ECOLOGICAL REPORT

SEPTEMBER 2017
ITA-INKATERRA ASOCIACIÓN

Trogon collaris – Collared Trogon

I.   Project: Trap Cameras – PhotoTrapping

1.1 Responsible: Jan Brack Faura
1.2 Objectives: Monitoring and registration of wildlife composition in areas and concessions of Inkaterra.

1.3 Developed activities

In this month the monitoring was continued in the cocha of Hacienda Concepción specially to register river wolves in until 08/09. Then the cameras were removed and placed in IGFS for the respective monitoring. The cameras were deployed in the collpa manco, palmetum (near the boundary), artificial collpa, behind the bio-garden (bajial) and at the edge of the aguajal.

1.4 Study methodology

o *Equipment:* Three trap cameras were used:
- 04 Cameras Bushnell Trophy Cam HD Aggressor: CAM ITA 05, CAM ITA 06, CAM ITA 007, CAM ITA 08.
- 01 Camera Spypoint solar: CAM ITA 04-solar
- 01 GPS Garmin 64s map
- 01 Camera of photos Canon SX60HS

o *Data collection:* The TCs (trap cameras) were programmed in hybrid mode: photographs and videos, 24 hours a day, infrared light detector, medium level motion sensor. They were placed at a height of 0.4 - 0.5 m from the ground to have images of small animals. The areas of greatest fauna activity were traversed and analyzed for their placement through indirect indications such as footprints, used roads, feeders, eaten fruits, among others.

o *Information analysis:* The data collected were digitized in an Excel spreadsheet, the identification of the species was made based on:
- Book: Birds of Peru
- Field Guides of Field Museum:
        Mammals of the Amarakaeri Comunal Reserve
        Mamíferos grandes del Sudeste de la Amazonía Peruana

1.5 Results

A. Generals: Cocha Concepción - ITHC

The results obtained in the monitoring of fauna with trap cameras in the lake of the ITHC site are exposed, during the month of August - September of 2017. 05 trap cameras have been placed: 04 cameras in the Cocha Concepción and another one in the collpa 02 (wall lick). This report presents the data obtained in 14 days of sampling, equivalent to a sampling effort of 1680 total hours. We found 11 mammal species (05 orders, 11 families), 11 bird species (06 orders, 08 families) and 02 reptile species.

It is worth to mention that in this sampling period the presence of river wolf (*Pteronura brasiliensi*) was not registered - nor the Otter - *Lontra longicaudis*.

The best results for mammals were obtained in collpa 02 with 08 recorded species, in terms of birds, the highest abundance of species was obtained by the cameras located in the lake, due to the influence of birds associated with bodies of water.

1.5.1 Study area and location of cameras

Image Nº 01. Location of trap cameras

o   Location / Coordinates:

Chart Nº 01: Coordinates of the Cameras Location

Location TC - ITHC August 17th			
Trap Cameras	**Coordinates**		
	Zone	**X**	**Y**
CAM ITA 04-solar		491392	8606381
CAM ITA 05		491632	8606422
CAM ITA 06	19 L	491417	8606353
CAM ITA 007		491389	8606341
CAM ITA 08		491412	8606357

For this period CAM ITA 05 was moved to the front (to the band) of the area in which the river wolves were registered in the first 10 days of evaluation corresponding to CAM ITA 06 and CAM ITA 08.

Chart Nº 02: List of total records.

Nº Camera	Common Name	Scientific Name	Family	Recorded	Schedule
	Total Records ITHC - August/September 2017				
	Mammals				
	Agoutie	*Dasyprocta variegata*	Dasyproctidae	3	11:18-15:29
	Squirrel	*Sciurus sp.*	Sciuridae	1	7:52
	Capybara	*Hydrochoerus hydrochaeri*	Caviidae	1	10:15
	Southamerican Coati	*Nasua nasua*	Procyonidae	2	6:14-17:18
	Spotted Paca	*Cuniculus paca*	Cuniculidae	12	19:09-5:03
	Red hawler monkey	*Alouatta seniculus*	Atelidae	1	12:58
	Bicolor-spined porcupine	*Coendou prehensilis*	Erethizontidae	7	18:36-2:25
	Rat	*NN*	NN	5	20:08-4:42
	White Collared Peccary	*Pecari tajacu*	Tayassuidae	1	7:41
	Southamerican tapir	*Tapirus terrestris*	Tapiridae	1	19:09
CAM ITA 04	Red Brocket	*Mazama americana*	Cervidae	2	23:54-0:54
CAM ITA 05	**Birds**				
CAM ITA 06	AveNN	*NN*	NN	1	6:48
	Speckled Chachalaca	*Ortalis guttata*	Ardeidae	6	10:37-16:10

CAM ITA007 CAM ITA 08	Pale-legged Hornero	*Furnarius leucopus*	Furnariidae	4	12:09-14:30
	Social Flycatcher	*Myiozetetes similis*	Tyrannidae	1	13:24
	Grey-fronted Dove	*Leptotila rufaxilla*	Columbidae	19	6:03-17:15
	Pigeon 1	*Patagioenas speciosa*	Columbidae	3	8:43-16:08
	Plumbeous pigeon	*Patagioenas plumbea*	Columbidae	4	7:59-15:14
	Spix guan	*Penelope jacquacu*	Cracidae	13	7:25-16:36
	Undulated Tinamou	*Crypturellus undulatus*	Tinamidae	4	7:15-17:00
	Grey-necked Wood-rail	*Aramides cajaneus*	Rallidae	7	5:35-17:00
	Sunbittern	*Eurypiga helias*	Eurypygidae	7	7:10-17:25
	Black-billed Thrush	*Turdus ignobilis*	Turdidae	2	6:56-6:57
Reptiles					
	Tupinambis	*Tupinambis teguixin*	Teiidae	1	10:49
	Lagarto	*NN*	Alligatoridae	1	19:37

The table No. 02 shows the general list of registered species: 11 mammal species, 12 bird species and two reptile species. For mammals, collpa 02 recorded: squirrels, capybaras, bobcats, porcupines, White Collared Peccary, Tapirus terrestris and Red Brocket (63.6% of all species), the others were recorded in the vicinity of the lake. In comparison with the first 10 days of evaluation, a lesser species of mammals was recorded, in addition, the composition of them varied: wolves of river, otter or opossum weren't recorded, in contrast, were recorded in this evaluation: capybaras and coatis .

The absence of river wolves and otters may be partly due to the summer season, with August and September being the driest, which has influenced the level of water in the lake, as well as a decrease in water quality amount of fish. In addition, taking into account this summer season, is found in general terms, the same species as those recorded in the wet or rainy season, with the exception of larger mammals such as White lipped peccaries, pumas, among others (recorded in collpas).

In birds, there is a good number of registered birds compared to a previous evaluation, although with different species due to the aquatic habitat in which most of the cameras are found, observing species such as: Sunbitterns, raccoons, partridges, hornero, social flycatcher among others, being the previous evaluation focused on collpas within the forest.

For reptiles, of the two registered species: iguana and lizard, the first one has already been registered in all the properties subject to evaluation with trap cameras, however, the lizard corresponds the first record for the project, which was registered at the edge of the inlet.

➢ **MAMMALS**

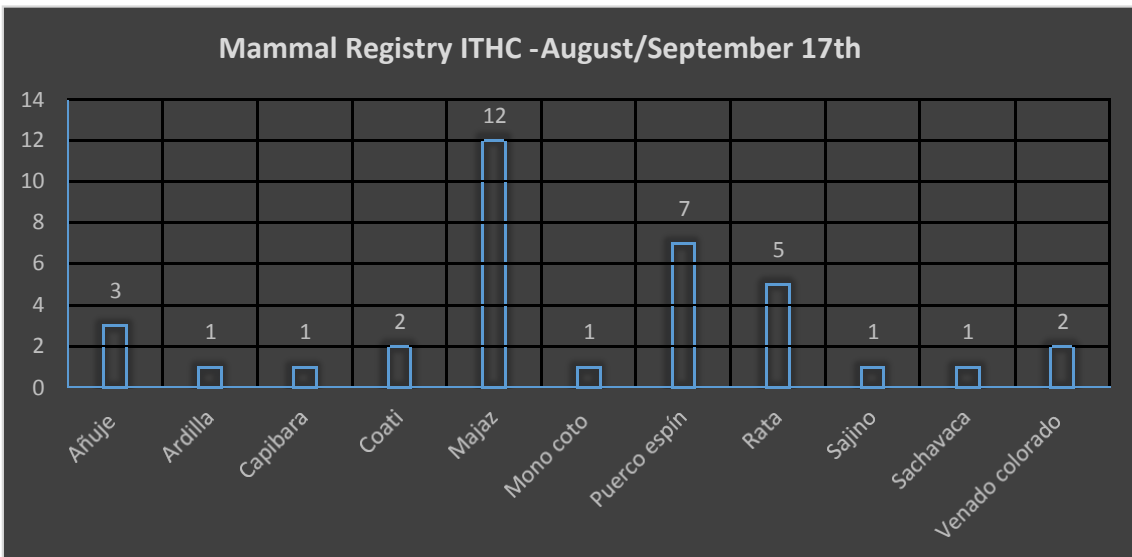Chart Nº 03: Taxonomy of registered mammals – ITHC

