



SNOW LEOPARD RESEARCH AND CONSERVATION

TRIALING NEW FORMS OF 'COLLABORATIVE MANAGEMENT' IN THE SANJIANGYUAN NATIONAL NATURE RESERVE

5 September 2011

Plateau Perspectives Canada has been working with Tibetan herding communities in the headwaters of the Yangtze River (Zhiduo County, Yushu Tibetan Autonomous Prefecture, Qinghai Province) since 1998. Our long-term partnership with local people and communities has assisted the establishment of several community-based environmental organizations, such as the Upper Yangtze Organization, as well as the development (capacity building) of several of the Sanjiangyuan National Nature Reserve's field stations.

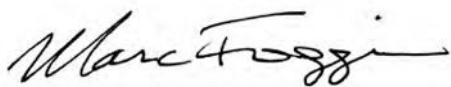
Collaborative management (in the form of community co-management, contract conservation, etc.) now generally is accepted as the best way forward for conservation in the extensive grasslands and mountain areas of the nature reserve – and, in light of this, Plateau Perspectives is working closely with government and non-government partners to trial/develop the effective ways of collaborating with local Tibetan communities, to conserve wildlife such as the rare and endangered Snow Leopard, *Uncia uncia*.

Attached are “fact sheets” for each Snow Leopard event or encounter with camera traps in 2010. Based on the identification of individual snow leopards (see Table 1), we have directly observed between 7 and 9 individuals (certain individuals could not be identified from the pictures, though their presence has been established). The mountain region surveyed is around 150-200 km².

The information contained in this report will subsequently be compared to wildlife observations made by community wardens (wildlife monitors) in the same geographic area since around 2007, which are expected to be complementary in the information provided.

In closing, many thanks are due to everyone who has been involved in this work – and we wish many more fruitful years of partnerships, for the conservation of Snow Leopard and their rugged mountain environments.

