TD 4: The Birds

The sampling methods for each type of bird are related to its habitat (forest, open areas, freshwater, marine water, cliffs...).

1. Forest birds:

Forest birds have small wingspans (the passerines); which gives them

allow easy access into the forest.

a) Progressive Frequency Sampling (P.F.S.):

* The method of progressive frequency sampling (P.F.S) is well suited for fragmented forest environments.

* The experimenter must have a good knowledge of birds, particularly their vocalizations (songs and calls). For a bird enthusiast, this method is very practical due to its ease of use and does not require any special preparation in the field.

* The recordings will be made early in the morning and under the best possible weather conditions (no rain and strong winds).

* We record the presence/absence of all species heard and seen during each 20-minute listening session.

* Listening Points method allows for contacting diurnal singing birds, particularly passerines, but it is less suitable for raptors and nocturnal birds.

b) Point Abundance Indices (P.A.I.):

- The I.P.A. method consists of semi-quantitative inventories.

- It is a relative method.

- It consists of noting, at fixed listening points, all visual and auditory contacts obtained with the birds during two visits, one at the beginning (early breeders = between March 25 and April 30) and the other at the end of spring (late breeders = between May 8 and June 20).

- These listening points are marked on the ground by markers (metal stakes, for example) to help with their location.

- The surveys must be conducted on similar dates each year and, if possible, involve the same observer.

- Observations must be conducted very early in the morning, within 3 to 4 hours after sunrise and under favorable weather conditions (avoid cold, strong wind, heavy rain, fog).

- The observation duration at each listening point is fixed at 20 minutes.

- Each individual should only be counted once.

- The observations made are conventionally translated into breeding pairs according to the following equivalence: one bird seen or heard calling counts as 0.5 pairs. A singing male: 1 pair. A building bird: 1 pair. A family group, an occupied nest: 1 couple

c) The method of grid plans:

* The quadrature method is described as an absolute method; it is quite precise.

* It involves delineating a plot in a representative area of the environment to be studied during the breeding season and surveying it multiple times to count the nesting birds.

* She is more precise than the two previous methods.

* This method allows for obtaining species densities per unit area (by convention expressed in pairs per 10 hectares).

* The area of the census plot should be between 40 and 100 hectares in an open environment, or between 10 and 30 hectares in a closed environment, depending on the number of species studied and their respective abundance.

* It requires a lot of preparation work, which involves placing markers inside the plot according to a plan or grid (to find one's way and orient oneself).

* It is time-consuming.

* It requires several surveys (or censuses) during the nesting season to account for the majority of nesting species.

* For each contact with a bird, a breeding index will be assigned, according to three classes:

1) Certain indicators: nest construction and/or material transport, adult alarm, feeding of young, discovered nest, observation of non-fledgling immatures.

2) Probable indicators: observation of a couple, display of a single male or a couple, mating, song, interaction or pursuit between males.

3) Possible indices: observation of an individual of a species.