Registered Mammals in ITHC - August 2017			
Order	**Family**	**Scientific Name**	**Common Name**
Rodentia	Dasyproctidae	*Dasyprocta variegata*	Agoutie
	Sciuridae	*Sciurus spadiceus*	Squirrel
	Erethizontidae	*Coendou bicolor*	Bicolor-spined porcupine
	Cuniculidae	*Cuniculus paca*	Spotted Paca
	Caviidae	*Hydrochoerus hydrochaeris*	Capybara
	NN	*NN*	Rat
Carnivora	Procyonidae	*Nasua nasua*	Southamerican Coati
Artiodactyla	Tayassuidae	*Pecari tajacu*	White Collared Peccary
	Cervidae	*Mazama americana*	Red Brocket

Primates	Atelidae	*Alouatta seniculus*	Red hawler monkey
Perissodactyla	Tapiridae	*Tapirus terrestris*	South American Tapir
5	*10(11)*	*10(11)*	*11*

The table No. 03 shows the taxonomic ordering of the mammal species registered in the assessment. The order Rodentia presented the greatest number of families (06) and species (6) which is the maximum number of species in this order registered in previous assessments, of which, the porcupine and capibara have only been registered in collpa 02.

The order Artiodactyla with two families and two species is the second order with the highest record, these two species red deer and white-collared peccary, have also been recorded in collpa 02. In the Carnivora order, only the family Procyonidae was recorded, with the species coati, which is the first record for ITHC. In the previous evaluation in the month of June, the monkey of the order Primates and family Atelidae was also registered, this species was also registered in collpa 02, which is a habitual visitor of the collpa.

As a result of the evaluation carried out in June, 17 species of mammals with 27 days of evaluation were recorded with a sampling effort of 1944 h-cam (03 cameras only in clay licks), compared to this assessment which registered 64% of June species with 14 days (half of time) and a sampling effort of 1680 h-cam (05 cameras in a collpa and cocha). This shows we can achieve a complete and representative record of fauna with a greater number of sampling points (cameras) and a lower sampling effort (time or days).
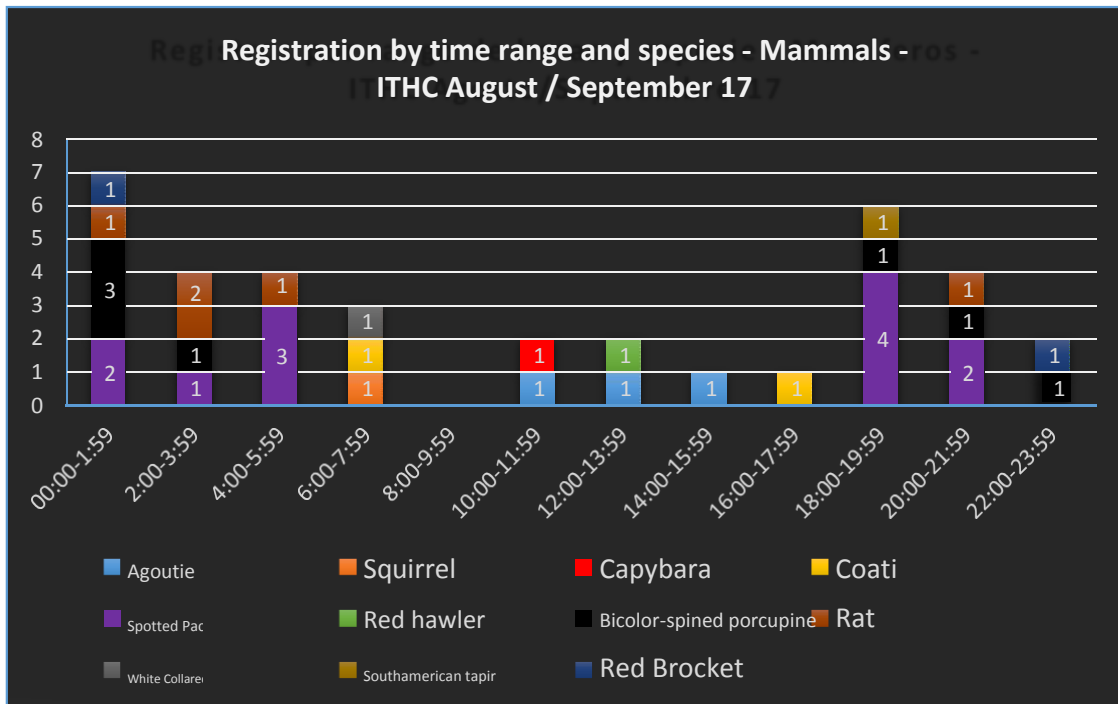

Graphic Nº 01: Total of registered mammals - ITHC

Graphic No. 01 reflects the abundance of records per species, in total 36 records of mammals were obtained, being the most abundant the Agoutie with 33.3% of the total (12), followed by the porcupine with 19.4% (7) of total records . In the first 10 days of the present evaluation, the same abundance pattern was observed (Agoutie, Bicolor-spined porcupine, Agoutie), evidence of the pattern of species and their abundance at this time of the year.

Compared to the evaluation of the month of June in ITHC, there is a decrease in records: in the case of the Agoutie 45% less, the spotted paca 70% less, squirrel 97.5% less, one less record in the capybara and red hawler monkey, 90% fewer records in White Collared Peccary, 94.5% fewer records of South American tapir and 86.6% fewer records of red deer. In contrast, for the South

American coati are two new records, since it was not recorded in said evaluation and an increase of three records (from 4 to 7) in the porcupine. This is due to two important factors: in this evaluation, 03 trap cameras were deployed in collpas, collpa 02 which was now evaluated and two cameras in collpas inside the forest (one in the buffer zone of the Tambopata National Reserve) which increases the probability of mammal records; in addition to the sampling time which was 27 days. However, only focusing on collpa 02, in this evaluation have registered a smaller number of records, only increased the number of porcupine, which has only been registered in collpa.

Graphic N° 02: Registration by time range and species - ITHC

A peak of activity is observed in the range from 00: 00 to 2: 00 h with 7 records (19.4% of the total) with 4 species, which is also the range of hours with the most registered species: Red Brocket, rat, Bicolor-spined porcupine and Spotted Paca. After this hourly range gradually decreases with the same nocturnal species, up to the range of 6: 00-8: 00 h changing the composition of species to diurnal: Southamerican Coati, Squirrel and White Collared Peccary. In the range from 8: 00 to 10: 00 h there is no activity observed for mammals, to then register the only capybara, and continue with a low activity until 18:00 h, after which increase the records in the activity night, to register the only South American Tapir.