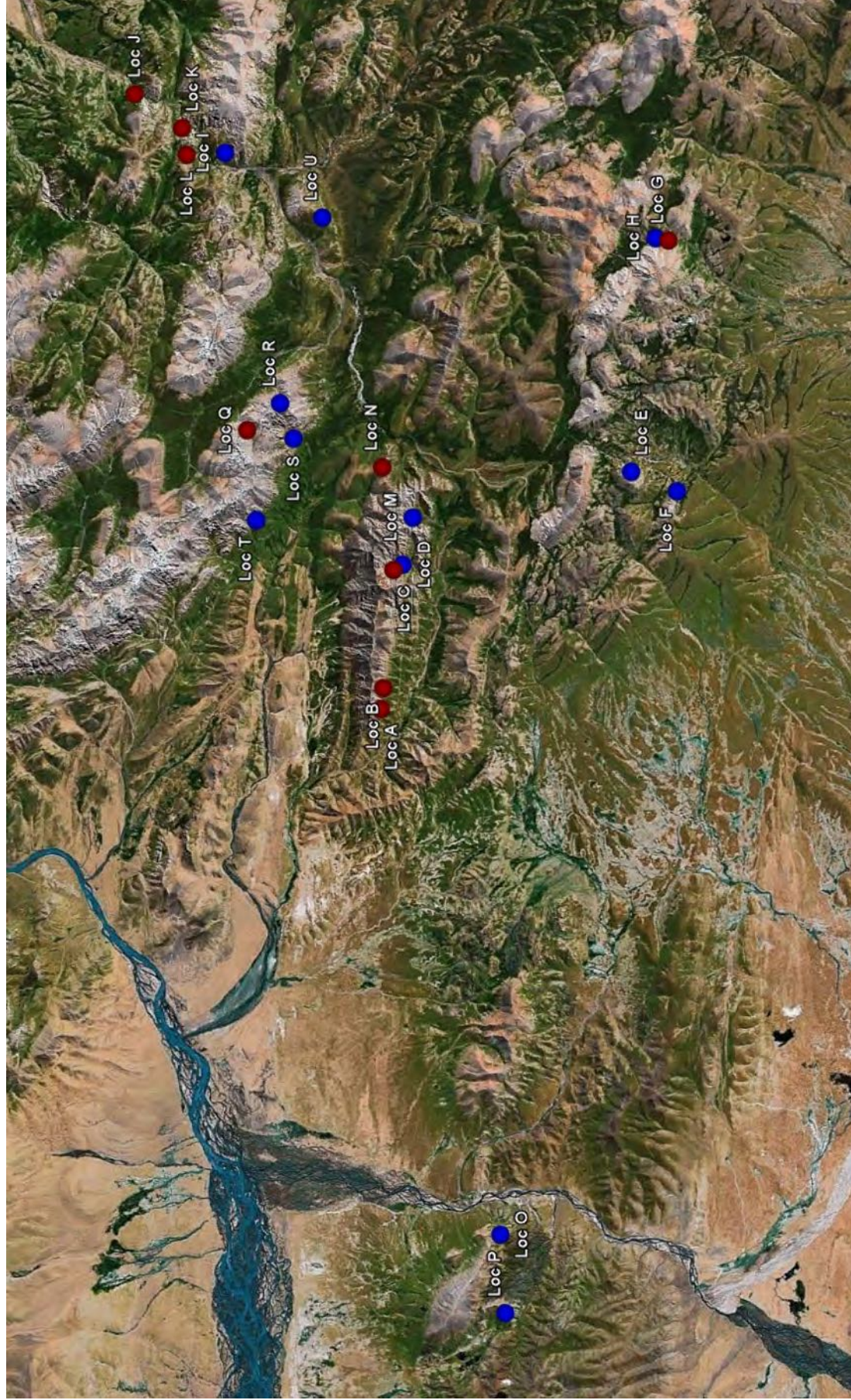
Sincerely,



Dr J Marc Foggin

Director, Plateau Perspectives

Figure 1. Map of study area, including location of camera traps set up in 2009-10 (with location IDs; blue circles, no photos; red circles, with photos).



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 001

(Camera trap PP-002)

3 January 2010 02:44 AM

Location 'B'

34° 09.274 N

93° 52.534 E

Camera setup on 31 December 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 002

(Camera trap PP-003)

6 January 2010 07:52 PM

Location 'C'

34° 09.090 N

93° 55.076 E

Camera setup on 31 December 2010

Tseren Range, up toward Muqu School

4,824 m a.s.l.



*All photographs
© Plateau Perspectives / J Marc Foggin 2011.*

*With special thanks to community partners
and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 003

(Camera trap PP-002)

8 January 2010 04:44 AM

Location 'B'

34° 09.274 N

93° 52.534 E

Camera setup on 31 December 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 004

(Camera trap PP-010)

12 January 2010 11:22 AM

Location 'K'

34° 12.898 N

94° 04.662 E

Camera setup on 2 January 2010

Bemenge Range, mid valley, from cave

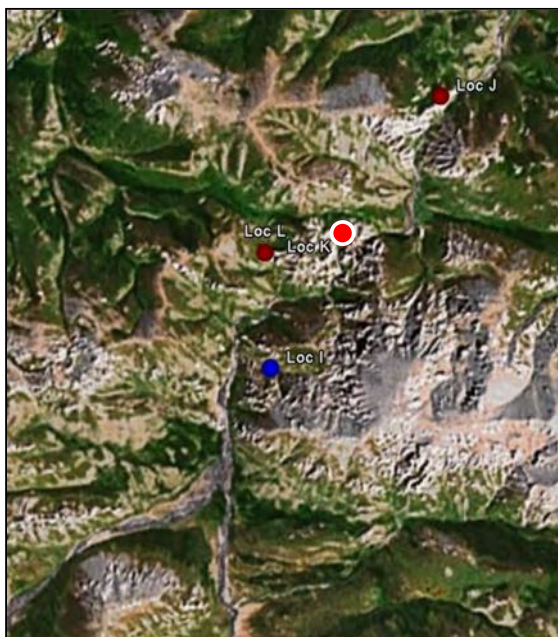
4,642 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:

 **PLATEAU PERSPECTIVES**
Community Development & Conservation



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 005

(Camera trap PP-009)

28 January 2010 04:16 AM

Location 'J'

