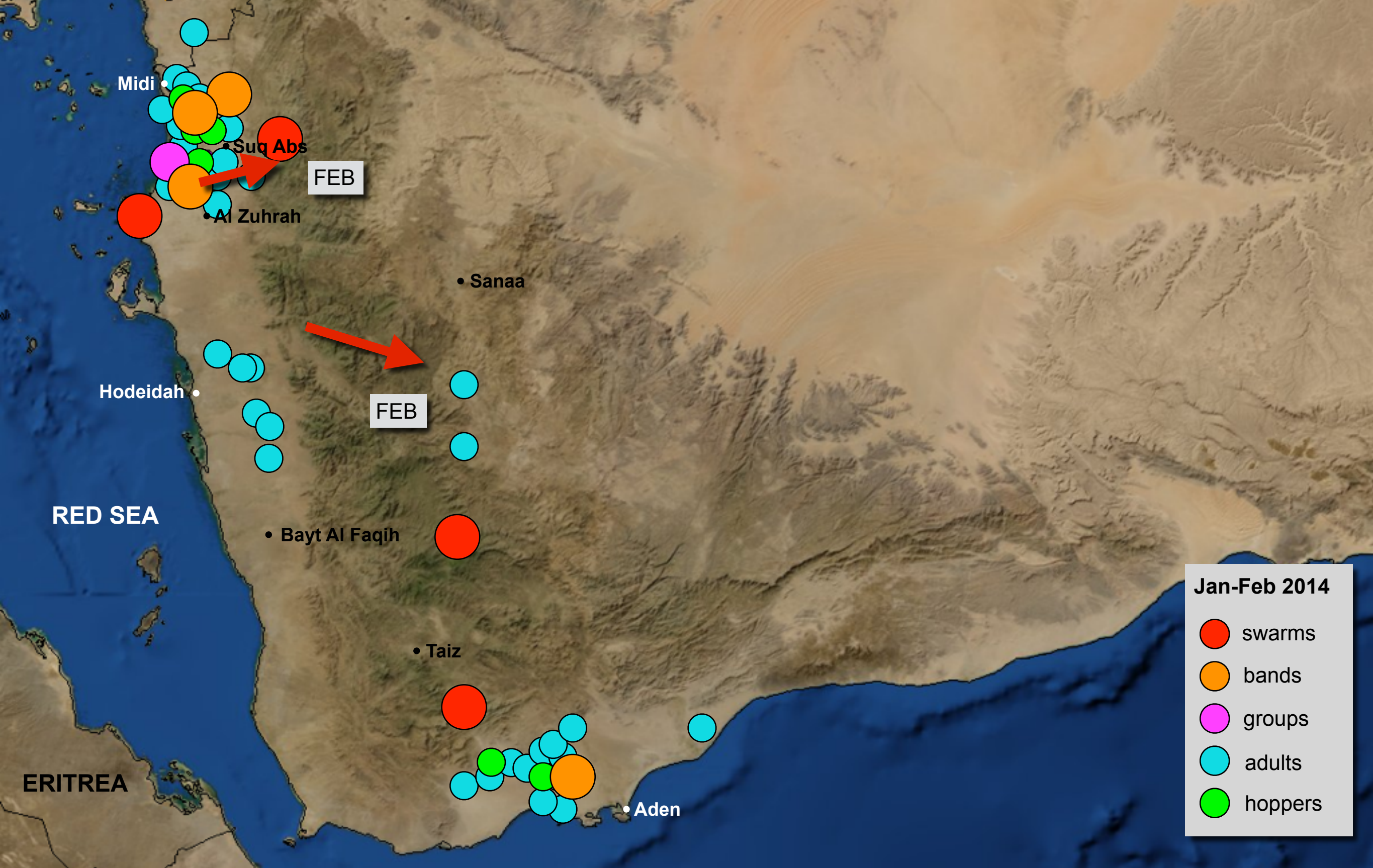
adults

hoppers



**DEC 2013** Several hundred late instar hopper groups and bands persisted on the northern coast until mid-December; thereafter, at least a dozen swarms formed, matured and laid eggs since conditions remained favourable. A few swarms moved north into adjacent coastal areas of Saudi Arabia. Ground teams treated more than 24,000 ha. A few hopper bands and an immature swarm were present on the Gulf of Aden coast but control was not possible due to insecurity.





**JAN-FEB 2014** Second generation hatching commenced in early January on the northern Red Sea coast, causing a few hundred hopper bands to form at densities of up to 500 hoppers/m<sup>2</sup>. Despite beekeepers, ground teams treated nearly 4,000 ha. After mid-February, hopper bands decreased due to control and fledging, giving rise to adult groups and several small swarms. Some of the adults and swarms moved into the highlands between Sana'a and Taiz. Low numbers of adults and one hopper band were present on the Gulf of Aden coastal plains. The situation became calm in March as vegetation dried out.







