



Saola Working Group Annual Report 2019

Achievements and Highlights



Overview

This is an annual report of the significant achievements of The Saola Working Group in the last 12 months. In 2019, our primary focus has been on the ongoing search for the last remaining wild Saola in Lao PDR and Vietnam. Without partner and donor support, our program would not be possible. Here we summarize the many highlights and achievements, made possible by your support, from January to December 2019.

Some of the biggest achievements of the year include:

1. SWG has collected an enormous amount of data from our camera trap work in both countries; In Lao PDR, the total trap nights between 2017 and 2019 was 96,616 and in Vietnam the total trap nights from November 2018 and throughout 2019 was 23,144. The data has now been analysed for KXNM in Lao PDR.
2. Some species caught on the camera traps include Large-antlered muntjac, Annamite striped rabbit, Owston's Civet, Marbled cat, Crested Argus, Pangolin, Hog Badger, Asiatic black bear and Red shanked douc.
3. Dung work has been very active with 173 dung kits produced this year and over 95 people trained on how to use them. 26 dung samples were analysed.
4. Negotiations were completed with the Government of Vietnam to begin construction of the Saola and Endangered Ungulate Captive Breeding Centre in Bach Ma National Park, Vietnam
5. The new Governance Body was formed and has been very active, supporting decision-making within SWG.
6. A SWG Conservation Strategy Group has been formed and was busy drafting the Strategy and Action Plan for the coming 12 months (2020) and beyond. This has helped formalize some points around risk and priorities.
7. SWG was successful in securing a National Geographic Society grant which will allow us to carry out the largest camera trap survey so far, due to start in early 2020.

Some key priorities for 2020 include:

- Pilot new detection method(s) and carrying out the largest camera trap survey to date
- Develop the basic field capacity necessary for Saola capture
- Ensure the Breeding Centre in Bach Ma operational and ready to receive animals
- Build on our in-country network of partners to facilitate smooth implementation of all field work
- Secure permissions to capture Saola in both countries

Report structure

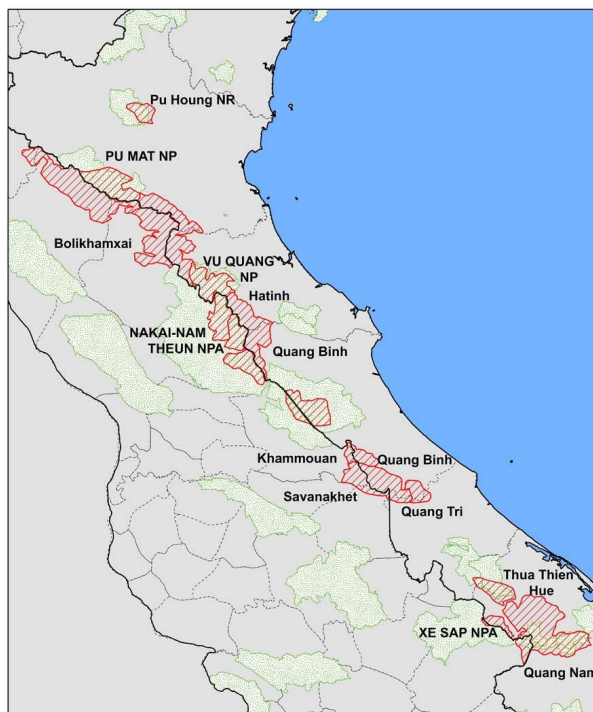
SWG activities fall into six objective-themed categories:

- i) Detect Saola and Large-antlered Muntjac (LaM)
- ii) Capture Saola and LaM
- iii) Ex-situ breeding of captured animals
- iv) In-situ conservation of Saola, Saola habitat and other Annamite biodiversity

v) Raise support for the IUCN's One Plan Approach to Saola Conservation

vi) National capacity building and mentoring

Highlights and achievements in January to December 2019 are summarized as progress made within these categories. Activities are based within Saola range in both Lao PDR and Vietnam, with key sites illustrated on the map below.



Priority sites in Lao PDR and Vietnam

As SWG can't work in all potential areas where Saola might be found, a small number of priority sites need to be identified in both Lao PDR and Vietnam as having the highest likelihood of containing Saola. A brief summary of the reasons to be working in each of the key sites can be found in the Annex.

Objective 1. Detect Saola and Large-antlered Muntjac (LaM)

In the last year we have continued to employ intensive efforts across priority sites in Lao PDR and Vietnam to detect wild Saola, using a mixture of camera-traps, local knowledge, forest surveys and DNA analysis of dung samples. Frequent indirect reports from our growing network of local informants suggest that Saola are still out there, in very low densities. Analysis of a massive backlog of thousands of camera trap images is nearly complete and the results are presented below.

Focused Camera Trap detection surveys in Lao PDR and Vietnam

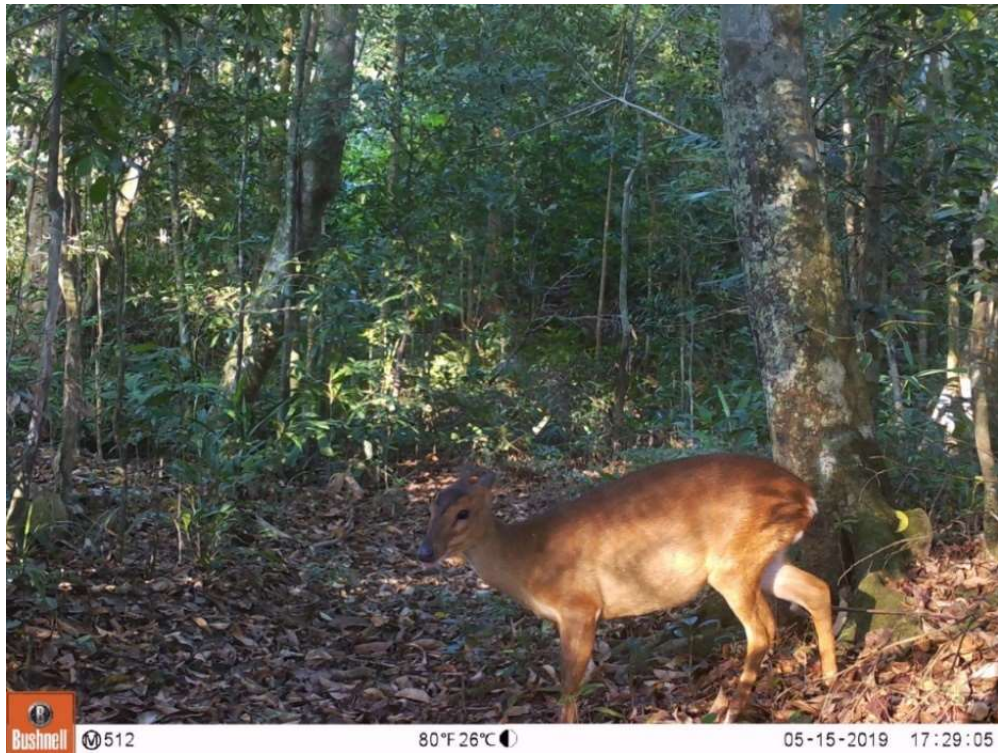
In Lao PDR, camera traps were active at four different sites in three provinces during the year. Below is a summary of the survey efforts and camera trap stations deployed at the sites between 2017 to 2019.