In general, the species with the widest range of distribution in all the nocturnal schedules is the Spotted Paca together with the porcupine, for the diurnal schedules the Agoutie distributed at 10:00 am is observed and the coati registered early in the morning and ending the day afternoon.
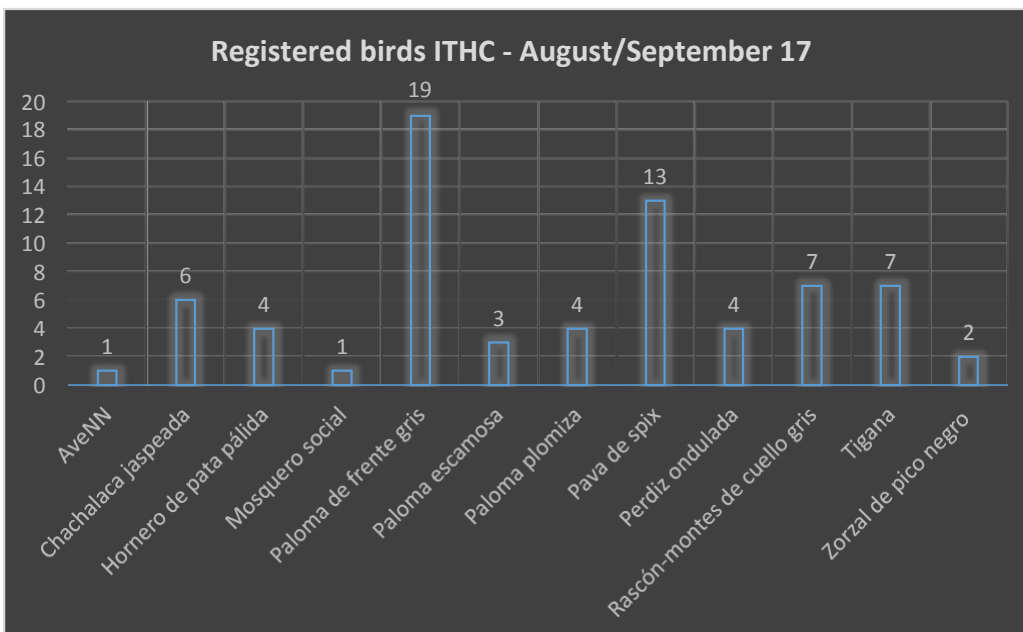
➢ **BIRDS**

Chart Nº 04: taxonomy of registered birds – ITHC

Registered birds in ITHC - August 2017			
Order	**Family**	**Scientific Name**	**Common Name**
Columbiformes	Columbidae	*Leptotila rufaxilla*	Grey-fronted Dove
		Patagioenas speciosa	Pigeon 1
		Patagioenas plumbea	Plumbeous pigeon
Eurypygiformes	Eurypygidae	*Eurypyga helias*	Sunbittern
Galliformes	Cracidae	*Ortalis guttata*	Speckled Chachalaca
		Penelope jacquacu	Spix guan
Gruiformes	Rallidae	*Aramides cajaneus*	Grey-necked Wood-rail
Passeriformes	Furnaridae	*Furnarius leucopus*	Pale-legged Hornero
	Turdidae	*Turdus ignobilis*	Black-billed Thrush
	Tyrannidae	*Myiozetetes similis*	Social Flycatcher
Tinamiformes	Tinamidae	*Crypturellus undulatus*	Little Tinamou
NN	NN	*NN*	Bird NN
6(7)	8(9)	11(12)	12

From chart Nº 04, the register of 6 orders distributed in 8 families, 11 species and 12 common names is observed. The Passeriformes order presented the greatest diversity of families (03) and species (03). Following the order Columbiformes with the family Columbidae and three species.

In comparison with another evaluation in the month of June in which 16 species were recorded, 11 species have been obtained in the present report, although the evaluation times were different: 14 days of current evaluation against 27 days of previous evaluation. In addition, the Passeriform order was the most specific in this evaluation, in contrast to the Columbiformes order which is in most evaluations the most diverse. Also, it was not reported in the past evaluation of the order Gruiformes, family Rallidae and species Aramides cajaneus. In the present evaluation, the order Psittaciformes reported in collpa 02 wasn't reported.
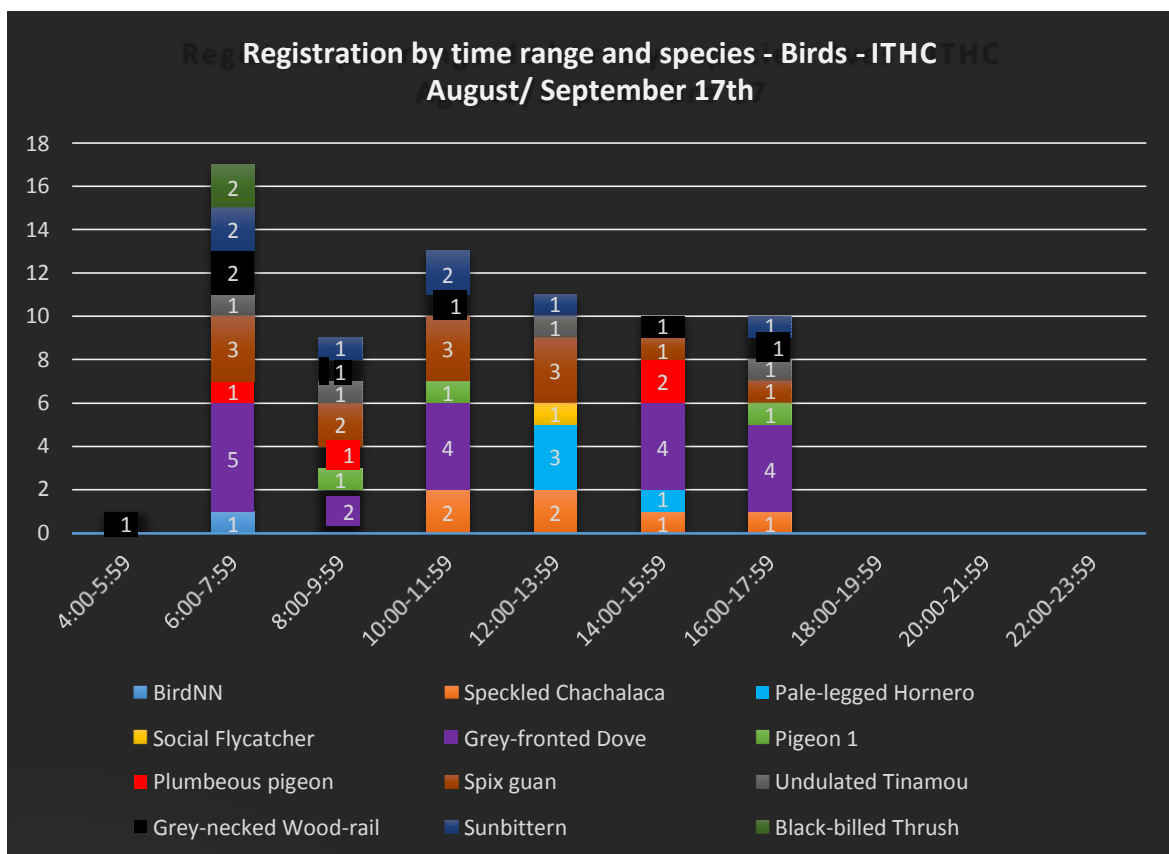

Graphic Nº 03: Total of Registered Birds – ITHC

In this evaluation a total of 71 reports of birds were recorded, of which the gray-fronted pigeon was recorded 26.7% with 19 reports, followed by the Spix guan with 18.3% of registered times (13), the Grey-necked Wood-rail and Sunbittern were recorded 7 times each equivalent to 9.8% of the total each. These 4 species represent 64.9% of records, the other species had an abundance of less than 6 records each.

In contrast to the first 14 days of evaluation, the abundance changed a lot, so we have the Pale-legged Hornero which was the most abundant with 21 records, decreased to 4, while the grey-fronted dove of 8 records went up to 19 , just like the Spix guan from 2 records went up to 13.

In comparison with the June evaluation, it has increased from 02 records to 19 the grey-fronted dove, otherwise it happens with the Pigeon 1 which has been reported on 25 occasions (the most abundant in that evaluation) against 3 of this report, same as the Plumbeous pigeon that of 20 records has decreased to 4. Otherwise it happens with the Spix guan which has increased in number of records from 9 to 13 in the present evaluation, in addition the Pale-legged Hornero from 1 record to 4 current, as well as the Sunbittern from 4 to 7 reports. The Grey-necked Wood-railhas not been reported in the past evaluation. The social flycatcher corresponds the first report of the species for the project.

Graphic Nº 04: Registration by range of hours and species – Birds – ITHC

As usual, other than reporting nocturnal birds such as nightjars or other nocturnal birds, no birds have been registered. There is an almost constant distribution of activity in the hour ranges, with a peak of activity in the range from 6: 00 to 8: 00 h, which coincides with the largest number of recorded species. The species recorded in all the ranges of hours has been the grey-necked Wood-rail, as well as the Spix guan, the Grey-fronted dove.

A marked difference was observed in comparison with the first 14 days of evaluation, in which there was a peak of activity from 6: 00-8: 00 h and then decrease in the day. Compared to the June evaluation, the species recorded in all time ranges was the Pigeon 1 - *Patagioenas speciosa*, the

Grey-fronted dove now taking that place, due to the focus of the evaluation which focused on the cocha now while the previous one in clay licks.

