

## Chapter 10

### *Apis florea* in Saudi Arabia

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*Apis florea* is the better known of two recognised species of dwarf honeybee. Its main range is in hot regions of Pakistan, India, Sri Lanka, Myanmar, Thailand, Indochina and southern China (Otis, 1994). It also lives in several mid-western countries including Oman (Dutton and Simpson, 1977) and Iran (Tirgari, 1971). More recently *A. florea* has been reported from Sudan (Lord and Nagi, 1987) and Iraq (Claim, 1992). This is the first report of *A. florea* from Saudi Arabia.

In 1985, a colony of honeybees was reported from Riyadh to staff of the College of Agriculture of the King Saudi University. The person who reported it came to seek help in hiving the bees in a Langstroth hive, thinking it was an *A. mellifera* swarm. Upon seeing the colony it was realised that this was the first colony of *A. florea* known from Saudi Arabia. The colony nest measured about 15 cm x 15 cm and was attached to a frond of a palm tree. In 1986, many people called the Ministry of Agriculture and Water seeking help in hiving *A. florea* in swarm boxes in their gardens. By 1991, more than sixty colonies had been detected in many different areas of Riyadh. Moreover, recently *A. florea* bees were seen in Al-Gassem about 400 kilometres from Riyadh in the east of the country. The

occurrence of *A. florea* in this area is not surprising because of the heavy movement between there and Riyadh.

1996 was different from other years for Riyadh as it had more rain than in the last 30 years, (about 100 mm) and was one of the best for beekeepers. This led to an increase in the number of *A. florea* with an average of 10 new swarm-reports per day. Most of the nesting sites were in gardens either in bushes and trees or between exterior window bars or in house walls. Comb size varied greatly depending on how long the bees had been established in a particular location. Combs were between 10 cm x 15 cm and 25 cm x 35 cm. They were full of brood and had less than 800 g of honey. Some of the larger colonies had up to ten queen cells; an indication that reproductive swarming was occurring.

The ability of *A. florea* to survive in Riyadh's harsh, hot climate is remarkable particularly as this species nests in the open on a single comb. This is especially true when one compares this species with imported *A. mellifera* colonies that with extensive care, sheltering, cooling and feeding, still experience a high degree of mortality.

Because of the high price of honey, most people who find *A. florea* colonies destroy them

to harvest the honey. A few take the honey and then try to repair the rest of the comb but, unfortunately, bees do not return to nests that have been disturbed. The main concerns of beekeepers is robbing of *A. mellifera* colonies by *A. florea*, and the transference of *Varroa* mites, but not competition for limited nectar and pollen sources. Of five swarms examined in Riyadh in February 1997, two had *Varroa* mites on adult bees (brood not examined) indicating that *A. mellifera* had been robbed.

It is not known how *A. florea* entered Saudi Arabia. It is possible that it came from a neighboring country as, in addition to Oman and Iraq, it is also known to occur in Yemen and is suspected in Abu Dhabi (Whitcombe, 1984) and Qatar. If such is the case, this species has long been in Saudi Arabia, for it would have taken a long time to reach inland to Riyadh. On the other

hand, its presence in Riyadh, located in the centre of Saudi Arabia, may mean that it entered the country by airplane in cargo.

## References

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