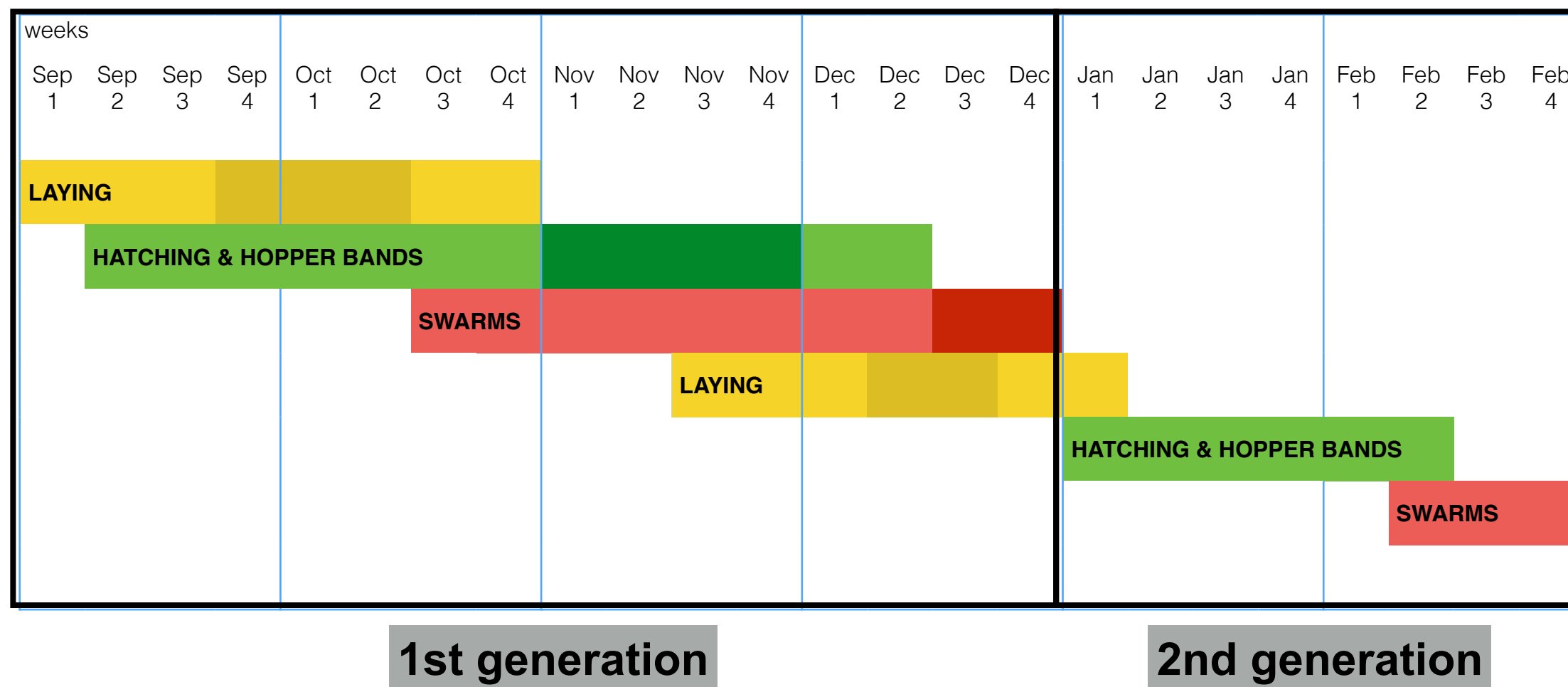
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**FEB 2014** Second generation small but dense hopper bands were present on the northern coastal plains of the Red Sea in early February. More than 150 bands were reported between Al Zuhrah and Suq Abs and many bands contained up to 500 hoppers/m<sup>2</sup>. The bands decreased after mid-month as they fledged and formed immature adult groups and swarms.



# 2013

# 2014



**OVERVIEW** Mature adults were first reported on the northern Red Sea coast on 10 September but were probably already present, but not detected, in August. Egg-laying occurred throughout September until about the third week of October when the last adults arrived from the interior. As a result of this prolonged laying, hopper groups and bands formed from mid-September to mid-December. Fledging started in mid-October and peaked by late November and early December, causing an increasing number of adult groups and swarms to form. A second generation of egg-laying started in mid-November and increased in December with hatching in early January that gave rise to hundreds of hopper bands throughout January and early February. Fledging occurred in mid-February and at least a dozen second-generation swarms formed that left the coast due to drying conditions by March. In all, some 53,000 ha were treated by ground teams from August 2013 to February 2014 despite insecurity and beekeepers.