B. <u>Generals: Inkaterra Guides Field Station</u>

In the present month, after the evaluation in ITHC, the cameras were placed in the premises of IGFS, during a month until the first weeks of the month of October. We have placed 05 trap cameras: 01 camera in the area of the Palmetum, 01 camera in the collpa manco, 01 camera behind the bio-garden, 01 camera in the collpa 01 (artificial collpa) and 01 camera on the edge of the aguajal. The data obtained are presented with a total of 131 sampling days (total of cameras) equivalent to a sampling effort of 3144 camera-hours.

The following results were obtained: 16 mammal species (08 orders, 14 families), 08 bird species (05 orders, 06 families) and 02 reptile species.

The best results were obtained in the cameras located at the edge of the aguajal, in which large mammals were recorded such as: Greyheaded Tayra - *Eira barbara*, Margay - *Leopardus wiedii*, Collared Anteater - *Tamandua tetradactyla*, White Collared Peccary - *Pecari tajacu*. It should be mentioned that compared to other evaluations in the area, although it is not the first record of South American Tapir, since last year this species was not evident.

Chart Nº 04. Sampling effort by camera trap and total

Camera	Start	End	Total days
CAM ITA 04	19/09/2017	08/10/2017	19
	Esfuerzo de muestreo (h-cámara)		456
CAM ITA 05	09/09/2017	10/10/2017	31
	Esfuerzo de muestreo (h-cámara)		744
CAM ITA 06	14/09/2017	10/10/2017	26
	Esfuerzo de muestreo (h-cámara)		624
CAM ITA 07	12/09/2017	07/10/2017	26
	Esfuerzo de muestreo (h-cámara)		624
CAM ITA 08	10/09/2017	09/10/2017	29
	Esfuerzo de muestreo (h-cámara)		696
Esfuerzo total de muestreo (h-cámara)			3144

1.5.1 Study area and location of cameras

Image Nº 02. Location of trap cameras

o Location. Coordinates:

Chart Nº 05: Coordinates of location of the cameras.

Location CT - IGFS September/October 17th			
Trap Camera	**Coordinates**		
	Zone	**X**	**Y**
CAM ITA 04-solar		495051	8615171
CAM ITA 05		494870	8614534
CAM ITA 06	19 L	494963	8614747
CAM ITA 007		495414	8614922
CAM ITA 08		494744	8614336

Chart Nº 06: List of total records.

Total Records IGFS - September/October 2017					
Nº Camera	**Common Name**	**Scientific Name**	**Family**	**Records**	**Schedule**
	Mammals				
	Agoutie	*Dasyprocta variegata*	Dasyproctidae	26	5:38-16:54
	Southern Amazon Red Squirrel	*Sciurus spadiceus*	Sciuridae	8	6:59-11:36
	Seven-banded Armadillo	*Dasypus sp.*	Dasypodidae	3	19:01-2:45
	South American Coati	*Nasua nasua*	Procyonidae	2	9:53-11:41
	Black-headed Squirrel Monkey	*Saimiri boliviensis*	Cebidae	3	9:51-11:14
	Margay	*Leopardus wiedii*	Felidae	1	4:16
	Spotted Paca	*Cuniculus paca*	Cuniculidae	5	18:32-1:51
	Greyheaded Tayra	*Eira barbara*	Mustelidae	2	6:17-16:30
	Rat	*NN*	NN	35	18:08-5:00
	South American tapir	*Tapirus terrestris*	Tapiridae	1	4:41
	White Collared Peccary	*Pecari tajacu*	Tayassuidae	4	5:49-17:40
	Collared Anteater	*Tamandua tetradactyla*	Myrmecophagidae	4	5:14-23:03
CAM ITA 04	Brocket	*Mazama sp.*	Cervidae	1	16:34
CAM ITA 05	Red Brocket	*Mazama americana*	Cervidae	2	17:18-3:05
CAM ITA 06	Amazonian Brown Brocket	*Mazama nemorivaga*	Cervidae	1	3:50
CAM ITA 007 CAM ITA 08	Opossum	*Didelphis marsupialis*	Didelphidae	13	18:59-5:00
	Birds				
	Bird NN	*NN*	NN	2	10:57-17:17
	Black-faced Antthrush	*Formicarius analis*	Formicariidae	11	5:38-16:47
	Grey-fronted Dove	*Leptotila rufaxilla*	Columbidae	23	6:12-15:38
	Spix guan	*Penelope jacquacu*	Cracidae	2	8:55-15:32
	Partridge	*Crypturellus sp.*	Tinamidae	2	8:28-9:23

Great Tinamou	*Tinamus major*	Tinamidae	24	5:01-17:23
Undulated Tinamou	*Crypturellus undulatus*	Tinamidae	10	5:23-17:17
Pale Winged Trumpeter	*Psophia leucoptera*	Psophiidae	5	10:22-14:01
White-necked Thrush	*Turdus albicollis*	Turdidae	1	15:31
Reptiles				
Iguano	*Tupinambis teguixin*	Teiidae	1	12:31
Rana	*NN*	NN	1	1:15

In the chart No. 06 shows the total number of registered species, number and time range of records: 16 species of mammals, 09 species of birds and 02 species of reptiles.

In comparison with evaluations in IGFS of March, April and May for mammals, the number of registered species is double of each of these months in which were recorded 08 species per month of evaluation; This is partly due to the fact that in previous months, there was one or two cameras, in the artificial collpa (collpa 01), which was also part of the current evaluation. This shows that with a greater number of sampling points (cameras) it is possible to achieve greater representativeness of data of an area in less time (3 months against less than 01 month). In

In general, all mammal species previously found have been recorded, with the exception of the Amazonian Brown Brocket - *Mazama nemorivaga*, which represents the first record of the area.

In birds, the number of registered species is equivalent to or lower than previous assessments, which correspond to those commonly recorded, but there is a slight increase in the number of records per species.
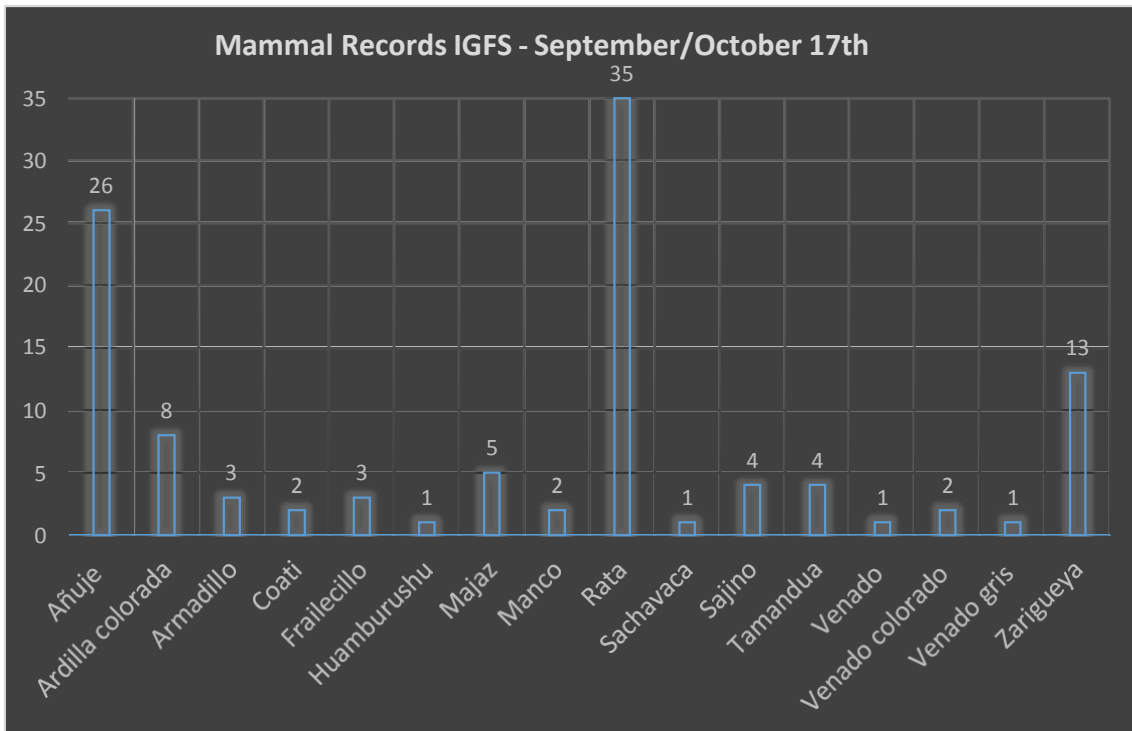
➢ **MAMMALS**

