

Bird species composition and feeding guilds based on point count and mist netting methods at the Paya Indah Wetland Reserve, Peninsular Malaysia.

ABSTRACT

A comparison study was conducted to determine the bird species composition, relative abundance, species diversity and feeding guilds based on point count and mist netting at the Paya Indah Wetland Reserve, Peninsular Malaysia. A total of 13872 bird observations belonging to 100 species and 38 families were recorded using the point count method over 15 consecutive months, and a total of 1478 bird individuals belong to 65 species and 33 families were captured using the mist netting method over 1260 netting hours. The results showed that *Treron vernans* (1723 observations; 12.42%) was the most abundant bird species using the point count method, whereas *Pycnonotus goiavier* (378 individuals; 25.64%) was the most abundant bird species using the mist netting method. The Ardeidae (9 species; 23.68%) was the most dominant family using the point count method, but the Rallidae (6 species; 18.18%) was the most dominant family using the mist netting method. The point count method produced higher species diversity (Shannon's $N1 = 31.22$) and richness (Margalef's $R1 = 10.42$) than mist netting, whereas the mist netting method produced higher species evenness (McIntosh's $E = 0.86$) than the point count method. Insectivores, comprised of arboreal foliage and bark gleaners and sallying and terrestrial foragers, were found to be the most dominant feeding guild using both methods (point count = 35% and mist netting = 40%). In contrast, Carnivore/Insectivore was the rarest feeding guild found using the point count method (2%), and Carnivore and Nectarivore/Insectivore were the rarest feeding guilds found using the mist netting method (3.08%). These findings indicate that the point count method is more efficient and produces better results than the mist netting method.

Keyword: Distance sampling; Mist netting; Species abundance; Diversity; Feeding guild.