

PROTOCOL FOR PRIMATE SURVEYS IN GRIDS AND MODULES PPBIO

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Why monitor Primates?

Primates are often included in biodiversity surveys because they have a lot of appeal to the general public. Additionally, some species have a restricted distribution and are sensitive to human impact such as hunting, deforestation and logging.

How is RAPELD structured?

The RAPELD grids and modules are a system of permanent standardized plots and trails Grating Modules RAPELD are trails systems and standardized permanent plots. The map shows a grid where lines represent trails, which are usually 5 km in length and 1km apart.

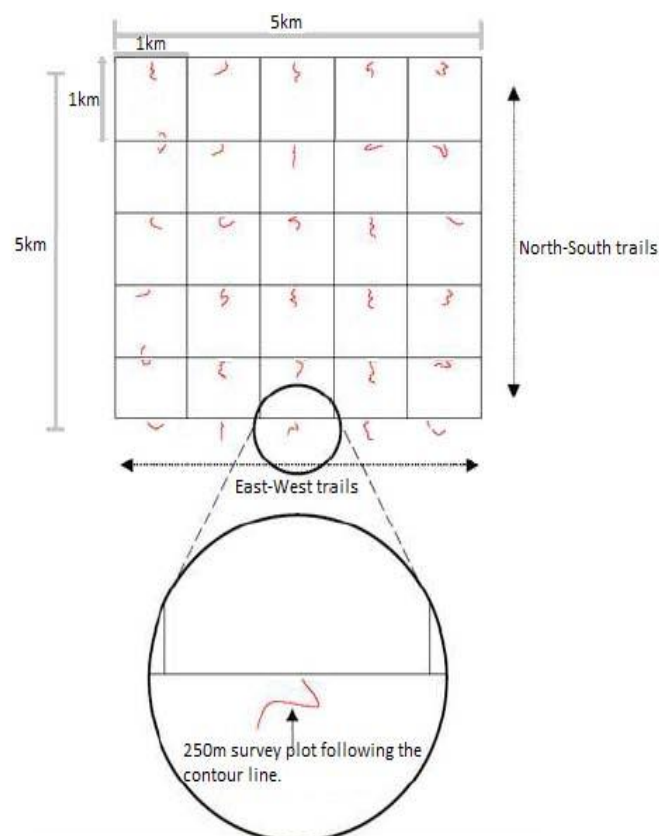


Figure 1 - Illustration of a RAPELD grid.

The trails are marked with a picket every 50 meters with the trail name and distance along the trail (Figure 2).



Figure 2: Example of a trail Figure 3: Example of a picket tag marked out by pickets. showing the trail name and distance along the trail (3000m).

Images: Julio Vale

The RAPELD system has several types of permanent plots, however for primate surveys the 5km trails are used as Transect Lines.

Sampling.

Primates need to be sampled in line transects, because they are difficult to find in small patches of forest (such as on the 250m permanent plots). Transects need to be linear, because the tracks made by hunters and others who use the forest's resources, avoid the more difficult routes and do not include all the different types of forest environment.

The line transect method is a good way to sample primates, because they are arboreal and difficult to register using other methods (tracks, feces, camera traps). Using this line transects it is possible to sample other medium and large mammals, as well as birds of Cracidae family, which are large birds. However, sampling is more efficient when restricted to only one target group.

Before leaving for the field check that you have the field worksheets necessary to record data (available on the site <http://ppbio.inpa.gov.br/Port/dadosinvent/>). It include:

- Metadata tables that describe information about the time, location and people involved in the work.
- The datasheets where you record the data on primates.
- You should always take to field a map grid or module to be sampled. Check out the maps of your site in PPBio site (<http://ppbio.inpa.gov.br>) or your project site.

Before going to the field, it is important to do a good literature search using species distribution maps to familiarize yourself with the species most likely to be found, together with guides species and scientific papers

containing plates. IT IS important to note the features that will be used to differentiate species within the same genus.

To survey of primates you must have the following materials:

- A 50 meter tape measure.
- Binocular
- Head Flashlight (to get to the beginning of the trail, because you should start sampling around 6:00 am).
- Hammock of lightweight material for use during the interval between the transect sample 1 and 2.
- Pencil, eraser, sharpener, clipboard, plastic bags to protect clipboard and worksheets.
- Clothing should be chosen to blend in with your surroundings. e.g. dark greens and browns would be good.

Now we are ready to start our field survey. The survey can be done by one person, but it is much safer and more efficient to work in pairs. Only one person can be the observer, if the recorder encounters an animal, it can be registered separately on the worksheet, but should not be communicated to the observer.


The method used to survey primates in RAPELD systems is by actively searching, visually and acoustically. Although primate species may be detected by sound only those that have been seen may be recorded on the data sheet.

Before starting the survey, we recommend that the trails are walked first as this can make the subsequent survey more efficient. However this procedure requires more time in the field and increases costs. If this preview is carried out, it should be recorded on the metadata sheet. Primate surveys begin around 6:00 am, or as soon as there is good visibility.

Protocol for Primate RAPELD surveys on PPBio modules

The survey starts on the zero picket for each trail. The recorder and observer both walk silently and unobtrusively at a constant speed of around 1 Km / h until the end of the 5 km trail. Pay close attention to any noise or movement on both sides of the track. It is important to stop every 15 to 20 meters as it is easier to see the animals.

When viewing an individual or group, you must stop to write down the time, species, number of individuals and sex. All animals sighted must be recorded in the field sheet. Each animal sighted or heard must have its position along the trail recorded and the perpendicular (shortest) distance from the trail to animal to be recorded must be measured with the tape measure (Figure 3). You can use a GPS to geo-reference the point on the trail, but you do not need to measure the distance along the trail with the tape, this should be measured from the nearest picket.

