# TROPHIC RESOURCES USED BY BEES *APIS MELLIFERA* LINNAEUS, 1758 (*HYMENOPTERA*, APIDAE) LIKE A PROTEIN SOURCE IN DIFERENTS MUNICIPALITIES OF SERGIPE STATE

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## INTRODUÇÃO

The pollen in addition to the plants reproduction serves as reward for flower visitors (Schlindwein *et al.,* ., 2005). The bees use them in their nutrition, especially as a protein source for the larvae and adults (Zerbo *et al.,* ., 2001). The Physical and chemical composition of bee pollen is influenced by the number of pollen types present in the sample(Modro *et al.,* ., 2009). These pollen types are considered as a "fingerprint"of their foraging habits (Wittmann & Schlindwein 1995). That is studied by the palynology (Zafra, 1979). The layers surrounding the pollen grain has varied forms (rough, smooth, with or without ornamentation), allowing carry out systematic classifications, differing thereby the botanical species (Buchmann, 1992; Cornejo, 1994). The pollen spectrum obtained by the palynology normaly used to refer the bee operation area and type of plants visited by the bees for search food (Durkee, 1971).

## OBJETIVOS

Identify the plants visited by bees *Apis mellifera* locking for a proteic source in Sergipians municipalities producers of dehydrated pollen

## MATERIAL E MÉTODOS

The pollen samples were collected during the year 2007, at the Sergipians municipalities of Brejo Grande, Estância, Neópolis, Pacatuba and Tobias Barreto, major pollens producer of the State. Being collected for the analysis 300g/municipality/trimester. In total were 18 samples by year.
The municipalities studied have vegetation of biome of Cerrado, Forest Wasteland, Cerrado, Caatinga, Atlantic forest, Restinga and Mangrove, evidencing the botanical richness of the regions.

The samples were submitted to acetolysis technique (Erdtman, 1952). The material was mounted in glycerin gelatin and prepared slides. Them carried out a qualitative assessment by comparation whit references slides in the Department of Entomology and Acarology from ESALQ/USP and specialized bibliographies, and quantitative by Louveaux *et al.,* . (1978), whit the count of 900 grains of pollen/sample, categorizing according to the representation in dominant pollen (above 45%), accessory pollen (16 to 44%) and isolated pollen (until 15%).

## RESULTADOS

Were observed pollen grains from the familiesAnacardiaceae, Amaranthaceae, Arecaceae, Cecropiaceae, Fabaceae, Labiatae, Mimosaceae, Myrtaceae, Poaceae, Rubiaceae and Solanaceae in the samples, being Mimosaceae and Arecaceae the most representatives, almost appearing in all samples. The municipalities of Pacatuba and Estância did not present production in the winter, which is the rainy season in Sergipe, with the predominant pollen in this season of grains of the Mimosaceae family. Which was also predominant in the spring at the municipality of Tobias Barreto (Caatinga) and Brejo Grande (Coast), whit the species *Mimosa invisa* and *M. desmioides*, respectively.
During the rainy season, the pollen of *Cocus nuscifera* is washed and the bees look for the feed alternatives.
Four of the five apiaries are located in the coastal municipalities, which have production areas of *Cocus nuscufera*, pollen type that was founded in nearly all samples, as dominant or accessory in most of them.
As the municipality of Tobias Barreto is located in a caatinga area shows pollen of Cocus nuscifera only in the portion of isolated pollen.The choice for the pollen resource is s performed by the bees in function of the resources availability among others factors (Hill *et al.,* ., 1997).However, the fidelity of *A.melífera* by determinative plant, can be in function of the greatest number of amino acids that has (Cook *et al.,* . 2003).
On the other hand, despite the floral diversity can influence on the pollen quality, may not occur a direct relationship with the pollens collected by bees (Modro *et al.,* ., 2007).

## CONCLUSÃO

The low diversity of botanical families founded may be related to the availability of floral sources founded by the bees and/or fidelity for some plant. Despite the importance of Arecaceae to bees, they seek other pollen sources, diversifying the protein content on their food.

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