Chart Nº 07: Taxonomy of registered mammals – ITHC

Registered Mammals in IGFS - September/October 2017			
Order	**Family**	**Scientific Name**	**Common Name**
Artiodactyla	Cervidae	*Mazama americana*	Red Brocket
		Mazama sp	Brocket
		Mazama nemorivaga	Amazonian Brown Brocket
	Tayassuidae	*Pecari tajacu*	White Collared Peccary
Carnivora	Felidae	*Leopardus wiedii*	Huamburushu
	Mustelidae	*Eira barbara*	Greyheaded Tayra
	Procyonidae	*Nasua nasua*	South American Coati
Cingulata	Dasypodidae	*Dasypus sp.*	Seven-banded Armadillo
Didelphimorphia	Didelphidae	*Didelphis marsupialis*	Opossum
Perissodactyla	Tapiridae	*Tapirus terrestris*	South American tapir
Pilosa	Myrmecophagidae	*Tamandua tetradactyla*	Collared Anteater
Primate	Cebidae	*Saimiri boliviensis*	Black-headed Squirrel Monkey
Rodentia	Dasyproctidae	*Dasyprocta variegata*	Agoutie
	Sciuridae	*Sciurus spadiceus*	Squirrel
	Cuniculidae	*Cuniculus paca*	Spotted Paca
	NN	*NN*	Rat
8	*13(14)*	*15(16)*	*16*

The chart No. 07 shows the taxonomic ordering of the mammal species registered in the assessment. The Rodentia order was the most abundant in families (04) and species (04), followed by the order Carnivora with 03 families and 03 species. The order Artiodactyla presented two families, being the family Cervidae the one that presented the greater number of species (03) because it was not possible to obtain the identification of a species by the quality of the photo, therefore the two species of deer were registered present in Amazonia.

The record of the puffin, although it is not the first, is very important due to the number of registered individuals, large group, moving on the forest floor, unlike the records of one to three individuals.

It is worth mentioning the record of the South America Tapir, which although it is not the first for the area, so far this year is the first sighting of the species for IGFS; likewise, the record of the Greyheaded Tayra is very interesting since in comparison to other sightings in previous months, in which only one individual was registered, this time a family of three individuals was recorded moving in one day and in another day an individual by the same place.
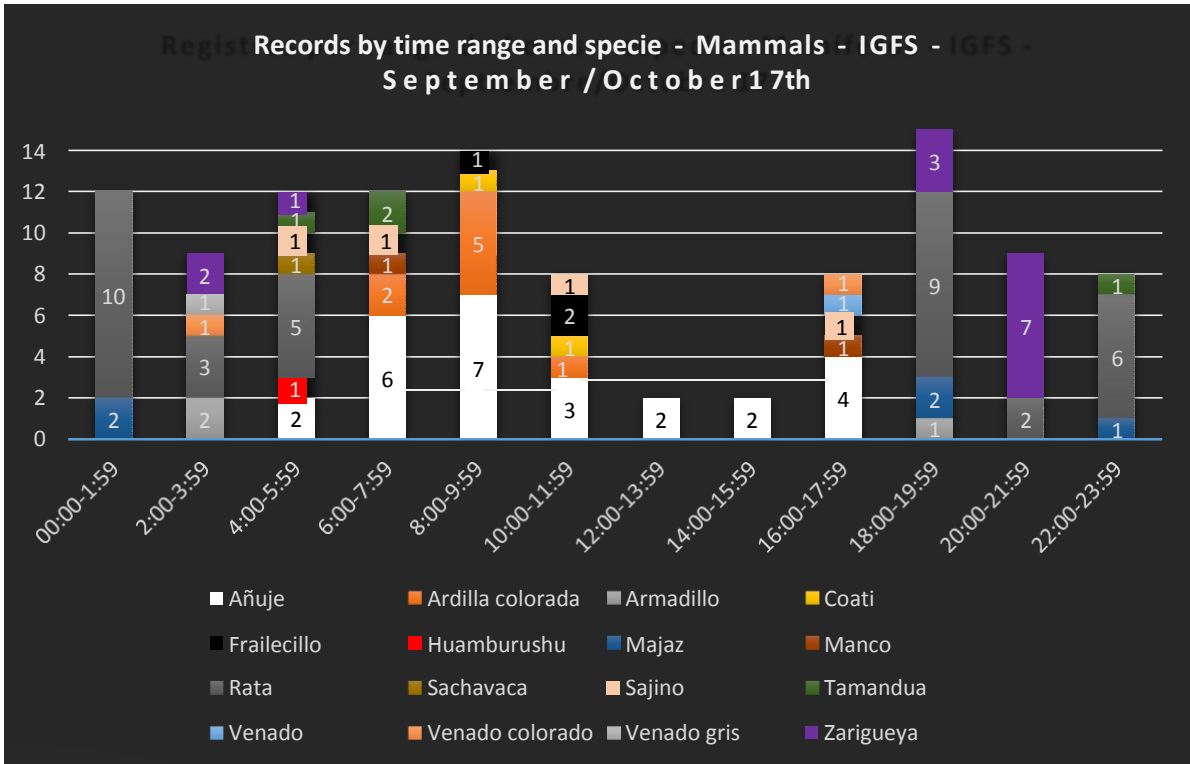
Graphic Nº 05: Total mammals registered - IGFS

The graphic N°. 05 reflects the abundance of records of mammals by species, in total 111 records were obtained, with the rat having the largest number with 31.5% of the total, followed by the Agoutie with 23.4% of the total, the opossum (intuto) with 11.7% of the total. In comparison with previous evaluations in IGFS, the same pattern is observed in terms of abundance of these species, however, Agoutie records have decreased: 02 records in March, 15 records in April and 18 records in May, which may be due to the dry season in which the present evaluation has been carried out against the rainy season of the previous ones (although the past evaluations were only carried out with a camera). A similar case occurs with the Agoutie, which has decreased in abundance in the area (38 in March 38, 54 in April and 32 in May).

The South American Coati, Black-headed Squirrel Monkey and Greyheaded Tayra have increased in number of records compared to the other months due in part to the greater number of cameras and larger area covered with them. The Crab-eating raccoon - *Procyon cancrivorus*, which has been registered only once on the premises, has not been registered in this evaluation.

In general terms, there is a decrease in abundance per species but an increase in the number of recorded species. The lower abundance may be due to the dry season in which this evaluation has been carried out, while the greater number of species is directly related to the greater number of sampling points (cameras)

Graphic Nº 06: Records by time range and specie- IGFS

It is inferred of the chart that the record by time range is relatively constant with a marked decrease in the hours from 12:00 to 16:00 h. This pattern has been observed in the previous evaluations in the area, however, the peaks of records (number of records) are lower in this evaluation. The highest number of records from 6:00 pm to 8:00 pm and from 8:00 to 10:00 am is repeated in the previous evaluations, thus demonstrating the highest activity of mammals at the beginning of the day and at the end of it.