For analysis by “Distance  ” it's recommended that the distance from the track to the

first individual to be **detected** is recorded. Some researchers use the distance to the center of the group and others measure the distance from the nearest individual to the trail. We recommend recording all three measurement in order to allow comparisons with other studies.

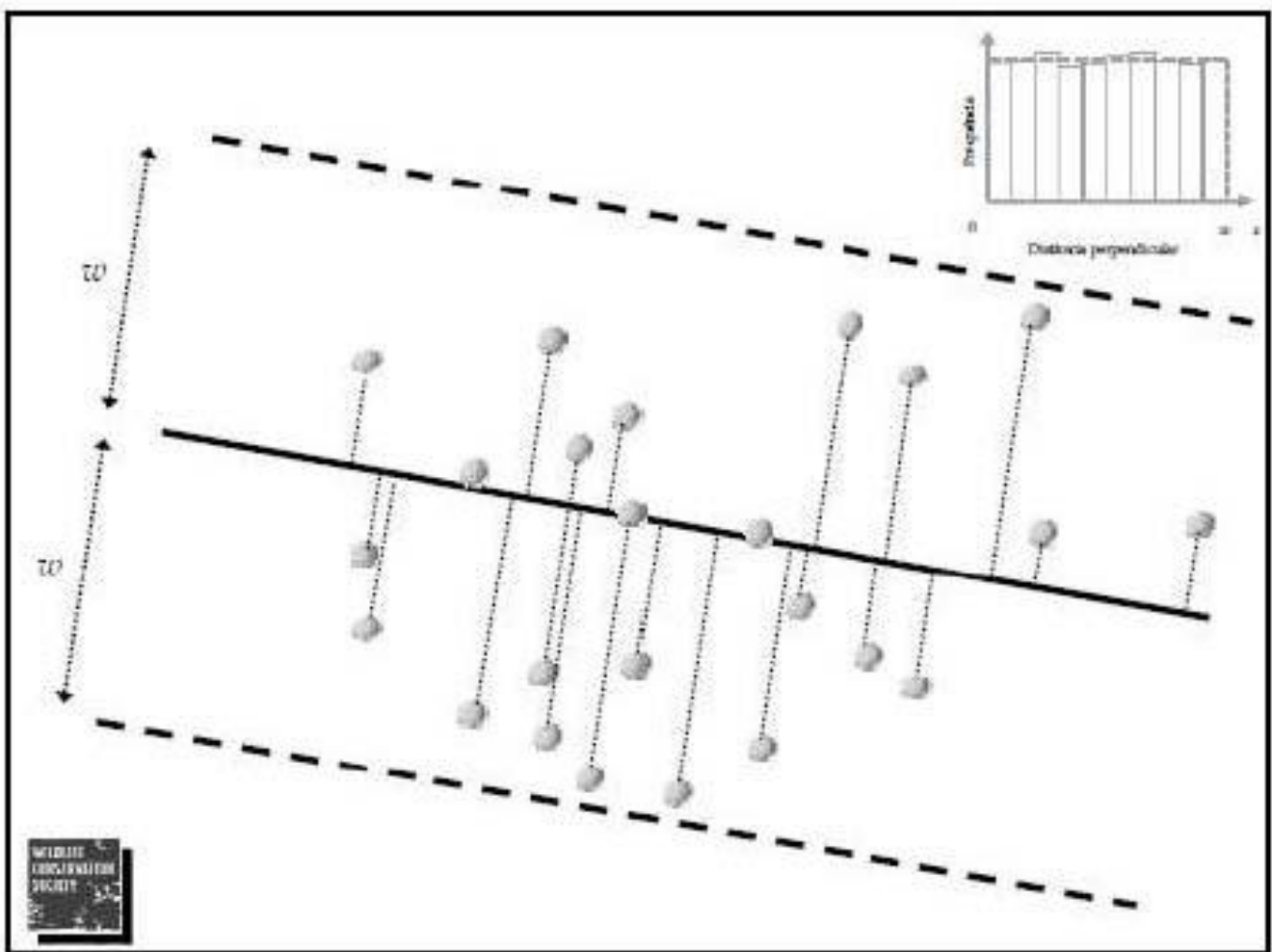


Figure 3 – Illustration showing the perpendicular distance to the individual observed. (Source: WCS)

When you see primates, it is important make a note of the tree(s) where they are. When you go to measure the perpendicular distance they will almost always have dispersed.

When you get to 5000m it should be around 10 to 11h. A rest is recommended because monkeys are not normally active during the middle part of the day. You should calculate the best time to recommence the survey on the parallel trail in order to finish at around 6pm, or when light levels are no longer adequate for

surveying.

Primate surveys should not be done during the rain because these animals are inactive and there is poor visibility. If it starts to rain during the survey, make a note of the time and interrupt the survey. If the rains stops within 30 minutes, note this on the worksheet and recommence. If the rain does not stop, the survey should be discontinued.

Note:

1 - Individuals present just above the track need to be registered, so it is necessary to ensure that animals are not scared away. 2 - The method relies on accurate measurements, thus the distances should never be estimated. Care must be taken to register individuals at the position where they were at the time of detection and not after they begin to flee. 3 - The line transect is a plot of varying width, so confidence in density estimates depend upon the number of different trails surveyed more than repeats of the same trail.

Congratulations! Now you have collected useful data for assessing change at your site, or for making comparisons with other sites.

However, remember to deposit your data on to public databases to make them more accessible, optimizing your efforts in the field.