

## Large Blue Butterfly re-introduced into North Cornwall

(pictures and text by Malcolm Lee)

The Large Blue butterfly (*Maculinea arion*) has a very specialised life cycle. The larvae initially feed on thyme flowers, but after a few weeks they fall off the thyme plants and are adopted by a particular species of ant, *Myrmica sabuleti*. They spend the rest of their larval stage in the ant nest, feeding on the ant's own larvae, to emerge as adult butterflies in late June.

Formerly widespread on the south facing Atlantic coastal valley slopes of Cornwall and Devon, from the Camel estuary to Clovelly, the Large Blue became extinct here in 1975, and in the UK (on Dartmoor) in 1979. The principal reason for the extinction is the loss of the habitat of *Myrmica sabuleti*, which can only survive in the shortest turf (less than 2cms) of warm south facing slopes. In former times the turf was kept short by farm animals and regular burning (a procedure known as swaling). Changes in farming practices led to the removal of domesticated animals, and swaling ceased. Initially, rabbits were still there to keep the turf short, but the advent of myxomatosis in the late 1950s removed this last grazing pressure. The grass grew and, within a few years, the ant disappeared along with the Large Blue.

As a result of work carried out at the Institute of Terrestrial Ecology by Dr Jeremy Thomas and Dr Dave Simcox, the habitat at the last UK site was returned to a suitable state and the Large Blue was reintroduced in 1983, using stock from Sweden. Butterfly numbers at this initial site have increased year on year, enabling re-introductions to take place at several former UK sites where suitable management regimes are in place to maintain short turf for the ant.

After much hard work over the last five years by Derek Lord and his team at the National Trust, the first site in Cornwall was declared suitable for re-introduction this year. On 27th June, 10 egg laying females and 2 males were released, and eggs were soon found on the thyme plants. Up to 200 captive bred larvae will also be released this summer. With around 25% survival rate, over 50 butterflies may fly in 2001. If all goes well, this will form a self-sustaining colony in future years, perhaps enabling other suitable sites to be re-populated. The following pictures were all taken on 19th July 2000.



Adrian Spalding (Secretary Large Blue Committee), holding the box with the larva, and Lee Slaughter (Chairman Cornwall Butterfly Conservation), with Dave Simcox (Institute of Terrestrial Ecology) making final preparations at the release site for the first Large Blue larva. The water sprayer is to moisten the release area, creating suitable conditions for the larva.





*The tiny (3mm) fourth instar Large Blue larva in its box (left), and close up (right).*



*Dave Simcox about to release the first larva. The ant nest can rarely support more than one larva, so each release area is marked with a stick to ensure that they are well spread around the site.*



*"Keep a very close eye on it" said Dave!!*





*Dave Land (Devon Butterfly Conservation) filming the adoption of the larva.*



*Large Blue larva wandering along the ground.*



*Larva found by Myrmica sabuleti ant, which is licking off the secreted honeydew before carrying it off to its nest.*