34° 13.733 N

94° 05.373 E

Camera setup on 27 January 2010

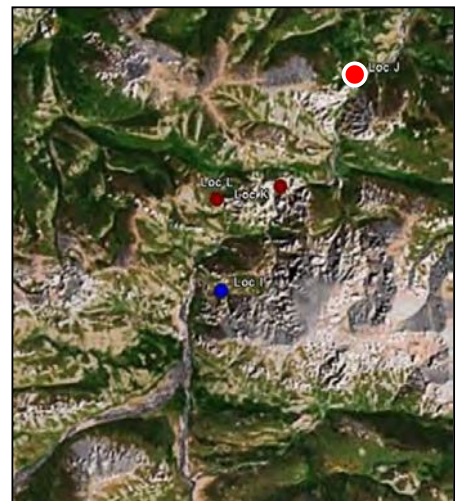
Bemenge Range, farthest down valley

4,612 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 006

(Camera trap PP-003)

30 January 2010 02:57 AM

Location 'C'

34° 09.090 N

93° 55.076 E

Camera setup on 27 January 2010

Tseren Range, up toward Muqu School

4,824 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 007

(Camera trap PP-002)

31 January 2010 06:27 PM

Location 'B'

34° 09.274 N

93° 52.534 E

Camera setup on 30 January 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:




PLATEAU PERSPECTIVES
Community Development & Conservation

SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 008

(Camera trap PP-006)

8 February 2010 07:54 PM

Location 'G'

34° 04.211 N

94° 02.145 E

Camera setup on 29 January 2010

Wugeu Reiju Range, behind Gama's home 4,882 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 009

(Camera trap PP-011ir)

11 March 2010 11:48 PM

Location 'L'

34° 12.803 N

94° 04.063 E

Camera setup on 8 March 2010

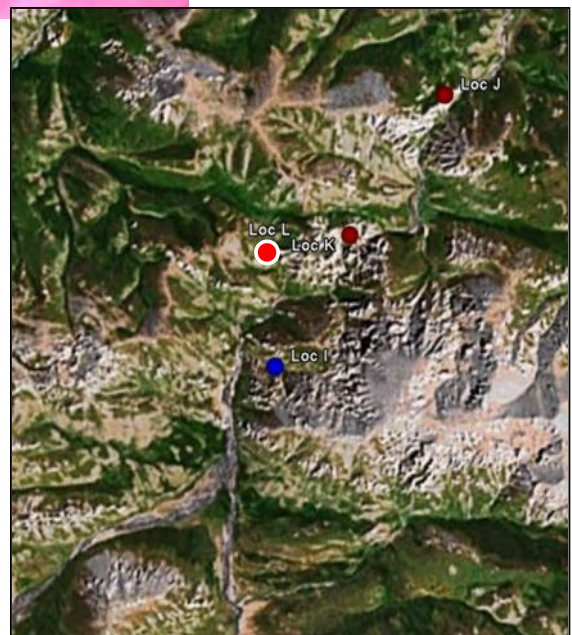
Bemenge Range, through side canyon

4,668 m a.s.l.



Location of Camera Trap:

*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 010

(Camera trap PP-001)

13 March 2010 00:26 AM

Location 'A'

34° 09.320 N

93° 52.080 E

Camera setup on 8 March 2010

Tseren Range, behind Shiamba's home

4,790 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 011

(Camera trap PP-006)

13 March 2010 11:02 PM

Camera setup on 9 March 2010

Location 'G'

34° 04.211 N

94° 02.145 E

Wugeu Reiju Range, behind Gama's home 4,882 m a.s.l.



All photographs

© Plateau Perspectives / J Marc Foggin 2011.

*With special thanks to community partners
and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 011b [continued]

(Camera trap PP-006)

13 March 2010 11:02 PM

Location 'G'

34° 04.211 N

94° 02.145 E

Camera setup on 9 March 2010

Wugeu Reiju Range, behind Gama's home 4,882 m a.s.l.



All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.

SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 012

(Camera trap PP-002)

17 March 2010 10:08 PM

Location 'B'

34° 09.274 N

93° 52.534 E

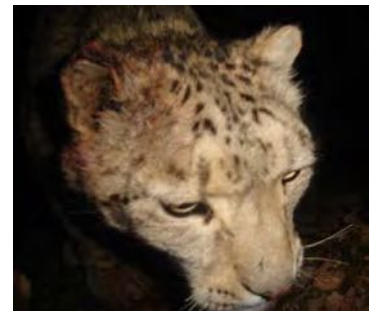
Camera setup on 8 March 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



Location of Camera Trap:



All photographs © Plateau Perspectives / J Marc Foggin 2011. With special thanks to community partners and SNNR colleagues.

SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 013

(Camera trap PP-009)

8 April 2010 01:37 AM

Location 'J'

34° 13.733 N

94° 05.373 E

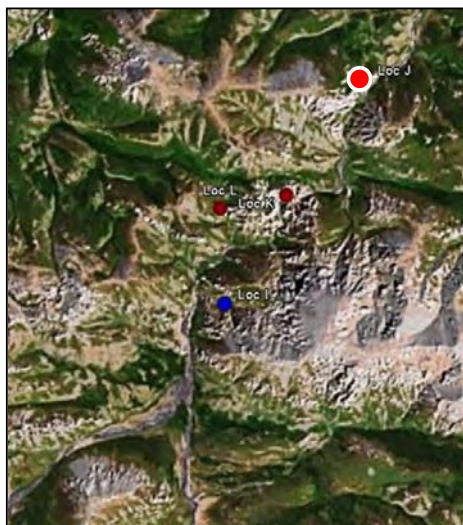
Camera setup on 8 April 2010

Bemenge Range, farthest site down valley 4,612 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 014

(Camera trap PP-009)

10 April 2010 06:26 PM

Location 'J'

34° 13.733 N

94° 05.373 E

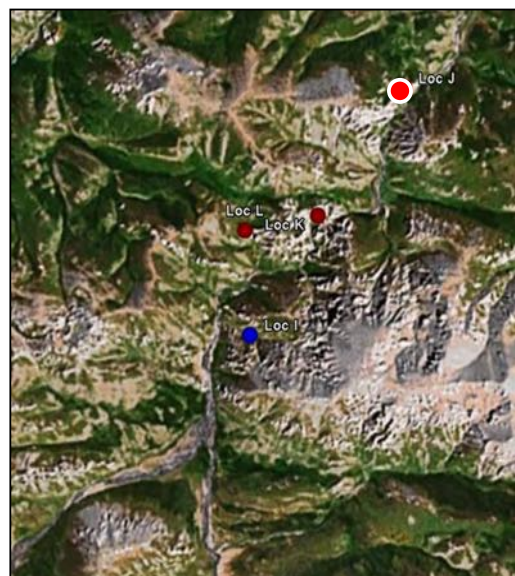
Camera setup on 8 April 2010

Bemenge Range, farthest site down valley 4,612 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 015

(Camera trap PP-009)

11 April 2010 05:51 AM

Location 'J'

34° 13.733 N

94° 05.373 E

Camera setup on 8 April 2010

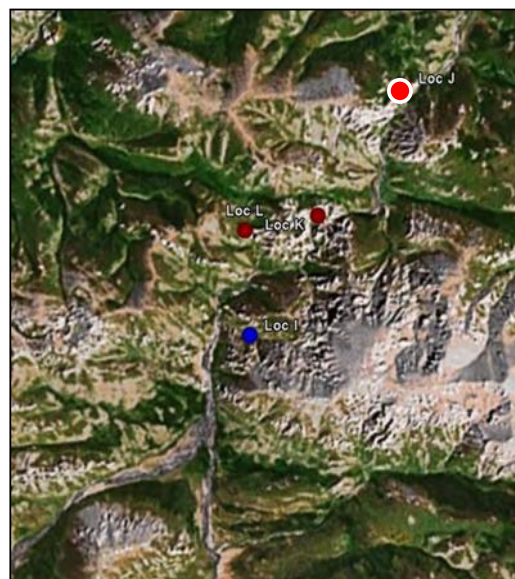
Bemenge Range, farthest down valley

4,612 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 016

(Camera trap PP-001)

11 April 2010 06:00 PM

Location 'A'

