**AFTER**

Both univariate and multivariate analyses indicated that bridge and culvert variables and habitat characteristics distinguished red-rumped swallow nest sites from random sites. Bridges with up to four culverts were recorded. In total, approximately 72% of the nests were observed at bridges with a single culvert. This was a significant contrast compared with the random sites that had approximately 87.5% of bridges with two and three culverts. However, out of the many culverts at the nest sites, only one bird pair used only one culvert for nesting, and the remaining culverts were empty. This phenomenon may be due to the desire to avoid inter-specific competition for nesting and to reduce the chances of attracting predators.

The culvert lengths at the nest sites were significantly longer than at random sites. Of all of the recorded culverts with various lengths (5.5 m - 10 m), the red-rumped swallows preferred to construct their nests in front (within 0.93 m to 4 m) of culvert openings. This finding suggests that the nests near culvert openings provide appropriate light and temperatures, minimize energy cost for collecting nest materials, and allow adults to quickly enter and leave the nest. Typically, the temperature inside culverts (at 12 nest sites) is two to three degrees higher than that of the atmosphere. Further research is required to examine the importance of the internal environment (temperature, light, humidity and wind) for the selection of nest sites.

Hirundinidae’s selection of a breeding habitat is significantly influenced by the food supply (Bryant & Turner 1982; Murgai 2002; Kang 2012). Turner (1982) reported that food availability is the major factor that controls the distribution and breeding habitat selection by house martins, *Delichon urbica*. Our results are in agreement with these findings. In the study area, the nest sites were more frequently located near cultivated lands (80% of the nest sites were within 30 m). However, 41% of the habitats around the nest sites were cultivated lands. This is an important factor because the red-rumped swallow is a species that responds to the foraging site distance when feeding nestlings.