Survey and Identification Some Pollinators and Pollen Resources in Missan Province

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Summary

A survey and identification of the most important pollinators were conducted in three locations in Missan province (Amarah, Maymonnh, Almajar alkabir), for the purpose to survey and identify the most important pollinators in the province,

In view of the diversity of plants and insects pollinators the study select three plants, ber tree *Ziziphus spina-christi* and two crops are alfalfa *Medicago sativa* and Egyptian clover *Trifolium alexenderianum* to confine the pollinating insects. Honey bee *Apis mellifera* be one of the most important pollinator. So pollen sources in the sediment of honey and propolis is studied to identify botanical origin that visited by insects to keep them and provide fingerprint about plant diversity in the province.

The study showed the following:

1. There are many insects visiting flowers of ber, alfalfa and clover were some of them are classified to the species level, while others were classified to the generic level such as wild bees *Andrena* sp., *Megachle* sp., *Tetralonia* sp. And some species belong to family syrphidae such as *Eristalis* sp., *Syrtta* sp. and *Syrphus sp.*.

2. Honey bee *Apis mellifera* is the most common and attracting to the two experiment crops flowe ı I here on average of 0.978 insects per 3m² during five minutes in alfalfa and 1.2 insects in clover were recorded. The second important is the wild bee *Andrena* sp. with an average of 0.662 insects in alfalfa and 0.8 in clover.

3. Honey bee were holding maximum quantity of pollen from alfalfa and clover. The average load was 67874 Pollen Grains (PG) was recorded. This quantity may be greater when it's estimated in the bee when they returns to hive.Wild bee *Andrena* sp. loud of pollen grain counted 54233 PG and,

the wild bee long horn *Tetralonia* sp. carry about 51664 PG , while the leaf cutter wild bee *Megachile* sp. and white -banded digger *Amegilla quadrifasciata* carry 44256 and 38154 PG respectively , The least loud was carried by syrphid fly *Eristalis aeneus* was 27657 PG in its gut .

4. Honey bee *Apis mellifera* was the most insect spending time of foraging pollen on clover in average 9.76 second and 8.85 second on clover and alfalfa flowers respectively in the daylight , the next were the miner bee *Andrena* sp. spending 5.53 sec and 4.32 sec on clover flowers and alfalfa respectively. The white -banded digger wild bee *A. quadrifasciata* and the leaf cutter wild bee *Megachile* sp. have not seen visiting clover while they visit alfalfa flowers.
5. pollen spectrum in spring and autumn honey sediment was studied , wich showed an important and new sources the tamarisk *Tamarix brachystachys* that is record the first time as a predominant pollen source , this source rated over than 45% in three sample of spring honey while as known between researchers and bee keepers that spring honey called a

Eucalyptus or clover honey. Some weed were also important as pollen sources such as *Capparis spinosa*, *Sonchus oleraceus* in addition to *Prosopis juliflora* and some species of the Families Cruciferae, Compositae and Umbelliferae.

6. The light microscope showed that the most important resource of propolis *Eucalyptus camaldulensis*, *Tamarix* spp. and *Prosopis juliflora*.