Province	Site	Partner	Survey period	Trapnights	Camera station	Damage	
						Stolen	Broken
Khammouane	KXNM	WCA/ICBF	June 2017- Nov 2019	63,977	311	20	22
Xekong	Pale	WWF	July 2018- April 2019	26,991	181	1	9
Bolikhamxay	PST	WCS	June- Nov 2019	5,151	47	0	1
Bolikhamxay	Thongmixay	LENS2	August- Nov 2019	497	7	0	0
			Total	96,616	546	21	32

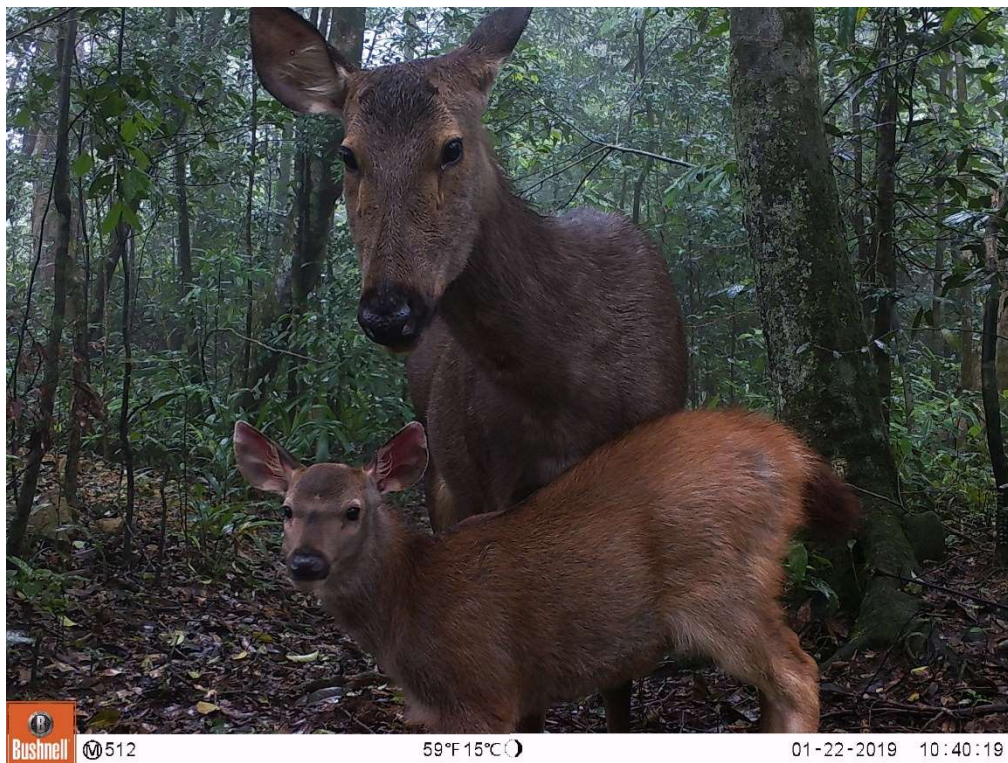
In KXNM, in June/July 2017, there was a preliminary survey in which basic information on logistics and habitat, wildlife and threats was collected and 11 camera traps were set. Following this, in August/September 2017, these 11 cameras were checked (and SD cards were collected) and 94 additional ones were set. In April the following year in 2018, there was a mission to retrieve the 105 camera traps (12 had been stolen and 1 was broken). In May/June 2018, there was the second stage of the camera trap work and 134 camera traps were set, which were then checked in Sept/October and SD cards were collected (4 had been stolen and 16 were broken) and 50 new cameras were added. In April 2019, the older 114 cameras were retrieved (4 had been stolen and 5 were broken), and the 50 new cameras were checked (and SD cards were collected). In October/November 2019, the remaining 50 cameras were retrieved (1 was broken). During this mission, the Lao field team also investigated potential sites for placing camera traps in preparation for the recently awarded National Geographic Society grant work entitled "Finding Saola, Saving Saola Through the IUCN One Plan Approach in Lao PDR" which is due to start in early 2020. The number of camera trap night for each session is summarised below:

Sessions	Number of Station	Trapnights
1 (Aug17-Apr18)	105	16473
2 (Jun18-Oct18)	134	13127
3 (Oct18-May19)	161	27771
4 (May19-Oct19)	51	6749

These cameras have provided some really exciting news regarding species present in KXNM, and at least 32 species of large mammal have been detected by camera trapping. We can demonstrate populations of globally significant species such as Bourret's Box Turtle, Crested Argus, Red-shanked Douc, Nomascus gibbons, Rooseveltorum-group muntjacs & Annamite Striped Rabbit. Large-antlered Muntjac (LaM) was detected at over 50% of camera-trap stations and was the most commonly photographed species at the site. This high frequency of LaM detections and the robust populations of large, ground dwelling mammals makes LaM captures realistic once the Breeding Centre is ready. It is also a positive indication that Saola may still be present in these areas. The full species list and detection rates can be found in the table in the appendix. This is the most exciting news from our fieldwork during this period. Below are some recent photos from camera traps in KXNM:



