**METHODS**

In this study, PCA was used to evaluate PCB congener profiles in tree swallow (Tachycineta bicolor) and house wren (Troglodytes aedon) tissues and dietary items collected at the Fort Custer reference site and at the Kalamazoo River Superfund site (Figure 2). Samples were Soxhlet extracted, cleaned, digested by GC-EC, and results were compiled on a congener-specific basis. Each sample was analyzed for 14 congeners, including several co-eluting homologue groups.

**RESULTS**

The study examined the role of selective accumulation and metabolism of PCBs in passerine species. By comparing the profile composition of co-eluting dietary items and tissues, we assessed the importance of identifying profile composition differences among trophic levels. We observed that >70% of the variation in sample across life stages and diets could be explained by 3 factors, with >40% of the variation described by hexa- and hepta- homologue groups. Patterns of PCBs among trophic levels were not consistent, with the aquatic pathway and diet affecting patterns associated with the aquatic exposure route. The study examined the role of selective accumulation and metabolism of PCBs in passerine species. By comparing the profile composition of co-eluting dietary items and tissues, we assessed the importance of identifying profile composition differences among trophic levels. We observed that >70% of the variation in sample across life stages and diets could be explained by 3 factors, with >40% of the variation described by hexa- and hepta- homologue groups. Patterns of PCBs among trophic levels were not consistent, with the aquatic pathway and diet affecting patterns associated with the aquatic exposure route.

**CONCLUSIONS**

The study found that >70% of the variation in sample across life stages and diets could be explained by 3 factors, with >40% of the variation described by hexa- and hepta- homologue groups. Patterns of PCBs among trophic levels were not consistent, with the aquatic pathway and diet affecting patterns associated with the aquatic exposure route.