



**CAMINOS AMIGABLES
CON LOS FELINOS**



I Progress Report

Finding evidence of 70 years of road impact on wildlife, Route 2 Interamericana
Sur-Costa Rica.



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Period covered: November 2020 to March 2021

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A. A description of work conducted.

Activities

1. *I Exploration field trip* (January 25-27) We visited different sites to determine the best accommodation, we marked reference points, we made the Route 2 track, we registered culverts, we did a daytime road survey test and we installed 3 camera traps in RE Mosqueritos Ecological Refuge to identify points to install the high definition cameras.
2. *II Exploration field trip* (February 15-18) Inventory of culverts / Inventory of canopy connectivity points over the route / Tracks of access roads to install camera traps / Night road survey test / Removal of carcasses from the road / Check of camera traps / Collection of genetic samples
3. *Presentation of the Project* (March 8) Presentation of the Project, survey and video to upload data to INaturalist
4. *I Road Survey* (March 8-12) Road survey by car of route 3 during the day and 3 at night / Walking tours 2 during the day of a random km / Taking data of speed, noise and number of cars



5. *I Camera trap setup* (March 15-26) Installation of canopy , culvert and forest floor cameras- Systematization of field data- Finalize culvert inventory- Cleaning of 20 culverts- Visit of James Campbell (writer) and CONAVI Engineers.

B. An evaluation of the impact and results of work undertaken and an assessment of progress that has been made in meeting stated goals, together with any problems that have arisen with a description of measures that have or will be put in place to address them.

Impact and Results

A total of 176 roadkills of wildlife registered on 48 km of Route 2 from January to March

1. *I Exploration field trip.* In the daytime road survey test we found a squirrel, two mice, 5 birds, a rabbit, an armadillo and a weasel road killed (**total 11**). We identify tapir tracks and a bathing area in Mosqueritos Ecological Refuge (MER). We received lodging for free in

MER, but there is no electricity and it is too cold. We bought equipment to overcome the lack of electricity.



2. *II Exploration field trip.* Number of wildlife roadkills: **35**. Number of canopy connectivity points on the route: 10 / Number of artificial canopy connectivity opportunities (hoses): 3. Number of km done of Route 2 Culvert Inventory: 24 (km 99 to 75) - Number of identified culverts: 109 (60 of them blocked). We asked CONAVI to clean the culverts but they do not have budget for this year. Therefore, we decided to clean the ones that can be used by wildlife for setting the camera traps. There is just a small chance of natural connectivity for arboreal species, concentrated in a few km of the study area. Summary of Daily Transit Average, provided by MOPT January 5, 2021: 3,500 vehicles per day - Average speed 45 km/h - Maximum speed 122 km / h. We have found a lot of trash on the side of the road; we are planning to invite a group of volunteers to do a Cleaning Campaign. Cars break speed limit and do prohibit overtaking constantly, we emphasize on security measures during the work on the road.
3. *Presentation of the Project* 19 participants from: SINAC, QUERC, VAVS, ULatina, Lanamme-UCR, Western Transportation Institute-Montana University, Estudiante de Francia y Estudiante de España.
4. *I Road Survey.* **41 Roadkills** and 3 sightings (two tapirs on the road and an owl)
5. *I Camera trap setup.* We set up 10 cameras on the canopy, 20 on culverts and 18 on the forest floor. The car electric system failed so we need to use staff cars (no 4WDrive). It took a week for the car to be repaired by a local mechanic. The 24 km pending culvert inventory are covered. From km 75 to 51, 82 culverts are registered. It ends with a total of approximately 191 culverts in 48km of the study area at Route 2. From all of them just 2 have the size for a tapir undercrossing, but their entrance is not accessible (canyon and waterfall). So there is no option of safe crossing for tapirs on Route 2. We identified a cattle

crossing at Trinidad and asked the engineers of CONAVI to estimate the cost and time of implementation of the structure, because it is a great example of safe crossing structure for tapirs and many other species. **Total in a 24 km walk (during drainage inventory) we registered 89 wildlife roadkills and 3 sightings (1 tapir-2 quetzals).**



C. A description and explanation of any changes in the nature, methodology, and/or objectives as presented in the initial grant request.

-We identify during the culvert inventory that many bird roadkill's were found on the side of the road, not on the road surface. So we are including to the Road Survey Methods a walking road segment of 1km.

-We planned to setup 50 camera traps on the forest floor, but we are reducing the amount to 25 cameras. Access to proposed camera sites is very difficult and the lack of the 4WDrive car delayed the camera trap set up. It took 9 days to setup just 18 camera traps on the forest floor.

