

### 3-3-9. Are the Summer Fruit Tortrix(*Adoxophyes orana*) and the Smaller Tea Tortrix(*Adoxophyes* sp.) in a Way to Speciation in Korea?

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*Adoxophyes orana* and *Adoxophyes* sp. have not yet been clearly distinguished as a separate species in Korea. But recently, through more information about sex pheromone and ecology of *Adoxophyes*, it may be separated into two *Adoxophyes* species. *A. orana* attacks apple and peach trees in the central and southern part of Korea and *A. sp.* attacks on tea and pear trees in southern part of Korea. Most *A. orana* mated before lights-on but *A. sp.* started to mate immediately after lights-on under 16L:8D photo regime at 26°C. And the concentration of sex pheromone in both species peaked during their own mating period. GC analysis on sex pheromone gland extracts of *A. orana* showed that sex pheromone composition was 95:5 ratio between Z11-14:Ac and Z9-14:Ac but 40:60 in *A. sp.* In field trapping tests, *A. orana* males were mainly attracted to the 95:5 blend between Z11-14:Ac and Z9-14:Ac, but *A. sp.*, to various blends of the two components. In mating choice experiments in laboratory, both species showed tendency to the conspecific mating, although, interspecific matings between males of *A. sp.* and females of *A. orana*, were observed. The sexual isolation between two species seems to be not complete because the progenies obtained from interspecific mating could successfully reproduce. However, in addition to variation in sex pheromone composition, apparent differences in esterase isozymes pattern between the two species imply the isolation of these two species in nature. Therefore it may be a good case for studies on speciation and evolution.