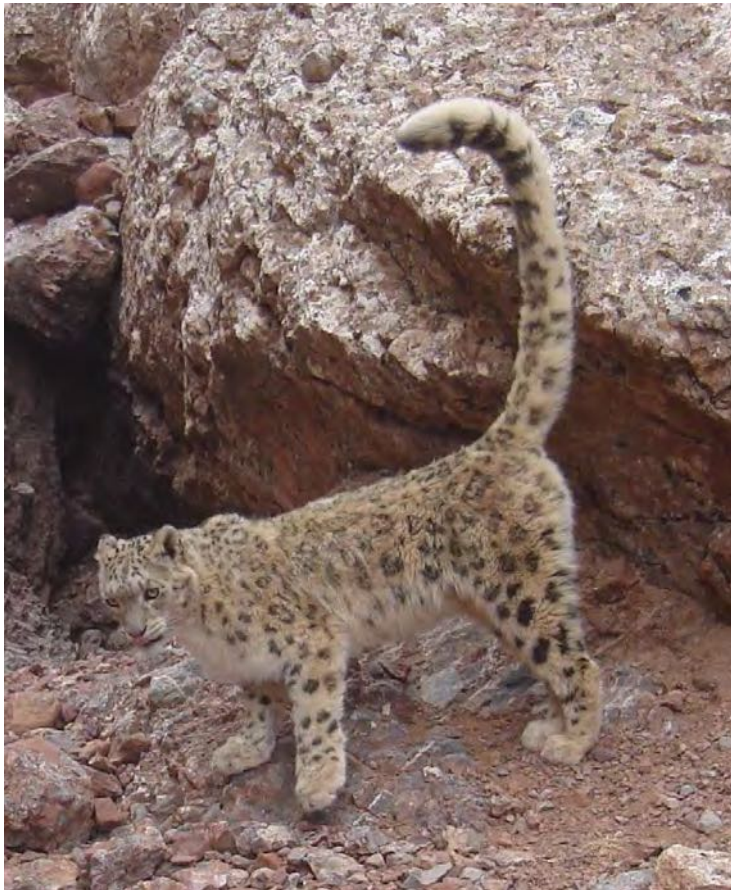
34° 09.320 N

93° 52.080 E

Camera setup on 8 April 2010

Tseren Range, behind Shiamba's home

4,790 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 017

(Camera trap PP-002)

15 April 2010 02:40 PM

Location 'B'

34° 09.274 N

93° 52.534 E

Camera setup on 8 April 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



*All photographs
© Plateau Perspectives / J Marc Foggin 2011.*

*With special thanks to community partners
and SNNR colleagues.*



Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 018

(Camera trap PP-002)

20 April 2010 **11:20 AM**

Location 'B'

34° 09.274 N

93° 52.534 E

Camera setup on 8 April 2010

Tseren Range, near Shiamba's home

4,873 m a.s.l.



Location of Camera Trap:



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 019

(Camera trap PP-006)

29 August 2010 06:05 PM

Location 'N'

34° 09.301 N

93° 57.290 E

Camera setup on 23 August 2010

opposite river, above Muqu School 4,923 m a.s.l.



*All photographs © Plateau Perspectives / J Marc Foggin 2011.
With special thanks to community partners and SNNR colleagues.*

Location of Camera Trap:




PLATEAU PERSPECTIVES
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SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 020

(Camera trap PP-002)

1 September 2010

08:52 AM

Location 'Q'

34° 11.700 N

93° 58.082 E

Camera setup on 25 August 2010

in range going toward 'lost valley'

4,960 m a.s.l.



All photographs © Plateau Perspectives / J Marc Foggin 2011. With special thanks to community partners and SNNR colleagues.

Location of Camera Trap:



SNOW LEOPARD RESEARCH AND CONSERVATION

SL Camera Trap Event 021

(Camera trap PP-006)

1 September 2010

11:15 AM

Location 'N'