Large-antlered Muntjac



Sambar deer



501

65°F 18°C

02-24-2019 08:57:32

Sambar deer

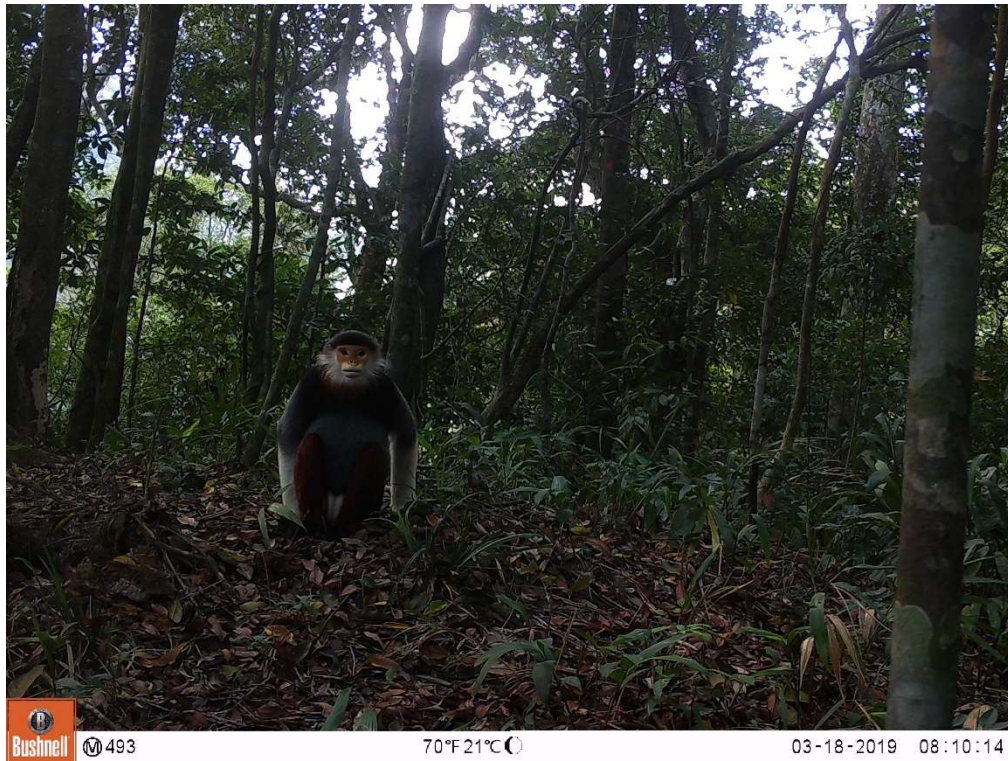


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63°F 17°C

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Crested Argus



Red shanked Douc



Otter

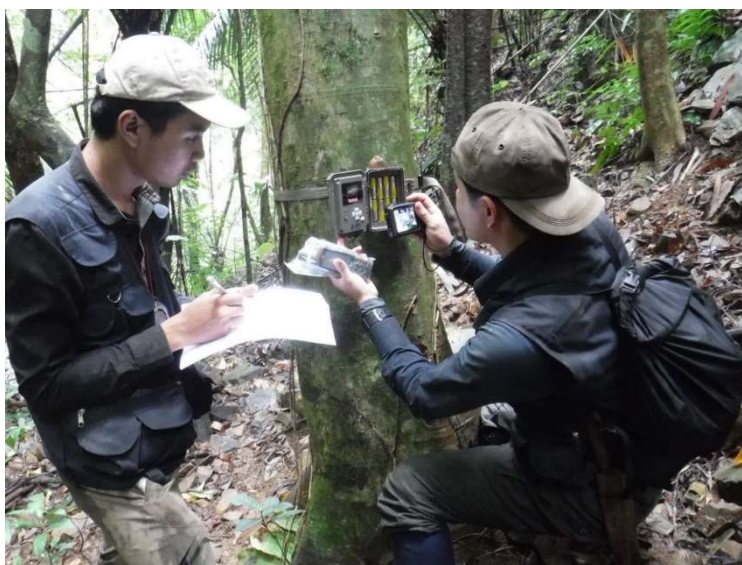


Annamite Striped Rabbit



Asiatic black bear

We also placed 146 camera traps in Xekong Province (Xe Sap) in July 2018 during which a preliminary survey was also carried out collecting basic information on logistics and habitat, wildlife and threats. In November 2018, all 146 cameras were checked and 51 were retrieved (6 were broken). Finally, in April 2019, the remaining 95 cameras were retrieved (1 had been stolen and 3 were broken). This study resulted in about 26,991 camera trap nights. Data analysis from these cameras is still ongoing and will be shared in early 2020. In 2019 we also started carrying out camera trap monitoring work in Bolikhamxai Province in PST in collaboration with WCS and in Viengthong in collaboration with LENS2. In PST. In June 2019 there was a preliminary survey in which basic information on logistics and habitat, wildlife and threats was collected, and 45 camera traps were set. These cameras were then checked in October/November 2019 and 1 additional camera was set (1 was broken). This work is ongoing.



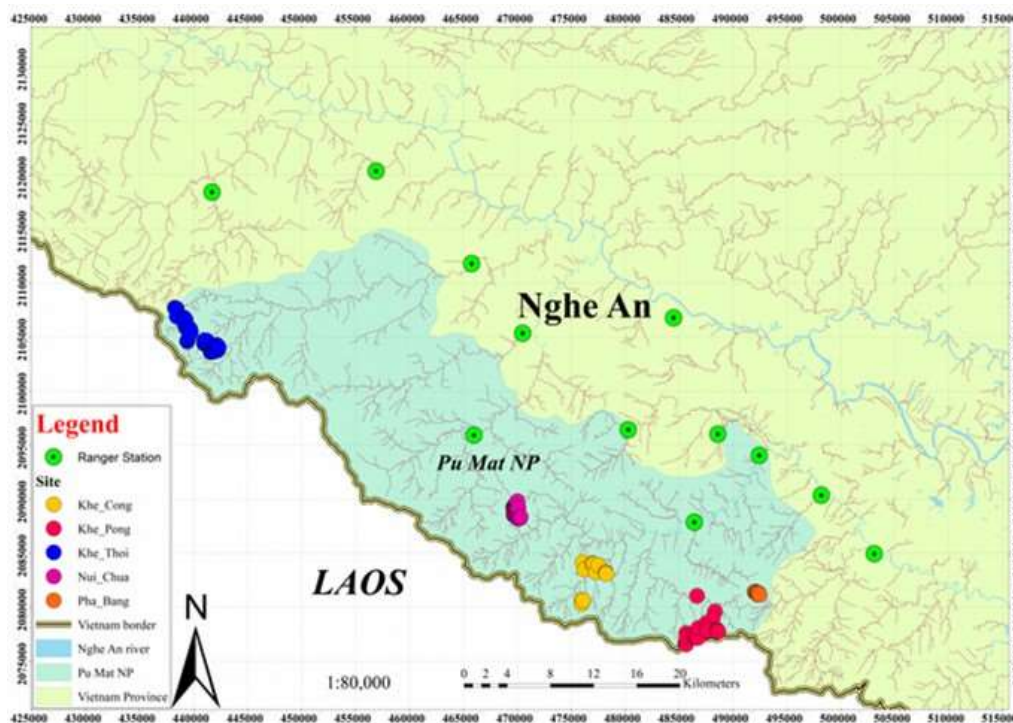
Field staff, Hamnong and Ley, setting a camera trap in Bolikhamxay Province, Lao PDR, Aug 2019.



