GENETIC DRIFT CONTROLS

Natural populations vary in size. Aside from variations caused by weather, food availability, predators and other environmental changes, natural selection can change a population's average reproductive success, what ecologists call the *intrinsic rate of population increase*. EVOLVE simulates this by setting two parameters.

Carrying Capacity (integer > 10)

Sets maximum population size

Post–crash size (integer > 2, lower than *Carrying Capacity*)

Sets population size if population exceeds carrying capacity

If the number of adults produced in the population exceeds, the *Carrying Capacity*, then the number is randomly reduced to the smaller *Post–Crash Population Size* value. This simulates random mortality, e.g., mortality caused by a population becoming too large for its food supply.

The *Post–crash* value is not a floor; populations can become extinct. If a population's reproduction isn't sufficient to make up for mortality (if *Absolute Fitness* of the majority of a population is less than 1.0, see *Natural Selection* help), the population will decline below the *Post–crash size* and might go extinct.