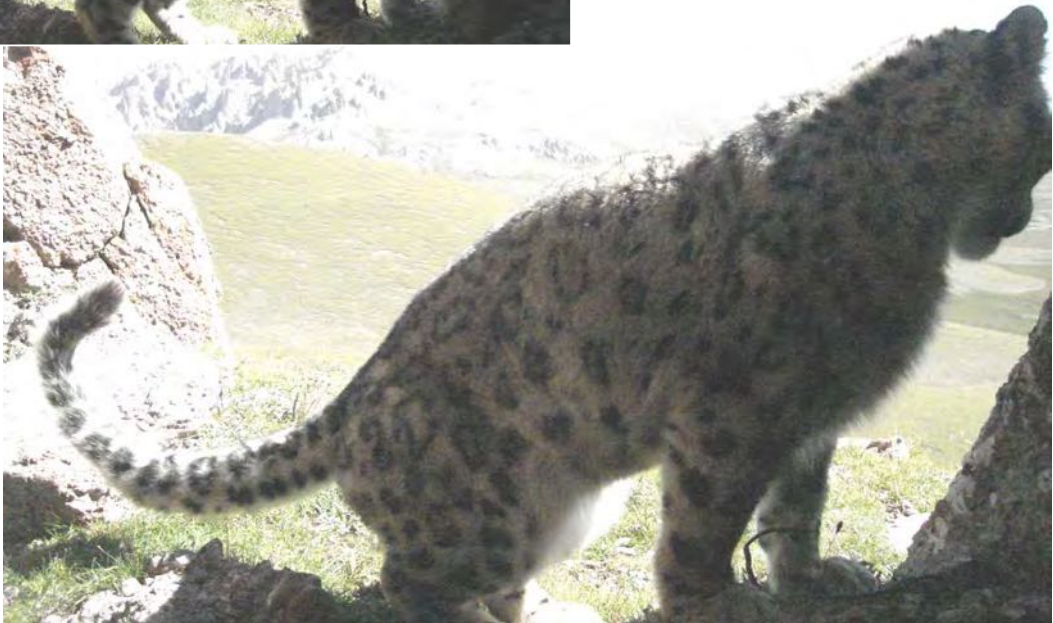
34° 09.301 N

93° 57.290 E

Camera setup on 23 August 2010

opposite river, above Muqu School

4,923 m a.s.l.



All photographs © Plateau Perspectives / J Marc Foggin 2011. With special thanks to community partners and SNNR colleagues.

Location of Camera Trap:



Table 1. Snow Leopard IDs based on unique visual markings.

	SL Event # 001	SL Event # 002	SL Event # 003	SL Event # 004	SL Event # 005	SL Event # 006	SL Event # 007 (3)	SL Event # 008 (3)	SL Event # 009	SL Event # 010	SL Event # 011 (2)	SL Event # 012	SL Event # 013	SL Event # 014	SL Event # 015	SL Event # 016	SL Event # 017	SL Event # 018	SL Event # 019	SL Event # 020	SL Event # 021
Tail pattern (double central small patches)	See 006		See 005, 006, 012		See 003, 006, 012	See 001, See 003, 005, 012						See 003, 005, 006									
Tail pattern (other)									Single small dot				Single small dot		Double small dot						
Right hind leg	See 020	See 018																See 002		See 001	
Front left leg (six spots)			See 010, 016, 020							See 003, 016, 020	1 of 2 SL					See 003, 010, 020				See003, 010, 016	
Left hind leg (pentagon, w/ triangle)			See 012, 016, 017								1 of 2 SL (maybe)	See 003, 016, 017				See 003, 012, 017	See 003, 012, 016				
Front right leg (outer pattern)				See 014		See 007	See 006							See 004							
Front left shoulder (three dots)				See 007, 010, 014			See 004, 010, 014			See 004, 007, 014				See 004, 007, 010							
Front right leg (two triangles)							See 010, 014			See 007, 014				See 007, 010							
Right ear ripped												See 020								See 012	
Left flank pattern												See 016, 020				See 012, 020				See 012, 016	
Pattern on back of neck								See 011			See 008										
Right flank pattern																			See 021		See 019
[not clearly marked]							Young #1														
[not clearly marked]							Young #2														
[not clearly marked]																					
[not clearly marked]								Likely same			Likely same										
[not clearly marked]								3rd SL in photo													

Snow Leopard names (tentative):

Gongbo	Tashi	Ngaya	Yisong	Jigme	Laba	Renzin	Dundrup	Dorje
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Figure 2. Specific markings use for identification purposes (see Table 1).