Hamnong collecting habitat information at a camera station, KXNM, Lao PDR, Oct 2019

In Vietnam, targeted camera trap work was carried out in Pu Mat National Park. Traps were set and maintained by a team from Vinh University, with limited oversight from Nicholas Wilkinson. Jeremy Holden and Vladimir Dinets also assisted with trap placement in Jan 2018 in Nui Chua and Khe Thoi. Trap locations were informed by expert opinion and local knowledge (Thai and H'mong ethnic groups). There were a total of 152 units set between January and December 2018; 75 units were set in January/February in two sites (Khe Thoi and Nui Chua) and 77 units were set in November/December 2018 (Khe Pong, Khe Cong and Pha Bang) within the National Park (see map below). The total trap nights from Nov 2018 and throughout 2019 is 23,144 (not including non-functioning cameras)

- Khe Pong route: 6,669 trap nights
- Khe Cong: 6,762 trap nights
- Pha Bang: 2,651 trap nights
- Nui Chua: 3,465 trap nights
- Khe Thoi: 3,597 trap nights



Map of Pu Mat showing the different sites where camera traps were set

Although no Saola have been detected, we have found frequent detection of other common ungulates (wild pig, serow, muntjac) and rare species detected include Asiatic black bear, Owstons Civet (December 2018 in Khe Phong), Marbled cat, Crested Argus, Pangolin and Hog Badger, all of which were detected in 2018. Images from this period have not been double-checked so some further images could be identified. From the 152 camera traps set in Pu Mat, in 5 sites, the following rare species were caught on camera at the following frequencies:

Crested argus	4
Serow	81
Bear	4
Pangolin	2
Owston's civet	6
Marbled cat	1

Much data has been generated which will be written up into reports/ academic publications will be produced from these data in 2020 to be shared with government and partners.

Saola dung search, collection & DNA analysis (including training of partners)

The SWG created custom designed Saola dung collection kits, carefully tailored to be light and durable for carrying in the field, and able to preserve genetic material. Our team also designed training materials and protocols so that kits can be used by partners working in Saola range and by local informants. In late 2019, Saola specific primers were tested with Saola material at the University of Copenhagen. Both showed a positive result with Saola material and not with African buffalo. In conclusion, we have a confirmed working set of primers to test for Saola DNA.

In Lao PDR, ranger teams and community members have been trained and are using dung collection kits. The sites, training dates, number of people trained, kits distributed and samples analysed are summarised in the table below.

Site	First dung kit training	No. of retraining	No. people trained	No. of kits	No. samples collected/analyzed
PST	Oct 2018	May 2019	14	18	2
WWF XS	Nov 2018		2	4	2
ICBF KXNM	Oct 2018	June 2019	6	7	4
NNT	June 2019	Aug 2019	16	16	0
PCV PES	June 2019	Aug 2019	20	19	1
LENS 2	Aug 2019		6	6	0
Ban Thongmixay	Dec 2018	Aug 2019	2	5	0
Ban Namkou	Dec 2018		2	1	0

In Vietnam, dung kit training was carried out and 28 dung kits were distributed to WWF Rangers (10 kits in May) and Vietnam Government Rangers (18 kits in June) from Hue and Quang Nam Saola Nature Reserves. There was also training carried out and the distribution of 51 kits to 14 villagers from 5 villages in 4 provinces between May and June 2019:

- Cu Pai (3 villagers - 16 dung kits in June)
- Huong Quang (2 villagers - 5 dung kits in June)
- A Roang (3 villagers - 10 dung kits in May)

- A Rang (3 villagers - 10 dung kits in May)
- A Banh (3 villagers - 10 dung kits in May)

There was additionally dung kit training and distribution of kits to rangers in June from Saola Hue Natural Reserve (5 forest rangers), Bac Huong Hoa Nature Reserve (2 forest rangers), Vu Quang National Park (3 forest rangers), Phong Nha Ke Bang National Park (3 forest rangers). The management boards of the protected areas have supported the training on dung kit use and are regularly in contact with CERD whenever they have information and are efficient at sending the dung to the laboratory for analysis. 17 unique samples were analyzed from Vietnam (Pu Mat National Park = 10, Phong Nha Ke Bang NP = 6, Vu Quang NP = 2).

No Saola have yet been detected via dung analysis but each sample helps us to better improve our identification techniques. Of those that could be identified, samples came from Stump-tailed macaque (n= 2), serow (n =12), Large Antlered Muntjac (n=2) and wild pig (n=5).

Integrated detection activities focused on local knowledge-led activities

In Lao PDR, integrated local knowledge led detection efforts in Bolikhamxai have led to identification of two high priority communities for integral involvement in Saola detection efforts. The SWG acted quickly on this positive news, by initiating camera trap monitoring with our partner LENS2, and dung collection for Saola detection in these areas. Communities around two additional other forest areas are also priorities for further engagement, and opportunities for engagement are being explored through the help of partner organisations. Another potential Saola lead in a fifth area/community is being actively pursued.

In Vietnam, the interview survey team has conducted interviews in 18 villages in the provinces of Nghe An, Ha Tinh, Quang Nam, Hue, Quang Binh and Quang Tri. In Pu Huong Nature Reserve, local hunter interviews led to recruitment of two expert hunters to assist with field research in nearby Pu Mat National Park (which has higher potential to still hold Saola). The team received credible reports of recent Saola activity (i.e. within 6 months), in two locations, in Quang Tri and Vu Quang. Follow up of a report of recent Saola activity in Quang Tri was carried out during a 10-day trip by two members of the Vinh team led by a local informant in June 2019. There was no dung detected. There are several leads from local informants requiring further follow up. Pilot hunter-led search for Saola sign and dung is being carried out in Quang Tri, starting in December.

Other achievements:

- The 'Response guidelines following a Saola detection in the forest' has been produced (version April 2019). This document outlines the Saola Working Group (SWG) protocols for when an individual Saola is detected (i.e a detection that is a 100% certainty) in the forest prior to having permission to capture it.
- A communication strategy in the case of a Saola detection in the wild has been drafted, and will be circulated to partners and stakeholders for review and finalization.

- In Lao PDR, a strong team has been recruited and trained and is now operational to handle detection activities (camera traps, community outreach, data management), in situ partner capacity building and governmental liaisons for One Plan support. Our next target, when funding becomes available, is to form a similar SWG Research Team in Vietnam. In both countries, Capture Teams need to be developed, with progress made identifying potential members.
- Camera trap data are being compiled into a database. Exploratory discussions with Wildlife Protection Solutions are underway to investigate the use of AI for managing camera trap data, and recommendation on improved camera trap maintenance
- Environmental DNA (eDNA) is an innovative non-invasive sampling technique used for biodiversity surveys and to detect rare species. It consists of collecting water samples from streams and rivers, which are later analyzed to extract DNA from animals that came into contact with the water. SWG are trialling this detection approach for identifying the presence of Saola DNA in water samples in Lao PDR. 29 eDNA water samples have been collected from KXNM Protected Area and Nakai-Nam Theun Protected Area (NNT) in collaboration with Project Anoulak (and in consultation with partners Vigilife, Beauval Nature and Spygen).
- Towards the end of the year, some SWG members had a consultation with representatives from Cybertrackers, an international collective of professional wildlife trackers who train and evaluate animal trackers all over the world. They discussed ideas for evaluating local hunters in Lao PDR and Vietnam for tracking skills, and the possibility of using international tracking experts to help in our detection work. The discussion is ongoing.

