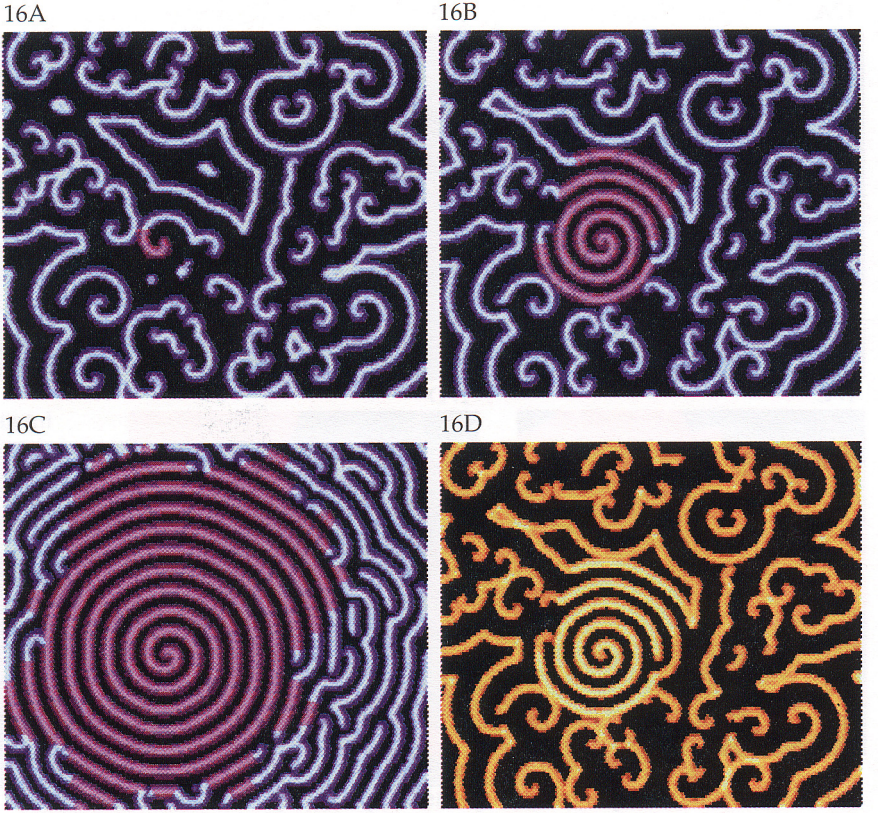

Plate 16. Spiral selection for a mutant parasitoid with reduced efficiency. **A)** Introduction of the mutant in a stable spiral pattern. This pattern was obtained starting from 50 clusters of 15 by 15 patches with 10 hosts and 100 clusters of 15 by 15 patches with 500 parasitoids, randomly located in an otherwise empty field of 150 by 150 patches. Parameter values are: λ=2; $\alpha_{\text{wild type}}$=0.5; α_{mutant}=0.25; μ_N=0.6; and μ_P=0.06. If the host population size in a patch drops below 1.0, the local host population is regarded as extinct (extinction is computed after dispersal). Local extinction of the host will automatically lead to local extinction of the parasitoid in the next generation (table 1A). We opt for a relatively low parasitoid dispersal, because a high dispersal would lead to global extinction of the host (as in Pimental *et al.* 1963; Sabelis *et al.* 1991). The wild-type parasitoids are shown in blue and the mutant parasitoids in pink. Brightness of colour corresponds to abundance. **B)** After 100 time steps the spiral with the mutant parasitoids has expanded its domain. This spiral rotates faster, which is reflected by the smaller distance between successive waves. **C)** After 500 time steps the field is completely dominated by the spiral with the mutants. The centres of the other spirals slowly drift towards the boundaries of the field (boundary conditions are reflectionary). **D)** Host numbers after 100 time steps. The spiral with the mutant parasitoids has an increased host density.