Mori’s synthetic works on bioactive natural products in general and pheromones in particular started about forty years ago to establish their absolute configurations and also to clarify their stereochemistry-bioactivity relationships. Results indicate that bioactive natural products are not always enantiomerically pure, and the stereochemistry-bioactivity relationships are not simple but complicated. For example, neither (R)- nor (S)-sulcatol, the aggregation pheromone of an ambrosia beetle, is behaviorally bioactive, while their mixture is active. In the case of olean, the sex pheromone of the olive fruit fly, its (R)-isomer is active against the males, and the (S)-isomer activates the females. Recent synthesis of new insect pheromones will be discussed to illustrate the modern methods in enantioselective synthesis.