Objective 2. Capture wild Saola and Large-antlered Muntjac

The SWG has continued to discuss and investigate different potential methods to capture Saola and LAM. In 2020, the group will work towards achieving all tasks needed to prepare for Saola capture so that it will be feasible to capture in 2021, but it may be possible sooner. Essential preparation includes training a field team in ungulate handling and veterinary protocols, training capture dogs and dog handlers, establishing transport protocols, and procuring all necessary drugs and equipment.

The effectiveness of using hunting dogs to capture Saola

The capture method of using dogs has been reviewed by SWG for its potential effectiveness. The recommendations resulting from this assessment define the appropriate situations and requirements of training before implementation. For example, it is recommended 'Capture dogs are only used in the case of a definite, fine-scale detection (i.e. we know that a Saola has been in a given area within the last few days)'. Further details are available in the report: Dog Research in Nakai Nam Theun National Protected Area, Lao PDR: trip summary and capture dog recommendations, available on request.



The field time for the capture dog mission in Lao

Other achievements:

- SWG now has a final version of 'Rapid Response Plan for the Incidental Capture of a Saola' (Version April 2019), including Vietnamese translation. This document outlines the Saola Working Group (SWG) protocols for what to do in the event a Saola is captured incidentally and reported to the SWG. Potential scenarios include villagers find or catch one and keep in or near a village and notify local authorities, a ranger team finds one in a snare or in a village, local authorities take possession of one through a confiscation and notify SWG, an SWG field team finds one in a snare or in a village, or SWG is notified of a private citizen holding a Saola (e.g. in a zoo or private collection).
- A list has been compiled of details of drugs/equipment needed (prepared by international vet team), associated costs, permits and where they can be sourced. Investigation into helicopter options in Laos with Lao Skyway have been carried out, including a helicopter briefing at Lao skyway headquarters in Vientiane with an introduction to key staff and tour of the facility.

Objective 3. Ex-situ breeding of captured animals

The Centre for captive breeding of Saola will be built in Bach Ma National Park, Vietnam. Since signing the Memorandum of Understanding (MoU) in late 2018, SWG has received agreement from MARD for initial construction before the Project Document has been signed. Funding was previously secured for initial construction.

Bach Ma site visit

In November 2019 a site visit took place. The team was led by Radoslaw Ratajszczak (who represented the SWG Captive Breeding Task Team and also, as his zoo will be responsible for the administration of

the Centre once it is up and running) with other members of the team including Tuan Bendixsen (Vietnam Director Animals Asia, for his vast experience carrying out site visits such as this in Vietnam and dealing with MARD in this situation and also, to translate when necessary), Julia (as architect representing the SWG), Nguyen Manh Hiep (from MARD) and Mr Nam, Director of Bach Ma NP. The trip was very successful and a quote has been submitted by the construction company for the full work. Additionally, a 3D graphic has been produced of the first phase of the Breeding Centre from Julia Hanuliakova (an architect from 'Zoo Design' who gives her services free of charge). The contractors estimate the work will take 3 to 4 months to complete. We expect initial construction to begin in early 2020.

There is also a need to have a holding facility under expert care in Lao PDR to temporarily hold animals captured in-country. A site that is currently being investigated and seems to be the most suitable option is the Ban Keun Zoo run by the Lao PDR Conservation Trust for Wildlife (LCTW). SWG is working closely with LCTW and proposed plans and a budget to construct and manage a temporary Saola enclosure at this site have already been drafted.

Other achievements:

- A successful test run and training exercise in rescuing and transporting an animal has recently occurred. A baby Serow was rescued recently by the Cat Tien National Park Wildlife Rescue Centre, led by Dr Bac Tien Hai and is being cared for at Bach Ma. This team have committed to be the SWG First Response team, in the event of an unexpected Saola or LAM capture in Vietnam. Wroclaw Zoo are providing funding and technical support.



- When a muntjac is caught, it is crucial that it is handled in the best way possible, including the housing/shelter, diet, veterinary care and general management provided. As such, a Muntjac handling protocol has been finalised (version April 2019)

Objective 4. In situ management for Saola and other Annamite biodiversity

The SWG's objective in this area is to work with key stakeholders to implement effective conservation management of priority sites. In both countries we already have close collaborations with many partners, but moving forward we plan to further clarify the different roles of each to work more effectively to best support Saola conservation. The table below summaries our key partners in each country and what they have been working on in 2019.

Partner	Location	Role
WCS Lao PDR	Bolikhamxai Province (Phou Si Thone and Nam Kading), Lao PDR	Dung collection for SWG, camera trapping, law enforcement, village funds for forest and wildlife protection, livelihood development.
Integrated Conservation of Biodiversity and Forests (ICBF)	Khoun Xe Nongma Protected Area (KXNM), Lao PDR	Law enforcement, dung collection for SWG
Asian Arks	Khoun Xe Nongma Protected Area (KXNM), Lao PDR	Applying for permissions for threat reduction patrols in the short term and a conservation concession.
WWF Lao PDR	XeKong province, Lao PDR	Law enforcement, camera trapping for SWG, dung work for SWG, outreach.
LENS 2 project	Bolikhamxai Province, Lao PDR	Law enforcement, dung collection for SWG, camera trapping for SWG.
Project Anoulak	Nakai-Nam Theun (NNT) National Protected Area, Lao PDR	Law enforcement, research, camera trapping collaboration with SWG, water samples collaboration with SWG (also looking for other species).
WMPA/NNT	Nakai-Nam Theun (NNT) National Protected Area, Lao PDR	Dung collection for SWG, camera trapping (not for SWG), law enforcement, livelihood improvement, land use planning, research
National University of Lao PDR	Bolikhamxai Province, Lao PDR	Dung collection for SWG, law enforcement, PES (Psou chom voy site).
IUCN Lao PDR		MoU will be signed by IUCN on behalf of SWG
Lao Wildlife Conservation Association (WCA)	Khoun Xe Nongma Protected Area (KXNM), Laving Lavern (LL), Lao PDR	Camera trapping and dung collection for SWG in KXNM. Interview surveys (non SWG related), law enforcement (small scale) in LL
Lao Conservation Trust for Wildlife (LCTW)	Ban Keun, Lao PDR	Support a temporary holding facility for Saola
The Ministry of Agriculture and Forestry represented by the Department of Forestry, Lao PDR	Central and provincial level, Lao PDR	Signing the MoU and approving annual work plans
PAFO, DAFO, military, villager	Lao PDR	Dung collection, camera trapping, law enforcement, outreach, livelihood
Pu Huong management	Pu Huong NR, Vietnam	Interview local hunter, fieldwork dog

