

# **Protection of the Black bee**

## **The situation for the protection of the Black bee (*Apis mellifera mellifera*) on Læsø**

### **The background**

On the isolated Island of Læsø, Denmark has a population of black bees *Apis mellifera mellifera*.

The black bees on the Island have been kept there by beekeepers for many years. They are gentle, productive with a high tolerance to adverse climatic conditions. The majority of beekeepers on Læsø, with the support of the Danish Beekeepers Association have for many years worked for establishing Læsø as a conservation area for the black bee.

We succeeded in 1993 when Læsø was declared a conservation area of the black bee, *Apis mellifera mellifera*. Only black bees should be allowed on Læsø, and no imports were permitted.

This was a huge step forward in the conservation of the biodiversity of bees in Europe, and one of the few situations where Denmark fulfilled its obligations to the Rio Convention.

### **The problems**

A few beekeepers questioned the legal background of the regulation and obstructed the conservation. Legal battles took place through several years until the European Court and local courts finally in 2001 declared the conservation area legal.

Change of government in 2002 in Denmark gave new momentum to the battle against the conservation area. The liberal government does not support the conservation area. The new minister of Agriculture, Fisheries and Food Mrs. Mariann Fischer Boel was basically against the conservation. She asked the Ministry to prepare a new report on the rationale behind the conservation area.

The conclusion was: The conservation of the black bee is justified and an important issue in fulfilling Denmark's obligations to the Rio Convention.

But for political reasons the report gave several solutions to solve the problems.

The ministry decided to make a protected mating station for the black bee in the very eastern part of Læsø and allow other bee races on other parts of Læsø. With the further limitation that the area should only be protected until 20th of July each year.

Mrs. Mariann Fischer Boel became in 2004 the European commissioner of Agriculture, her predecessor as Minister Mr. Hans Chr. Schmidt continues the work to allow other bee races on Læsø.

### **The positions**

The ministry and government owned Danish Bee Research Laboratory stated that this solution is viable and gives sufficient isolation to make a high degree of pure matings. Independent scientists and the Danish Beekeepers Association are convinced that this is not the case. Winds from the West are predominantly on Læsø. The distance from the western borderline to the mating station is less than 3 km. There will be an influx of drones from all Læsø to the mating station.

### **Strong support of the conservation**

Due to strong support from independent scientists and organisations we succeeded to get some improvements into the new regulation.

The mating area on the easternmost end of Læsø is protected all year, and a large portion of the government owned plantations on Læsø are reserved for black bees. The government gave a very small grant to the Læsø Beekeepers Association to help them run the mating station.

### **The situation just now**

The ministry took on the task to get all „non-black bees“ removed from the „protected“ mating area. This has not happened yet.

The Ministry promised to make DNA analyses of all bee colonies on Læsø to facilitate the selection of black bees. The bees have been collected but no results of the analyses yet, so no help for the selection this year. The Ministry promised to register all bee-colonies on the Island in order to facilitate the removal of „non-black bees“ from the „protected areas“. It ended up with a regulation that is asking for an annual registration of black bees, while the other beekeepers only need to register once, with no further follow up. The Ministry has moved a few colonies of black bees to another Island where they can be maintained with very large expenses.

The Danish Beekeepers Association have accepted to investigate the possibilities to have other bee races on the Island. But unless the Ministry fulfils it own regulations promptly this is definitely not possible.

The Beekeepers Association of Læsø does a huge effort to produce a high number of black bee colonies. But to make pure matings is very difficult due to the permission to have other bees on most of the Island.

*Presented at the Apimondia congress in Dublin, Ireland 2005  
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### **The island of Læsø**

114 km<sup>2</sup> (= 11.400 ha), nature covers 71% of the island

Length 22 km, width 2 - 12 km

Population: 2.300

Beekeepers with black bees: 30 with totally 250 colonies

Beekeepers with other bees: 7 with less than 200 colonies (many black or crosses).

### **Characteristics of the Læsø bee**

- Small colonies during winter, low consumption
- Fast development during flows
- Swarming
- Tolerance to adverse climatic conditions
- Not aggressive

### **Protection of the black bee - why?**

- The black bee is unique
- Preserve the diversity of the honeybee
- Preserve a gene-pool
- Enviromental conference in Rio de Janeiro 1992
- Preserving endangered animals of the world
- The majority of beekeepers support the conservation

**The situation is alarming**

Annette Bruun Jensen and Bo Vest Pedersen Biological Institute, University of Copenhagen,

investigated the degree of introgression of genes from non-native bees:

- The nuclear and mitochondrial gave comparable results, showing that introgression of *A. m. ligustica* derived mitochondrial haplotypes and nuclear alleles have occurred in varying degree into the examined populations.
- Generally the examinations showed limited introgression with *A. m. ligustica*.
- The most introgressed population was found on the Danish Island, Læsø, it contained almost 10% *A. m. ligustica* derived mitochondrial haplotypes and nuclear alleles.

**The black bee on Læsø is seriously threathend**

The conservation of the black bee on Læsø is seriously threatened. The Ministry claims that they work for the conservation. Reality is that they do not listen to independent scientific advice.

An increased introgression of genes from other bee races are evident.

The black bee of Læsø does not survive unless beekeepers care for it.

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