# FARMING INSECTS

Jack and Sue Hasenpusch live in the lowland rainforest of the wet tropics where they farm insects on their 32 hectare property. They did not have to cut down one tree or alter their rainforest in any way to establish their farm where they raise butterflies, moths, beetles and stick insects. Their house, laboratory and shade houses are surrounded by a small area of lawn. Beyond is the rainforest full of vines, tall trees, palms, gingers and ferns. At certain times of the year the air is heavy with the scent of flowering trees and shrubs. On other occasions they may be covered in brightly coloured fruits. Birds, including the cassowary, as well as insects frequent the garden.

Jack, spent a large part of his childhood in the rainforest of New Guinea. He spent as much of his time as he could in the bush where he was drawn to the plant and animal life, especially the insects. When the time came to return to Australia, he found that the wet tropics were most like New Guinea, so that is where he settled. His wife sue readily adapted to the rain and the insect and also became absorbed by the wonders of the forest. Neither can think of living anywhere else now.

But how and what do they farm? The benches and shelves of their laboratory are covered with containers full of leaves and on these leaves feed countless caterpillars. Each species needs it s own special food plant for its caterpillars. The baby stick insects, which have just hatched and look more like pieces of curled over leaf than sticks, are less fussy. They will east almost any leaf. Keeping up with these appetites is the insect farmers' biggest job. Jack says: "I was told when I started that if you think you have enough food plants for your caterpillars, double it, then triple it and you might be close". Luckily the fertile soil, the high rainfall and the warm climate make the plants grow fast.

Once the caterpillars change into their dormant stage and become pupae, a selection of them are hung in a special cage. When they break their pupal cases and unfold their wings, they will be transferred into a huge walk-through flight cage. This is the breeding stock. Here the butterflies feed on a special liquid food and mate. Soon the females will lay their eggs on the plants provided. These are then harvested and the whole process begins anew.

One of the problems of being an insect farmer, Sue says, is that like nearly all farmers you are bound to your livestock seven days a week from sunup to sunset.

Still they have time to roam over their own rainforest to look for insects with their son Paul. He too has become keen and knowledgeable about insects and is quite competitive with his father when it comes to catch them. They search for all kinds of insects but especially beetles. Beetles are the other half of the farm.

Containers with beetle larvae fill shelf upon shelf in the laboratory. The larvae do not need constant feeding. They are mostly white grubs burrowed into masses of damp decaying

wood. Jack does find a few containers with newly emerged beetles. He digs our several large stag beetles.

Jack and Paul have found many new kinds of beetles, stick insects, spiders, katydids and cicada. These and others they send to entomologist in museums and universities and so supply insects to science. Museums also draw on their expertise to supply them with live insects for educational displays.

Another aspect of the farm is the many visiting film crews world-wide. Summer time can be very busy, not only are the insects active so are the cameras. Currently, Animal Planet are on location at the farm, working with Paul who presents the insect world of North Queensland.