Partner	Location	Role
board		detection, survey in core zone
Pu Mat management board	Pu mat NP, Vietnam	Patrolling, law enforcement, camera traps, interview local hunters, dung analysis, reward for local hunters
Save Vietnam Wildlife	Pu Mat NP, Vietnam	Camera traps, dung analysis
Leibniz Institute of Zoo and Wildlife	Pu Mat NP, Vietnam	Camera traps, dung analysis
Floral and Fauna International (FFI)	Pu Mat NP, Vietnam	Camera traps, patrolling, law enforcement, dung analysis
Vu Quang management board	Vu Quang NP, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Phong Nha Ke Bang management board	Phong Nha Ke Bang NP, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
IEBR		Camera traps Interview local hunters, dung analysis, reward for local hunters
Viet Nature		Camera traps, interview local hunters
Dakrong management board	Dakrong NR, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Bac Huong Hoa management board	Bac Hường Hoa NR, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Phong Dien management board	Phong Dien NR, Vietnam	Camera traps, interview local hunters, dung analysis
WWF Vietnam	Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Saola Hue management board	Saola Hue NR, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Saola Quang nam management board	Saola Quang Nam NR, Vietnam	Camera traps, interview local hunters, dung analysis, reward for local hunters
Green Viet	Vietnam	Camera traps, interview local hunters, reward for local hunters
Bidoup Nui Ba management board	Bidoup Nui Ba, Vietnam	Camera traps, interview local hunters on LAM
The Southern Institute of Ecology (SIE)	Vietnam	Camera traps, interview local hunters



A football event between SWG and our government partners in Lao PDR

Objective 5. Raise support for the IUCN One Plan Approach to Saola Conservation

One Plan meeting in Hanoi

In March, the Saola Working Group hosted a national One Plan Meeting in Hanoi to promote the Saola conservation program. This meeting was co-hosted by the Government of Vietnam's Administration of Forestry of the Ministry of Agriculture and Rural Development.



Bill Robichaud giving the opening speech

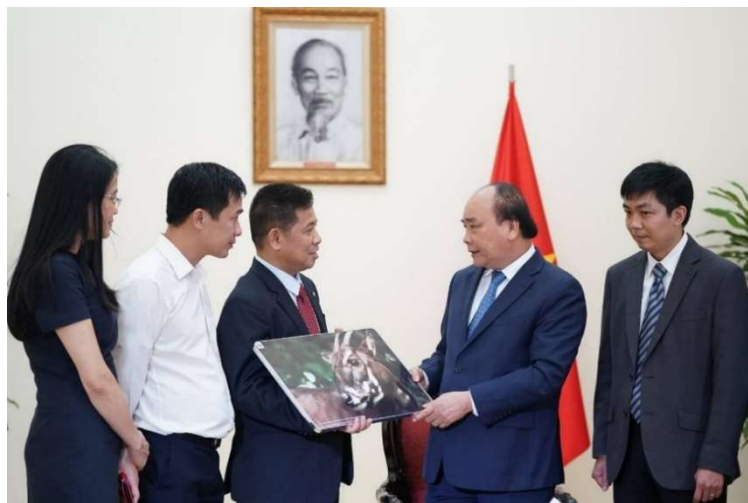
More than 40 conservationists participated, from conservation organizations, government agencies, and academic institutions throughout the country, and the SWG. The meeting concluded with an official

launch ceremony for the signing of the MoU. The meeting was a real success because people were grateful to hear the latest news and be invited to give their views.



Participants at the One Plan meeting in Hanoi

In September, Dr Van Ngoc Thinh, Country Director for WWF-Vietnam met with Vietnam's Prime Minister, H.E. Nguyen Xuan Phuc, who publicly declared his strong support for saving the Saola. This is a landmark success to publicly engage with Vietnam's highest-level minister and receive his public declaration of support for conservation.



Country Director for WWF-Vietnam meeting with Vietnam's Prime Minister

In Lao PDR, the SWG team has been busy drafting an MoU which will be signed with the government by IUCN on behalf of the SWG. A draft has already been shared within the SWG network and external

advisors for review, and has been professionally translated into Lao language. It has also been informally reviewed by the Ministry of Agriculture and Forestry GoL. It is now close to being ready for submission. The MOU is essential to enable SWG to carry out detection and capture work in Lao PDR that is necessary to save Saola. It is planned to submit it in early 2020, with the aim to have it signed by the end of 2020 at the latest.

Other achievements:

- SWG is now on the newly launched One Green Earth website to raise awareness and funds (www.1greeneearth.com)
- In March 2019 there was an Isle of Man awareness event organised by Dr Lorraine Scotson, with Simon Hedges and Douglas Richardson, which included a SWG-hosted dinner. The event led to two Saola focused newspaper articles in the Manx Examiner (Island newspaper) and two Saola focused Radio shows (Women Today: Bill Robichaud & Manx Countryside: Simon and Douglas). All media correspondence was positive with follow up offered for future events.

Simon and Douglas's interview on Manx Radio Country Side can be heard here (go to 2.30 minutes)
<https://www.manxradio.com/radioplayer/od/items/3135/>

Bill Robichaud's interview on Manx Radio Woman Today can be heard here (go to 38.40 minutes):
<https://www.manxradio.com/radioplayer/od/items/3092/>

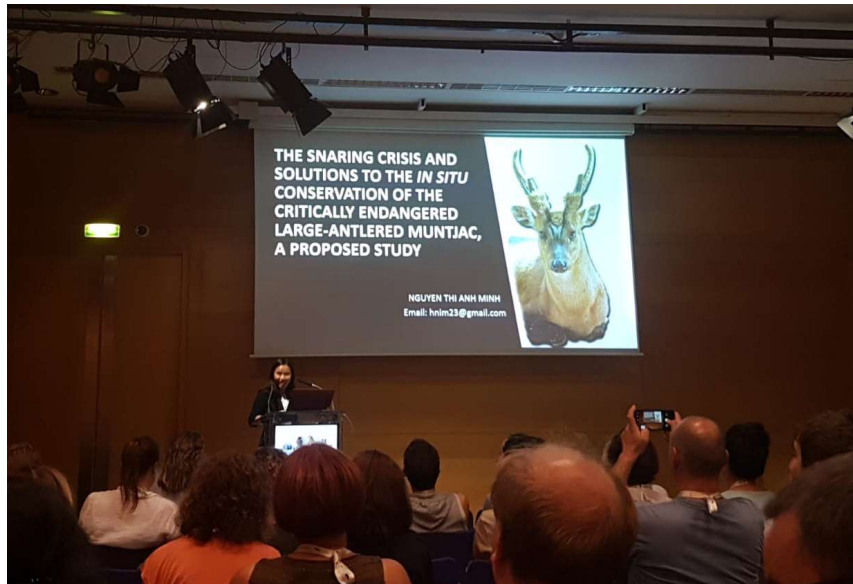
- SWG's Senior Technical Advisor, Rob Timmins, gave a very interesting interview for a podcast episode of Escape the Zoo, in which he discusses new species discoveries, and talks about Saola and Annamite conservation. You can listen to it here:

