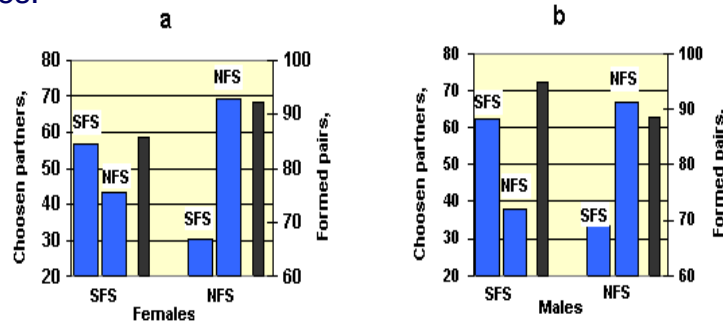


## PECULIARITIES OF SEXUAL BEHAVIOR AND NONRANDOM MATING

The most exciting findings on canyon flies come from sexual behavior experiments. These findings include positive assortative mating, interslope differences in mating propensity, sexual discrimination and reproductive behavior, and slope specificity in the courtship song pattern. No preferences were found when the sexual partners belonged to different isofemale lines from the same slope (Korol et al., 2000).

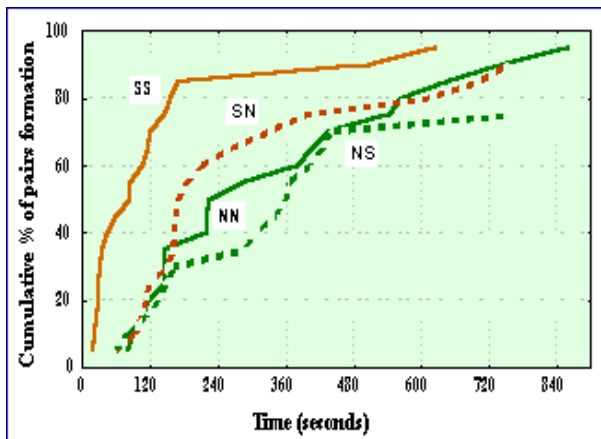
Interslope divergence for a multivariate complex of fitness-related traits and habitat choice led us to hypothesize additional behavioral mechanisms resulting in nonrandom mating and limiting recombinational reshuffling of the slope-specific trait complexes.

Results of mate choice tests: (a) female, (b) male choice. Proportions of pairs resulting from same- and other-slope choice: black columns represent the percent of formed pairs.

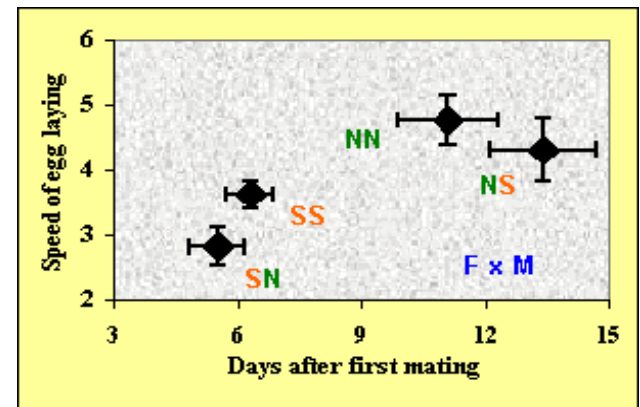


Relationship between time of egg laying and remating in females mated by same-slope and other-slope males (Iliadi et al., 2001).

### Mating speed for single pairs of flies (expressed as cumulative percentage of copulating pairs)



Results on sexual behavior tests demonstrated positive assortative mating, interslope differences in various elements of sexual behavior, and slope-specificity in the courtship song pattern. A significant preference of sexual partners originating from the same slope was detected in tests with slope-specific synthetic populations.



The first letter stands for female's origin, the second - for male's origin. N - from NFS; S - from SFS. The mating combinations are couple-grouped according to the females' origin