

Principle and methods of migration of Bee colonies



Migratory Beekeeping

- The art and practice of migratory beekeeping has been perfected in USA where large trailer trucks are used to move up to 20,000 colonies under one management.
- In ancient Egypt pyramid shaped hives numbering up to 4000 were seen being moved on boats and rafts along the Nile, following the bloom of various flowers on the banks of the river.
- Lotus was introduced from India to delta region of the Nile and Lotus honey was collected, it was the food of Kings and priests.

- The hives were moved on camels and donkeys.
- In India, *Apis cerana* bees moved from the higher altitudes of himalayas to the foot of the mountains where Brassica blooms where in abundance.
- With the introduction of *Apis mellifera* in India migratory bee keeping has become more profitable .
- Beekeepers have started making longer trips on trucks and pick-up vans reaching as far as the central districts of Punjab, Haryana, U.P, and Bihar.

Migratory Beekeeping Ancient times in Oman



Ancient hives in Jordan

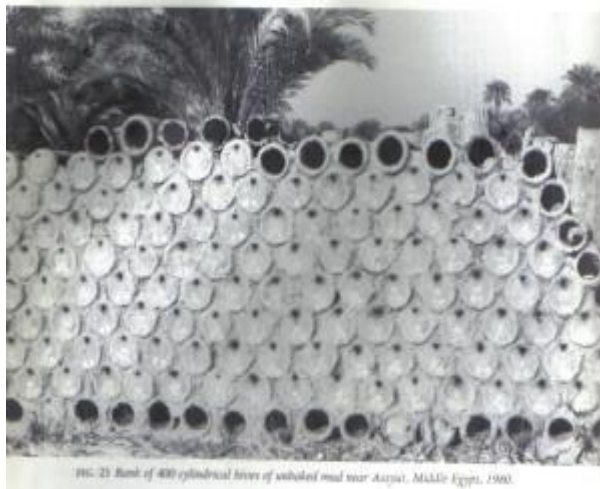


FIG. 21 Bank of 400 cylindrical hives of white mud near Asyut, Middle Egypt, 1960.



Out Apiary

- When migratory beekeeping involves moving bees 45-75 km away it is convenient to establish out apiary or rented land.
- The colonies are generally under the protection of an attendant or the owner of the land. Depending upon the number of colonies additional help can be hired.
- The site is generally on the edge of forest amidst crops with plentiful flora.
- An out apiary can be really useful for a beekeeper having a few hundred colonies.

Moving the Hives

- Moving the colonies is an art and an adventure and is the way of life of migratory beekeepers.
- One or two colonies may be moved as such after closing the entrances and can be carried on head or tied on the back of a two wheeler.
- In California the beekeepers riding inside more than one million boxes loaded onto thousands of tractor–trailers.
- Most of the beekeepers in United states move their boxes for rent to pollinate the trees.



Almond pollination in USA



Commercial beekeeping operations may have tens of thousands of hives. Here, hives wait in a "holding yard" for transport to the almond orchards for pollination. Photograph: USDA-ARS, Bart Smith.

- The pollination of California's almonds is the largest annual managed pollination event in the world, with close to one million hives (nearly half of all beehives in the USA) being trucked in February to the almond groves.
- Much of the pollination is managed by pollination brokers, who contract with migratory beekeepers from at least 49 states for the event.
- Every year around Valentine's Day millions of almond trees begin to bloom in an expanse of more than 800,000 acres