<https://apple.co/2IKFsgt> or <https://bit.ly/35PZVpR>

Objective 6. National Capacity Building and Mentoring

Since receiving the first SWG Women For Annamites Conservation Fund in December, Nguyen Thi Anh Minh (Minh) from Vietnam has changed the focus of her project due to restrictions with permissions to carry out the original work. Her new project is called 'The snaring disaster and optimistic solutions for in situ wildlife conservation in Vietnam and Laos'. The Critically Endangered Large-antlered Muntjac (*Muntiacus vuquangensis*) is one of several threatened endemic species in the Annamites Mountains of Vietnam and Laos. These species are under high pressure from intensive illegal commercial snaring and wildlife trade. In situ conservation is failing partly because of uncertainty about threatened species population viability with regard to threshold snare densities resulting in population collapse. It is hoped that the project results will help contribute invaluable knowledge to guide better management strategies and raise awareness for local communities as well as the authorities. Minh will set camera traps in Nakai to monitor the 'fake' snares to determine how real snares impact wildlife populations. It is anticipated that the snares will be monitored in this way for between three and six months. Up to 200 camera-traps will be set up at 50 to 100 fake snare locations chosen by local hunters. The study will last 12 months and it is planned that in early 2020, Minh will set camera traps in Nakai. This work will be

done in collaboration with Project Anoulak. It is funded by the Annamite grant and NGS Early Career Grant and her team has also applied for a grant from Conservation Leadership programme to assist her work on snaring in Khoun Xay Nam Ma and Bidoup – Nui Ba National Park.



Minh giving a presentation during the EAZA conference in September 2019

During this year a second grantee, Tran Thi Kim Hoan, has received SWG support. She is working on a project entitled “Integrated value chain and conservation development of *Scaphium macropodum* for enhanced income security of ethnic minority communities in Quang Nam, Vietnam.” The seeds of the tree species *Scaphium macropodum* are an important source of Non-timber forest products (NTFPs), due to their use as Traditional Medicine. Harvesting of seeds is not practiced sustainably, creating a significant negative impact on biodiversity and the livelihoods of local people. The study was focused in Areh and Xa Nghin Village, Dong Giang district, Quang Nam province, Vietnam in remote mountainous area where Co Tu Ethnic minority group is living from May 2019 to March 2020. The research team made 3 visits in May, July and December 2019 to collect data on the nature, economy, society and the current livelihood status in the research area. There were 4 discussion groups held in 2 villages, involving a total of 103 participants. In training sections conducted in the two villages, the researchers introduced the benefits that malva nut trees can bring to locals together with the costs. It takes about 24 years to grow; however, after that, the planters can regularly harvest nuts and sell at a very good price. Planting a malva nut tree can be an investment for each family, investing for years into the future. The main results from the interviews showed that almost all participants had little knowledge about the benefits of malva nut trees and they had never planted malva nut trees but only seen the tree in forest. The participants showed a willingness to be trained and learn more about the tree’s benefits and its contribution to improve their income. This is of great importance as in recent years more and more people sought out the trees for the nuts and, as the conventional harvest involves chopping down the trees, the trees were almost completely exploited, even at the young age. This impacts significantly on the forest ecosystem.

SWG organisational structure

The SWG's Organisational Structure has been optimized through the formation of a new Governance Body, a Conservation Strategy Group and a Fundraising Group. The new Governance Body is now operating, and supporting decision-making within SWG. A SWG Conservation Strategy Group has been busy developing a plan for a long-term strategy for the coming 12 months (2020) and beyond, facilitated by Jamie Copsey of the IUCN SSC Conservation Planning Specialist Group. It is planned that the wider SWG members will have a chance to input in early 2020.

Financial Summary

Below is a summary of income and expenditure during 2019.

Income

Starting balance 01 Jan 2019: \$257,980

Total income 2019: \$125,821

Funds on hand 2019: **\$383,801**

Donations (above \$3,000):

Organization	Amount USD (\$)	Restricted/ Unrestricted
Wroclaw Zoo	19,975	Restricted
Minnesota Zoo	5,000	Restricted
Wildlife Reserves Singapore (WRS)	15,000	Restricted
Zoo Boise Conservation Fund/ Friends of Zoo Boise	4,634	Unrestricted
City of Prague	7,462	Unrestricted
Brevard Zoo	3,000	Unrestricted
Zoo Zlin	9,950	Unrestricted
Wildlife Conservation Network	14,517	Unrestricted
GLAZA (LA Zoo)	20,000	Unrestricted
Leipzig Zoo	10,973	Unrestricted
Jacksonville American Association of Zookeepers (AAZK)	4,000	Unrestricted
	114,511	

Donations below \$3,000:

Galveston Chapter of the American Association of Zookeepers (AAZK)

National Capital chapter of the AAZK

Safari West AAZK

Zoo Ostrava

Zoo Wilhema

Henry Vilas Zoo

Saola restaurant at Ostrava Zoo

Individual donors:

Harald Roesch, Bill Odle, Molly Smith, Mary-Charlotte Domandi, Patrik Gabrys, Leonard Gantley, Kent Redford, Vikram Chowdiah, Dawn Falls, Liz Hendry, Anton Fritz, Michael Tate, Nancy Connolly Blum, Greg Eden, Evan Gedlinske, Julia Khismatullina, Molly Cordell, Madeleine Lam, Andrea Haverland, Giles Harris, Luis Fernando Orozco Mora, Peter Busa, Leonard Gantley, Scott Nishiki, Kathleen Judd, Perri Black, Andrew Holman, Janet Forman, Caroline ten Have, Ludi Price, Crystal Thomas, Ryan De Mott, Toni Busa

Expenditure

TOTAL: \$327,301

Category	Expense	Amount USD (\$)
Detection activities Lao PDR	Field activities Lao PDR (CT, interviews, dung kit materials)	36,338
	Office costs	8108
	National staff	24,075
	International consultant	52,292
Detection activities Vietnam	Field activities in Vietnam (CT, interviews, dung analysis)	39,108
	Vinh University staff	18,340
	International consultants	48,119
One Plan	Meeting Hanoi	12,000
Mentoring	Grant	5,000
Core running costs	Salaries	70,143
	Meetings (including travel and accommodation costs)	12,297
	Corporate services	114
	Telecommunication	780
	Bank fees	587
TOTAL		327,301

Note:

1. This excludes some DoO salary payments which GWC has advanced and SWG will be repaying in 2020.
2. The consultant payments include some back payments from before 2019

Net asset balance: \$56,500

Summary

This report highlights the major progress made by SWG in the last 12 months. The SWG is immensely grateful to all our members and to our funding and technical partners for their support, without which none of the incredibly important work would have been possible. We hope that you will continue your support, so that together we can save this unique and beautiful species from extinction. Please contact us if you are interested to support our work or to get involved.