It is observed that the Agoutie was recorded throughout the day, from sunrise to sunset and has also been the only species with activity in the range from 12:00 to 16:00 h the opossum failing that was the most widely distributed in at night, the red brocket was recorded at night as daytime, as well as the Collared Anteater.
The Greyheaded Tayra was registered early in the morning and at the end of the day.
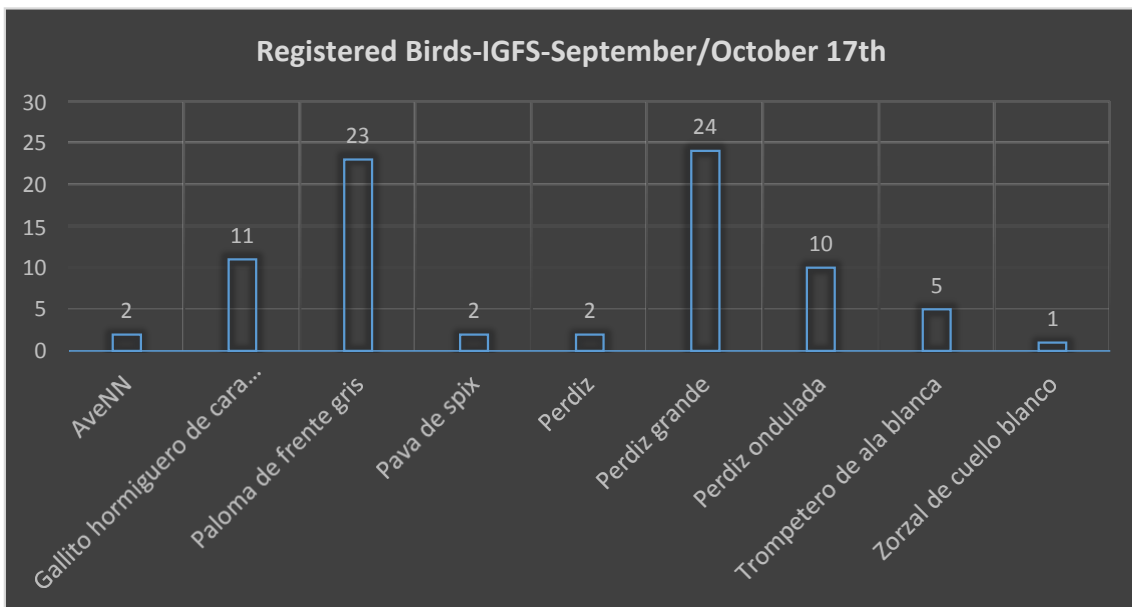
Chart Nº 08: Taxonomy of registered birds – IGFS

Registered Birds in IGFS - September/October 2017			
Order	**Family**	**Scientific Name**	**Common Name**
Columbiformes	Columbidae	*Leptotila rufaxilla*	Grey-fronted Dove
Galliformes	Cracidae	*Penelope jacquacu*	Spix guan
Gruiformes	Psophiidae	*Psophia leucoptera*	Pale Winged Trumpeter
Passeriformes	Formicariidae	*Formicarius analis*	Black Faced Antthrush
	Turdidae	*Turdus albicollis*	White-necked Trush
Tinamiformes	Tinamidae	*Crypturellus undulatus*	Undulated Tinamou
		Tinamus major	Great Tinamou
		Crypturellus sp.	Partridge
NN	NN	*NN*	Bird NN
5(6)	6(7)	8(9)	9

From Table No. 08, this order has 5 orders, 6 families, 8 species and 8 common names in terms of registered birds. The order Tinamiformes, with the family Tinamidae was the one that presented the greater amount of species. The order Passeriformes was the most diverse in families with two, and two species, the other orders recorded one family and one species each. In contrast to other evaluations in which the Columbiformes order was the most specific, this time only the Gray-fronted Dove was recorded which is the most common in the area.

All the registered species have already been observed in other evaluations, correspond to the most common found in the evaluation area.
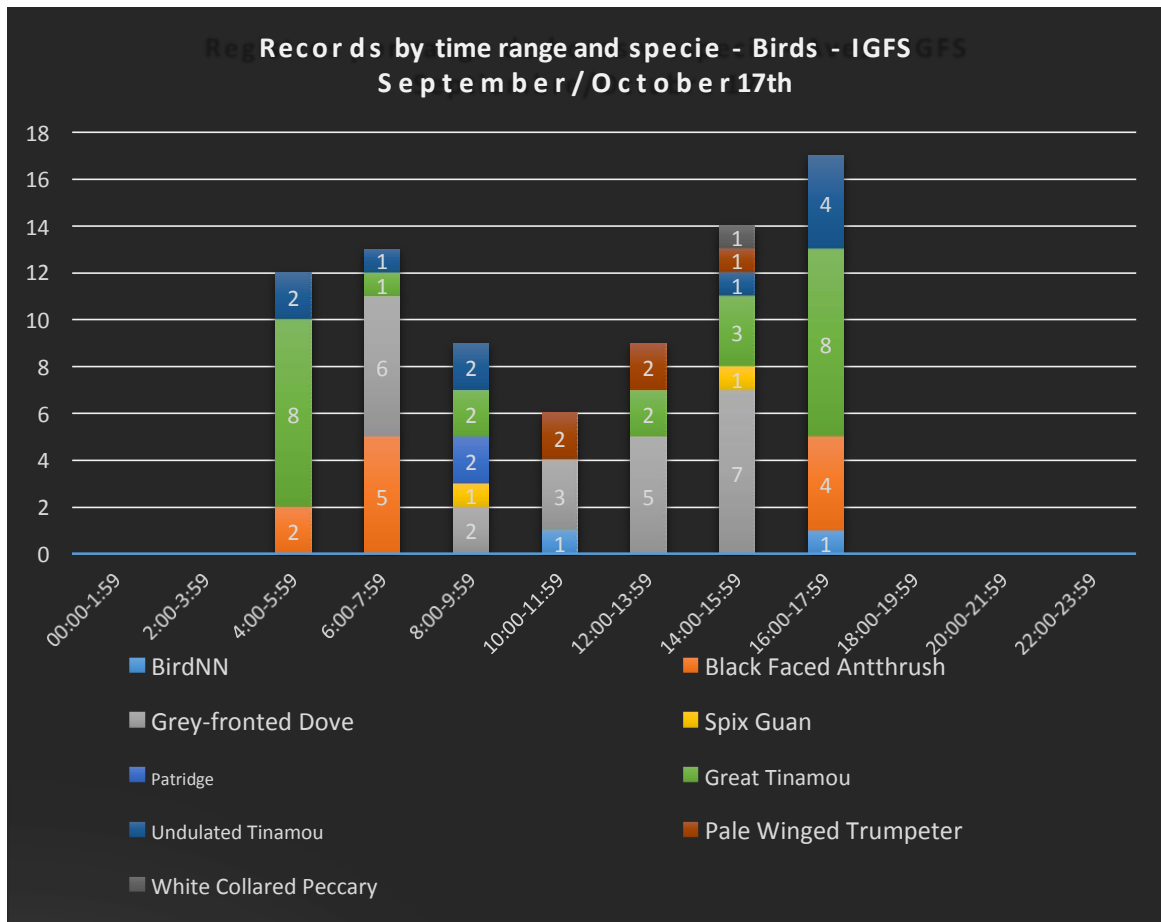

Graphic Nº 07: Total registered birds - ITHC

A total of 80 records of birds were obtained, of which the most abundant were the Great tinamou and the Gray-fronted Dove with 30% and 28.7% respectively of the total, followed by the Black-faced antthrush with 13.7% and Undulated Tinamou with 12.5%.

In general, there is a decrease in the number of species, less wealth, but a greater number of records per species (greater abundance), compared to the month of March in which 14 species were obtained and the most abundant with 8 records in April, 10 species were obtained and 9 records for the most abundant in the month of April, we obtained 9 species with 13 records of the most abundant, in all cases the most abundant was the large partridge as in the present evaluation. It could be inferred according to the pattern explained that the main reason is the season, since in the rainy months there is a greater wealth of birds, whereas as the rains diminish towards the dry

season, the quantity of species decreases and abundance increases.

It should be noted (as expected) that all registered species, both in this and previous assessments, the registered species have the habit of walking on the forest floor; which is a very effective and complementary method to the monitoring of birds that we do since, both the methodology of bird ringing, counting points and casual observations, sometimes do not report these understory birds mostly cryptic and difficult to observe.

Graphic Nº 08: Registration by time range and specie – Birds – IGFS

As expected, with the exception of the evaluation in Valencia in which nightjars were recorded, only daytime activity is observed for birds. A constant pattern is observed in all the evaluations carried out with the highest activity at the beginning of the day and at the end of the day, however, graphic N°8 shows greater activity in the last hour of the day (from 16:00 to 18: 00 h). The species with the greatest distribution in the records was the most abundant, the Great partridge with a marked higher activity in the range from 4:00 to 6:00 h and from 4:00 to 6:00 p.m., a similar pattern is observed with the Grey-fronted Dove; in contrast, the Black Faced Antthrush was recorded only at the beginning and end of the day. The records of the other Tinamidae, the Undulated Tinamou, they were also distributed in a day. It is also observed that the range of hours with the greatest diversity of recorded species at 2:00 pm to 4:00 pm with 6 species out of the 9 recorded (66.6%).

