



Butterfly Farming

A cool and conservation conscious way to raise butterflies

In the last decade or so there has been a revival in the interest of the smaller creatures that inhabit our planet and their importance to the health of our environment. A number of zoos, botanic gardens and museums have recently devoted exhibits to display live butterflies that have been farmed in various areas of the tropics. The Butterfly Pavilion was the first stand alone invertebrate zoo in the United States and has been open to the public since July of 1995. The mission of the Butterfly Pavilion is “to foster an appreciation of butterflies and other invertebrates, and to educate the public about the need for conservation of threatened habitats in the tropics and around the world.” We accomplish this through educational classes and lectures as well as live displays of arthropods from around the world. The process of acquiring the butterfly pupae and displaying them is an art form unto itself.

Any facility that wishes to display non-native Lepidoptera (butterflies or moths) must follow the guidelines set aside by the USDA for containment of the displayed organisms. The process of acquiring chrysalises starts with contacting the proprietors of butterfly farms from around the world and getting copies of the list of species they breed. The facility then must apply for permission to import and display any species not native to their area.

We import all of our butterflies from sustainable butterfly farms. These commercial enterprises initially acquire breeding stock from the wild, but once they have gotten their breeding programs going, they usually do not require any more collecting. A number of suppliers will occasionally collect individuals from the wild to augment their gene pool and almost all deliberately release excess stock back into the wild to help keep the surrounding gene pool diverse and healthy. Butterfly farming is a win-win scenario with the breeders needing intact rainforest around their breeding facilities for host plants and new candidates for breeding programs. Butterfly breeders supply local people with an alternative to slash and burn farming practices and the amount that they receive from the sale of their stock greatly increases their yearly income.

The Butterfly Pavilion receives standing orders of pupae from the following countries: USA (Florida), El Salvador, Costa Rica, Ecuador, Surinam, Kenya, Malaysia, the Philippines, and Australia. We are in the process of setting up an account with a supplier from Tanzania. Since it is our desire to display over 1200 free-flying butterflies at any time we must import about 600 pupae/week during non-peak visitation periods and 1200/week during peak periods. The shipment must go through a designated port of entry into the United States, be inspected by US customs agents and hopefully arrive at the Pavilion within 10 days (before the pupa emerge).

Though each supplier has their own methods of sending the pupae, most chrysalis shipments are packed in layers of cotton inside a plastic or wooden box and sometimes in a second box for protection from extreme temperatures. One breeder actually places a heat pack in shipments that are sent during winter months. Pupae are unpacked in a contained area (the chrysalis room) and sorted to species.

The chrysalises are then glued to strings that are pinned on corkboards. We use silicon glue for attaching them, as this substance does not seem to harm the developing insect. Pupae are then labeled with the supplier, species name, date of receipt, and number of specimens on the board. The pupae begin emerging within a week of arrival but can continue emerging for a couple of weeks. Data is gathered when over 70% of the pupae on a board have emerged. This data is entered on a spreadsheet and at the end of the year a complete report of the pupae received is sent to the federal USDA for their records.

The USDA also requires that the spent pupae, diseased pupae and packing materials must be autoclaved regularly. This is done so that there is little potential for new disease organisms getting established in the United States and moving over to native species. Autoclaving, or pressure cooking, at high temperatures will destroy any potential parasitoids and diseases. Once properly sterilized, the shipment debris can be disposed of.