For more information
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Annex

1. A brief summary of the reasons to be working in each of the key sites are described below, with input from Rob Timmins and Nicholas Wilkinson:

Lao PDR

Bolikhamxay (BKX): It is the only area in Lao PDR where there seems reasonable local knowledge that could be used to find Saola, which is important given that the local knowledge approach to finding Saola in BKX has the potential to be more efficient than using other approaches to find Saola in this area, with a few exceptions. The BKX strategy is multi-faceted, in and around Phou Sithone Endangered Species Conservation Area (PST ESCA)

Khoun Xe Nongma Protected Area (KXNM): In KXNM there is little hope of using local knowledge. In KXNM, an expert belief is that we have the best chance of finding Saola simply because the surrogate indicators all point in the right direction. These factors make camera trapping more favourable as a test of principle (there's a high probability that there are Saola to detect) which isn't the case in other sites.

Xe Kong (XK) province: As with KXNM, there is little hope of using local knowledge. XK is in worse shape than KXNM, but is still notably better than average.

Nakai–Nam Theun (NNT): It is believed that NNT is likely to hold a Saola but the problem is that local knowledge is very unlikely to help us find it, and other surrogates are too imprecise to pinpoint a likely small high probability area (the highest probability area is huge and remote). Therefore, the most effective approach here is to have patrol teams carry dung kits, and wait until we have developed a highly efficient detection method (i.e. dung/Saola detection dogs).

Vietnam

Pu Mat: Given Vinh University's long history working here, it was hope that this might aid in the ability to find the people who know where Saola might be. Pu Mat is among the places where it seems likely Saola would survive because of relatively remote areas, connected with large areas of forest in Lao PDR.

Quang Tri-Quang Binh: Focus on the Quang Tri-Quang Binh border area, which connects with KXNM-Laving Lavern, has been due to widespread perception from people in Vietnam and Lao PDR that this area is a good bet to contain Saola.

Vu Quang: This is an interesting area with similar advantages to Pu Mat, and a better ability to form good working relationships with knowledgeable local people.

2. A summary species list from the camera trap work that took place in KXNM, Lao PDR from 2017 to 2019, which was divided into 4 sessions over the course of nearly 2 years. The results for the different species caught on camera are recorded for each session, along with the number of camera trap stations at which they were photographed.

Frequency of capture of species by camera traps in KXNM between August 2017 and October 2019

Species	Session 1 (Aug17-Apr18)		Session 2 (Jun18-Oct18)		Session 3 (Oct18-May19)		Session 4 (May19-Oct19)		TOTAL	
	No. Stations	No. Photos	No. Stations	No. Photos	No. Stations	No. Photos	No. Stations	No. Photos	No. Stations	No. Photos
Annamite striped rabbit	28	137	10	65	35	349	10	82	83	633
Asiatic black bear	2	3	1	1	6	6	1	1	10	11
Asiatic brush tailed porcupine	28	263	8	125	25	222	3	5	64	615
Assam or Rhesus macaque	30	75	15	36	49	151	11	21	105	283
Bamboo rat	1	1	0	0	1	2	0	0	2	3
Binturong	2	3	2	2	6	7	0	0	10	12
Black giant squirrel	0	0	0	0	1	1	0	0	1	1
Chevrotain	13	36	2	9	0	0	0	0	15	45
Chinese serow	26	126	14	32	56	149	13	52	109	359
Common palm civet	41	335	45	300	75	561	23	192	184	1388
Crab eating mongoose	63	381	85	625	116	1330	32	323	296	2659
Crested argus	2	4	5	24	16	42	2	6	25	76
Domestic dog	13	23	7	7	8	10	2	2	30	42
Ferret badger	47	267	52	225	86	1275	29	624	214	2391
Francois langur	1	1	0	0	0	0	0	0	1	1
Gibbon	2	2	0	0	0	0	0	0	2	2
Grey peacock pheasant	19	90	15	24	33	126	13	149	80	389
Hog badger	2	5	8	9	7	11	1	1	18	26
Insect	16	41	62	169	85	274	10	15	173	499
Large antlered muntjac	73	1239	82	832	125	3231	33	501	313	5803
Large Indian civet	26	276	23	64	28	51	1	3	78	394
Leopard cat	6	6	0	0	2	2	0	0	8	8
Local people	17	26	9	14	24	50	9	16	59	106
Malayan porcupine	18	79	14	65	32	218	6	7	70	369

Frequency of capture of species by camera traps in KXNM between August 2017 and October 2019

Masked palm civet	44	159	57	143	76	287	33	132	210	721
Northern treeshrew	3	4	7	16	9	16	6	26	25	62
Otter	3	5	2	3	6	15	0	0	11	23
Pallas's squirrel	24	61	29	73	57	194	19	72	129	400
Pangolin	2	2	4	4	6	8	0	0	12	14
Pig tailed macaque	63	258	79	305	134	721	35	175	311	1459
Red cheeked squirrel	36	166	26	78	47	320	10	26	119	590
Red junglefowl	27	157	16	31	38	156	4	10	85	354
Red shanked douc	3	3	8	8	29	39	11	14	51	64
Roosevelt's muntjac group	43	367	63	458	107	1103	33	337	246	2265
Sambar	60	369	69	199	127	1099	27	177	283	1844
Silver pheasant	46	169	44	128	81	345	20	118	191	760
Spotted linsang	27	48	26	38	59	129	16	21	128	236
Stump tailed macaque	69	315	98	393	137	763	36	227	340	1698
Sun bear	0	0	1	1	3	3	0	0	4	4
Unidentified a mammal - NOT Saola	36	158	51	108	29	82	11	26	127	374
Unidentified animal - NOT Saola	55	269	77	192	111	467	31	102	274	1030
Unidentified bat	1	1	2	3	1	3	0	0	4	7
Unidentified bear	1	1	2	2	1	1	1	1	5	5
Unidentified bird	72	1115	71	311	109	847	27	213	279	2486
Unidentified macaque	20	38	47	75	54	89	12	14	133	216
Unidentified muntjac	72	592	77	319	94	442	24	97	267	1450
Unidentified murid	57	1018	55	455	84	1298	24	295	220	3066
Unidentified palm civet	10	17	19	25	24	34	7	11	60	87
Unidentified partridge	35	160	11	15	21	58	6	96	73	329
Unidentified pheasant	1	1	2	3	3	3	0	0	6	7
Unidentified small mammal	56	324	100	741	134	1441	36	408	326	2914

Frequency of capture of species by camera traps in KXNM between August 2017 and October 2019

Unidentified squirrel	9	11	20	54	38	125	9	33	76	223
Unidentified ungulates	17	34	38	69	53	144	11	27	119	274
Unidentified weasel	0	0	1	2	1	1	1	1	3	4
Wild pig	76	1011	78	418	125	1035	40	540	319	3004
Yellow throated marten	34	70	55	127	111	457	29	94	229	748