Photo Gallery:

ITHC

Photo Nº 12: South American Coati – *Nasua nasua*

Photo Nº 13: Caiman hunting (one of three photos)

Phtos N° 14: Capybara – *Hydrochoerus hydrochaeris* with babies

Photo N° 15: Capybara – *Hydrochoerus hydrochaeris* with babies

Photo Nº 16: Bicolor-spined porcupine – *Coendou prehensilis*

Photo Nº 17: White Collared Peccary – *Pecari tajacu*

Photo Nº 18: Spix guan – *Penelope jacquacu*

Photo Nº 19: Red hawler monkey – *Alouatta seniculus* with babies

Photo Nº 20: Red hawler monkey – *Alouatta seniculus*

Photo Nº 21: Sunbittern – *Eurypiga helias*

Photo Nº 22: South American Tapir – *Tapirus terrestres*

Photo Nº 23: Squirrel – *Sciurus spadiceus*

Photo Nº 24: Spotted Paca – *Cuniculus paca*

Photo Nº 25: Great tinamou – *Tinamus major*
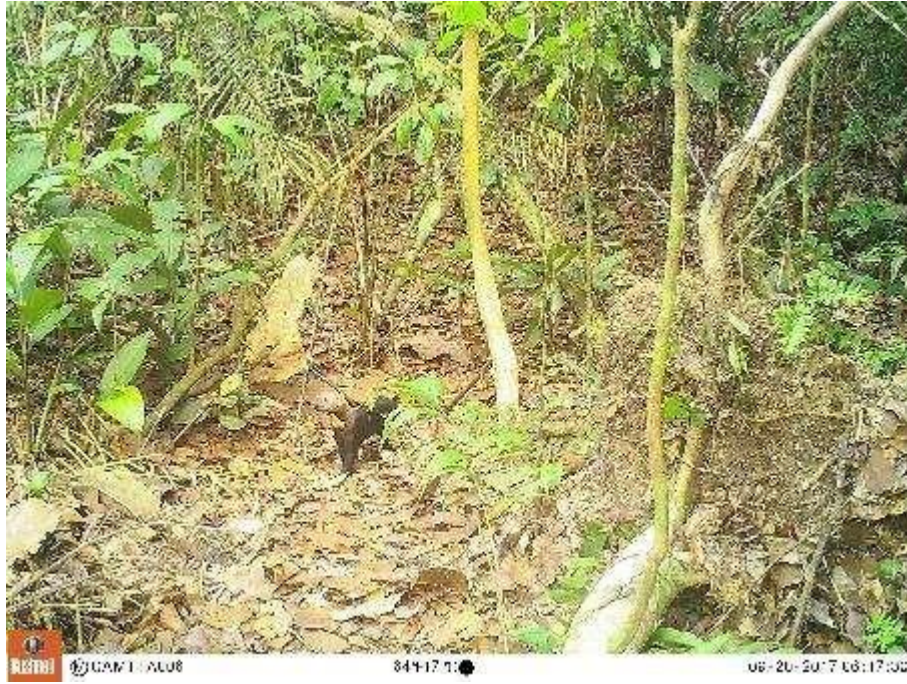

Photo Nº 26: Margay – *Leopardus wiedii*

Photo Nº 27: Crypturellus undulatus – *Eira barbara*

Photo Nº 28: Collared Anteater – *Tamandua tetradactyla*

Photo Nº 29: Spix guan – *Penelope jacquacu*

Photo Nº 30: Black-headed Squirrel Monkey – *Saimiri boliviensis*

Photo Nº 31: Pale Winged Trumpeter – *Psophia leucoptera*

II. BIRDS MONITORING BY POINT COUNTS

2.1   **DATE:** September 19th, 2017

2.2   **START HOUR:** 5:35 am   **FINAL HOUR**: 7:15 am

2.3   **PARTICIPANTS:** Noe Huaraca – Oscar Huarcaya

2.4   **SAMPLING AREA:** The study area was carried out in the private property of Reserva Amazonica, in the surroundings of Inkaterra' Guide Field Station (IGFS) and of the bio-garden. As a starting point corresponds the IGFS facilities (19L 0495057 8614723) culminating in the bio-garden.

Mapa N°1: Total evaluation route

Source: Google Earth

2.5   **OBJECTIVES:**

1.5.1.   To complement the list of bird diversity for Inkaterra Guides Field Station.

1.5.2.   To establish patterns of abundance of recorded bird species.

1.5.3.   To understand the different bird compositions according to each type of habitat.
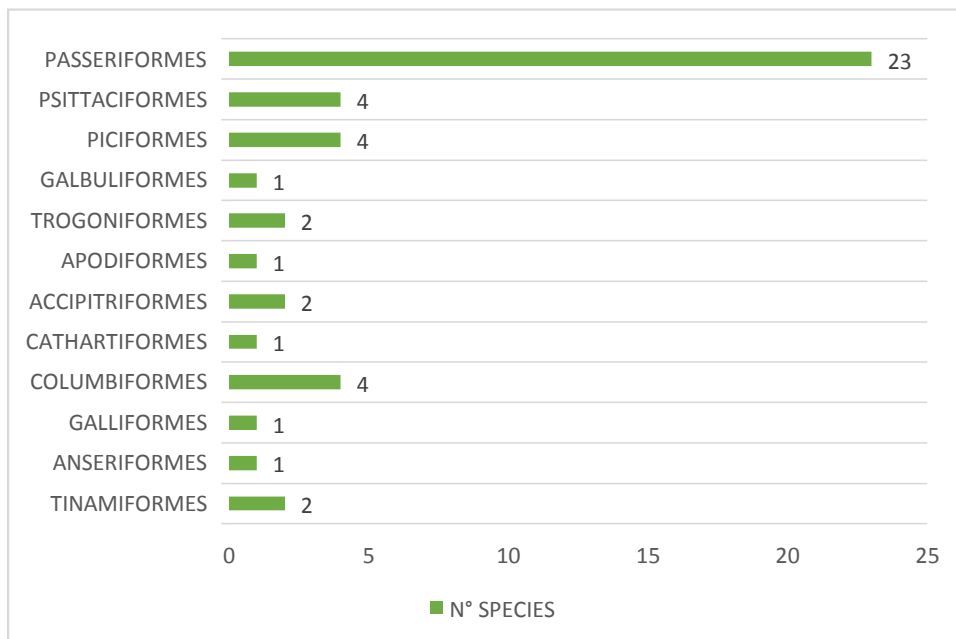
2.6 METHODOLOGY:

The Point counts method was used, which consists of staying at a point for a time of 10 minutes and taking note of all bird species, as well as the number of individuals and the type of record, whether viewed and / or heard; and the distance between each point was 200 meters (Ralph et al., 1995; Ralph, 1996; MINAM, 2015). For the correct identification of the species, the book of Birds of Peru (Schulemberg, et al., 2007) and the List of Birds of Peru (Plenge, 2017) were used, as well as playback of bird sounds and binoculars.

2.7 RESULTS:

Eight points counts were made (see Map N°1), where a total of 46 species belonging to 24 families and 12 orders were registered. As for the composition of the avifauna, the order that presented the greatest wealth was Passeriformes with 23 species, followed by Psittaciformes, Piciformes and Columbiformes with 4 species each, Trogoniformes, Accipitriformes and Tinamiformes with 2 species each and finally Galbuliformes, Apodiformes, Cathartiformes, Galliformes and Anseriformes with 1 each. (Graph N° 9).

Graphic N°01: Species by taxonomic order

Source: Own development

The species that were recorded in at least half of the 8 sampling points (see table N° 1), which means, from 4 to more were: *Campylorhynchus turdinus*, *Brotogeris cyanoptera* and *Patagioenas plumbea* constituting these species as the most conspicuous in the study area.

The species that were recorded in at least half of the 8 sampling points (see table 1), which means, from 4 to more were: Campylorhynchus turdinus, Brotegeris cyanoptera and Patagioenas plumbea, constituting these species as the most conspicuous of the study area.

Finally, the conservation status according to the IUCN (International Union for Conservation Nature) of: *Ramphastus tucanus* that were recorded during these monitoring sessions are considered as threatened (vulnerable), *Amazona farinosa* is considered as almost threatened and the other species considered of minor concern.