Loading and Transporting of Bee colonies



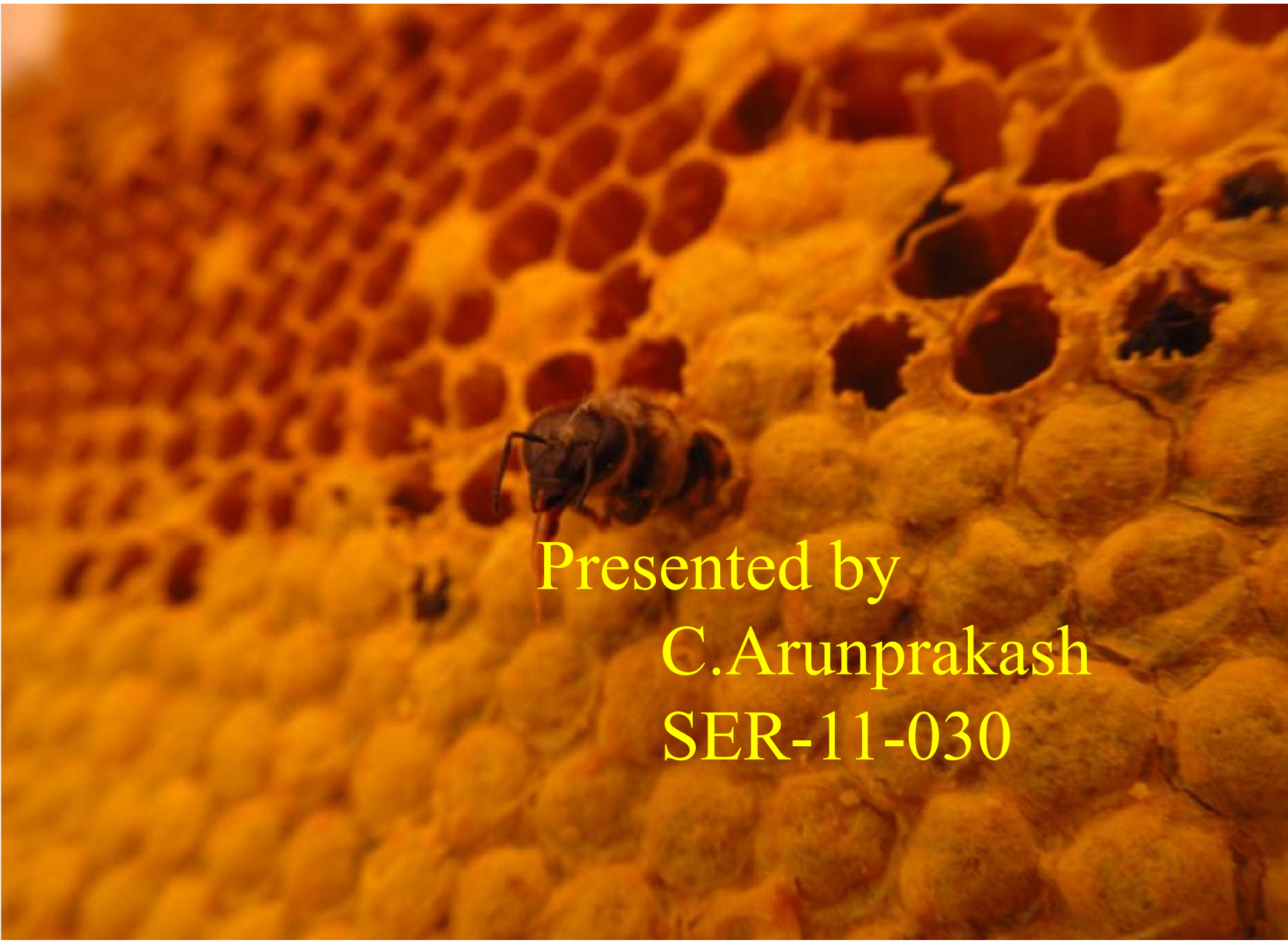




- Today, many beekeepers make at least half of their annual income not from selling honey, but rather from renting their hives to farmers to pollinate crops nationwide.
- In the past 10 years, many American beekeepers have lost between 30 and 60 percent or more of their hives each winter.
- Some researchers and beekeepers have argued that migratory beekeeping is one of the primary reasons that so many bees die each winter as well as an explanation for colony collapse disorder (CCD).



Thank you



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