

## BEE DISEASES . . .

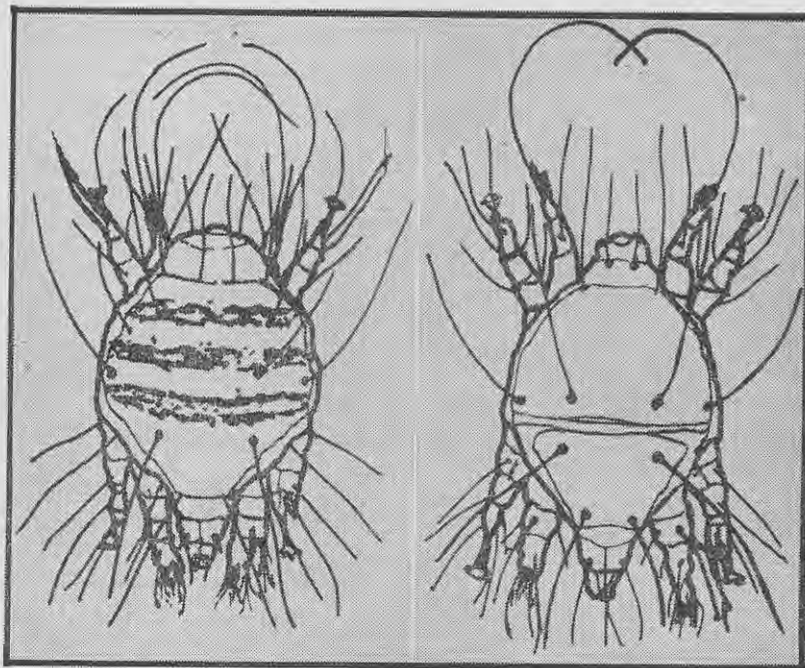
sulphapyridine (5 grammes), phenamidine (4 grammes), stilbamidine (.75 gramme), and pentamidine (.25 gramme). None of these drugs has shown any promise, but the work will continue.

### *Malpighamoeba mellifica prell*

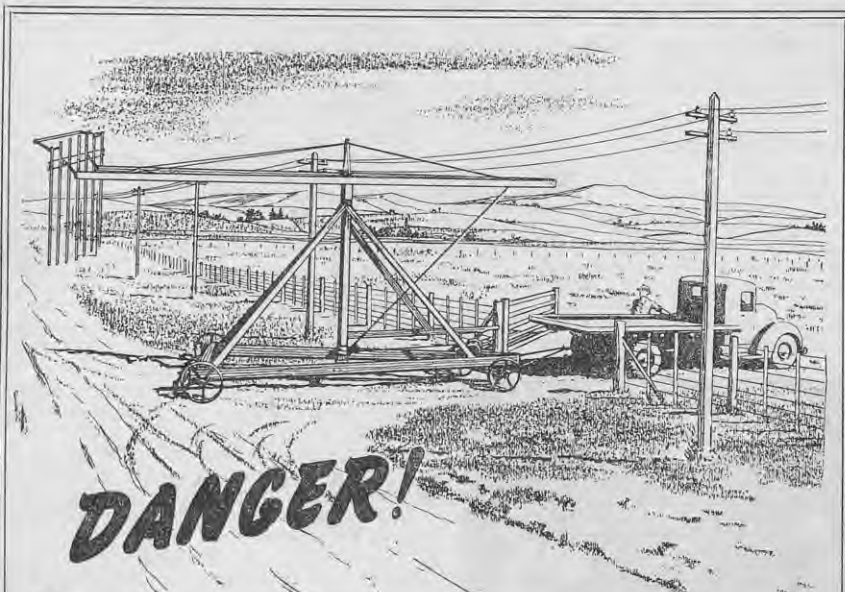
A disease affecting adult bees, *Malpighamoeba mellifica prell* is often associated with *Nosema*, but so far only one infected hive has been found in New Zealand (in August, 1948), though hundreds of bees have been examined for it. It is caused by a microscopic amoeba which destroys the cells in the malpighian tubules. It does not usually cause severe losses of bees and is regarded as of minor importance.

### Poisoning of Bees

Though poisoning is not a disease, it is mentioned because it can cause heavy mortality among bees. Usually it is caused by arsenic contained in lead arsenate used as a fruit tree spray. A serious blow to the industry, involving the loss of hundreds of hives, recently resulted in the Hawkes Bay area through the careless use of this spray. Apart from loss of field bees, pollen may be contaminated and may poison the brood.



Male (left) and female *Acarapis woodi*, much magnified. [After Hirst.]



**T**HE greatest care possible must be taken that nothing touches any electric power line. It is not necessary to know the difference between the various types of electric lines—all are dangerous and contact with any may cause fatality. It is important that farmers particularly should be aware of the danger because, as reports of accidents show, it is in connection with the movement of farm machinery that fatal contacts with power lines occur all too frequently.

Farmers should make certain that no farm implement whether stationary or when being moved can touch electric lines. Before moving a stacker the jib should be lowered, and similar action should be taken with the upward projecting part of any other implement before it is shifted.

When repairing buildings farmers should keep clear of all electric lines and they should not hesitate to ask a supply authority to make its lines dead if work is to be done near the point where lines are attached to buildings.

Farmers should report anything unusual about electric lines or installations on the farm, or even the lines on the road. When any part of the installation becomes faulty it should be repaired by an electrician.

The lethal dose of arsenic for a bee is about .00005 milligram. One ounce of lead arsenate is sufficient to kill 120,000,000 bees

Diagnosis is carried out at Wallaceville, a large sample of bees (at least 500) being required.

### Isle of Wight or Acarine Disease

Fortunately unknown in New Zealand, Australia, Canada, or America, Isle of Wight disease or acarine disease is one of the most deadly bee diseases known in Europe and England, where it causes great losses. It is caused by a small mite *Acarapis woodi*, which enters the tracheae of adult bees through the prothoracic spiracles and weakens its hosts by feeding on their juices.

Now that air transport is available there is danger that Isle of Wight disease could enter New Zealand with imported queen bees. However, the Apiaries Regulations 1948, made under the Apiaries Act 1927, give power to prohibit the importation of bees except under certain conditions. The Department of Agriculture would not grant permits to import bees from any country or State where acarine disease of honey bees is known to exist, and any bees introduced without a permit may be seized and destroyed. In addition, queen bees which arrive from such countries must first pass through Wallaceville laboratory, where their escort bees are examined for Isle of Wight disease before the queens are dispatched to the apiarist who ordered them. If all escort bees are free from the disease, the queen is transferred to a new cage and provided with fresh escort bees before she leaves the laboratory. This eliminates the risk of the disease being brought to New Zealand.