Chart N° 1. Taxonomic Classification of Species Registered by Counting Points

N°	TAXONOMY / SCIENTIFIC	COMMON NAME	SPANISH COMMON NAME	REGISTRER MODE	POINT N°
	Order TINAMIFORMES				
	Family Tinamidae	**Tinamous**	**Perdices**		
1	*Crypturellus undulatus*	Undulated Tinamou	Perdiz Ondulada	L	1
2	*Crypturellus cinereus*	Cinereous Tinamou	Perdiz Cinérea	L	7
	Order ANSERIFORMES				
	Family Anhimidae	**Screamers**	**Gritador**		
3	*Anhima cornuta*	Horned Screamer	Gritador Unicornio	L	6
	Order GALLIFORMES				
	Family Cracidae	**Guans**	**Pavas**		
4	*Penelope jacquacu*	Spix's Guan	Pava de Spix	L	8
	Order COLUMBIFORMES				
	Family Columbidae	**Pigeon/Doves**	**Palomas**		
5	*Patagioenas cayennensis*	Pale-vented Pigeon	Paloma Colorada	L	1
6	*Patagioenas subvinacea*	Ruddy Pigeon	Paloma Rojiza	L	7
7	*Patagioenas plumbea*	Plumbeous Pigeon	Paloma Plomiza	L	1,2,4,5,6
8	*Patagioenas speciosa*	Scaled Pigeon	Paloma Escamosa	L	2
	Order CATHARTIFORMES				
	Family Cathartidae	**Vultures**	**Gallinazos**		
9	*Cathartes melambrotus*	Greater-Yellow headed Vulture	Gallinazo de Cabeza Amarillo Mayor	V	8
	Order ACCIPITRIFORMES				
	Family Accipitridae	**Hawks & Eagles**	**Águilas y Gavilanes**		
10	*Buteogallus schistaceus*	Slate-colored Hawk	Gavilán Pizarroso	L	5
11	*Rupornis magnirostris*	Roadside Hawk	Aguilucho Caminero	L	7

		Order APODIFORMES			
	Family Trochilidae	**Hummingbirds**	**Colibríes**		
12	*Glaucis hirsutus*	Rufous-breasted Hermit	Ermitaño de Pecho Canela	L,V	2
		Order TROGONIFORMES			
	Family Trogonidae	**Trogons**	**Trogones**		
13	*Trogon viridis*	Green-backed Trogon	Trogón de Dorso Verde	L	4,5
14	*Trogon curucui*	Blue-crowned Trogon	Trogón de Corona Azul	L	8
		Order GALBULIFORMES			
	Family Bucconidae	**Nunbirds**	**Monjas**		
15	*Monasa nigrifrons*	Black-fronted Nunbird	Monja de Frente Negra	L	5
		Order PICIFORMES			
	Family Ramphastidae	**Toucans**	**Tucanes**		
16	*Ramphastus tucanus*	White-throated Toucan	Tucán de Garganta Blanca	L	2,5
	Family Capitonidae	**Barbets**	**Barbudos**		
17	*Capito auratus*	Gilded Barbet	Barbudo Brilloso	L	6
	Family Picidae	**Woodpeckers**	**Carpinteros**		
18	*Celeus flavus*	Cream-colored Woodpecker	Carpintero Crema	L	3,6
19	*Melanerpes cruentatus*	Yellow-tufted Woodpecker	Carpintero de Penacho Amarillo	L	6
		Order PSITTACIFORMES			
	Family Psittacidae	**Macaws, Parrots & Allies**	**Guacamayos, Loros y Similares**		
20	*Brotogeris cyanoptera*	Cobalt-winged Parakeet	Perico de Ala Cobalto	L,V	1,2,3,4,6,7
21	*Psittacara leucophthalmus*	White-eyed Parakeet	Cotorra de Ojo Blanco	L	8
22	*Amazona ochrocephala*	Yellow-crowned Parrot	Loro de Frente Amarilla	L	3,4
23	*Amazona farinosa*	Mealy Parrot	Loro Harinoso	L	4
		Order PASSERIFORMES			
	Family Thamnophilidae	**Antbirds & Allies**	**Hormigueros y Similares**		
24	*Thamnomanes ardesiacus*	Dusky-throated Antshrike	Batará de Garganta Oscura	L	1
25	*Myrmelastes hyperythrus*	Plumbeous Antbird	Hormiguero Plomizo	L	1
26	*Cymbilaimus lineatus*	Fasciated Antshrike	Batará Lineado	L	6
27	*Akletos goeldii*	Goeldi's Antbird	Hormiguero de Goeldi	L	1,6
28	*Hypocnemis peruviana*	Peruvian Warbling-Antbird	Hormiguero Peruano	L,V	1
	Family Formicariidae	**Antthrushes**	**Gallitos Hormigueros**		
29	*Formicarius analis*	Black-faced Antthrush	Gallito-Hormiguero de Cara Negra	L	1,2,3
30	*Formicarius rufifrons*	Rufous-fronted Antthrush	Gallito-Hormiguero de Frente Rufa	L	2
	Family Furnariidae	**Foliage-gleaners & Allies**	**Limpia-Follajes y similares**		
31	*Sittasomus griseicapillus*	Olivaceous Woodcreeper	Trepador Oliváceo	L	4
	Family Tyrannidae	**Flycatchers**	**Atrapamoscas**		
32	*Sirystes albocinereus*	White-rumped Sirystes	Siristes de Lomo Blanco	L	2,6
	Family Cotingidae	**Cotingas, Fruitcrows**	**Cotingas, Cuervos-Fruteros**		
33	*Conioptilon mcilhennyi*	Black-faced Cotinga	Cotinga de Cara Negra	L,V	1,4,5
34	*Lipaugus vociferans*	Screaming Piha	Piha Gritona	L	7,8
	Family Troglodytidae	**Wrens**	**Cucaracheros**		
35	*Campylorhynchus turdinus*	Thrush-like Wren	Cucarachero Zorzal	L	1,3,5,7
36	*Cantorchilus leucotis*	Buff-breasted Wren	Cucarachero de Pecho Anteado	L	4
	Family Donacobiidae	**Donacobius**	**Donacobio**		
37	*Donacobius atricapilla*	Black-capped Donacobius	Donacabio	L	8

	Family Turdidae	**Thrushes**	**Zorzales**		
38	*Turdus hauxwelli*	Hauxwell's Thrush	Zorzal de Hauxwell	L	1
	Family Thraupidae	**Tanagers**	**Tangaras**		
39	*Ramphocelus carbo*	Silver-beaked Tanager	Tangara de Pico Plateado	L,V	6,8
40	*Tangara schrankii*	Green-and-Gold Tanager	Tangara Verde y Dorada	L,V	8
41	*Thraupis palmarum*	Palm Tanager	Tangara de Palmeras	L,V	8
42	*Saltator maximus*	Buff-throated Saltator	Tangara de Palmeras	V	8
	Family Cardinalidae	**Grosbeak**	**Picogruesos**		
43	*Cyanoloxia cyanoides*	Blue-black Grosbeak	Picogrueso Negro Azulado	L	6
	Family Icteridae	**Oropendolas & Allies**	**Oropéndolas y similares**		
44	*Psarocolius decumanus*	Crested Oropendola	Oropéndoa Crestada	L	6
45	*Sittasomus griseicapillus*	Russet-backed Oropendola	Oropéndola de Dorso Bermejo	L	4
46	*Cacicus cela*	Yellow-rumped Cacique	Cacique de Lomo Amarillo	L	6

L: Listened
V: Viewed

III.   STAFF

We have the following staff:

- **Field Assistant:** Sr. Juan Inuma.

Functions: Carry out field assistance volunteers, researchers and / or others who visit IGFS, support the execution of the programmed activities of the different projects that are being executed.

- **Field Assistant:** Máximo Miranda.

Functions: Carry out field assistance volunteers, researchers and / or others who visit IGFS, support the execution of the programmed activities of the different projects that are being executed.

- **Field Assistant:** Sr. Celso Ihuaraqui.

Functions: Carry out field assistance volunteers, researchers and / or others who visit IGFS, support the execution of the programmed activities of the different projects that are being executed.

- **Technical Assistant:** Noe Huaraca Charca.

Functions: Supervise and direct the work of field assistants and volunteers, schedule activities in the different projects under their responsibility.

- **Technical Assistant:** Mariana Paz Mendoza.

Functions: Supervise and direct the work of field assistants and volunteers, schedule activities in the different projects under their responsibility.

- **Technical Assistant:** Daxs Coayla

Functions: Supervise and direct the work of field assistants and volunteers, schedule activities in the different projects under their responsibility.

- **Projects Boss:** Jan Brack Faura.

Functions: Manager of the area, supervise and direct the work of the field assistants, technical assistants, volunteers and students, program activities in the different projects that have been executed, program personnel francs, as well as manage the different materials needed to the development of the projects.