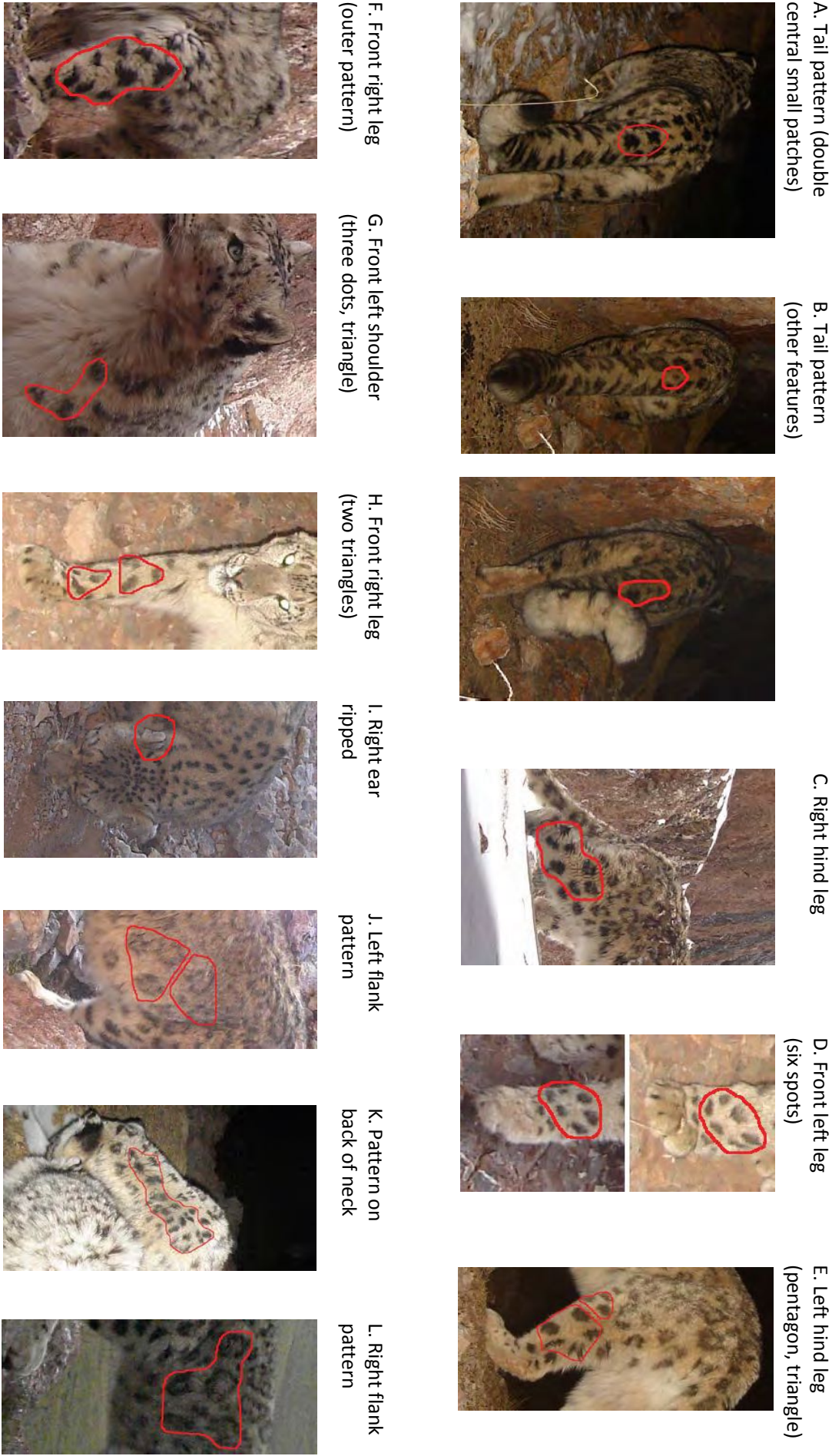


Figure 3. Map of movements made by 'Gongbo' (see Table 1).



Note: Based on the 'minimum convex polygon' above, this snow leopard has an estimated home range area of approximately 75 km². Between January and April 2010, this snow leopard traveled a full return-trip twice (i.e., between the western and eastern portions of its homorange; as estimated above), and then was photographed again in the central portion in September 2011.

Appendix 1. Plateau Perspectives trip report, December 2009 – January 2010

SNOW LEOPARD SURVEY & CONSERVATION PLANNING LOCATION OF CAMERA TRAPS, SETUP IN DECEMBER 2009

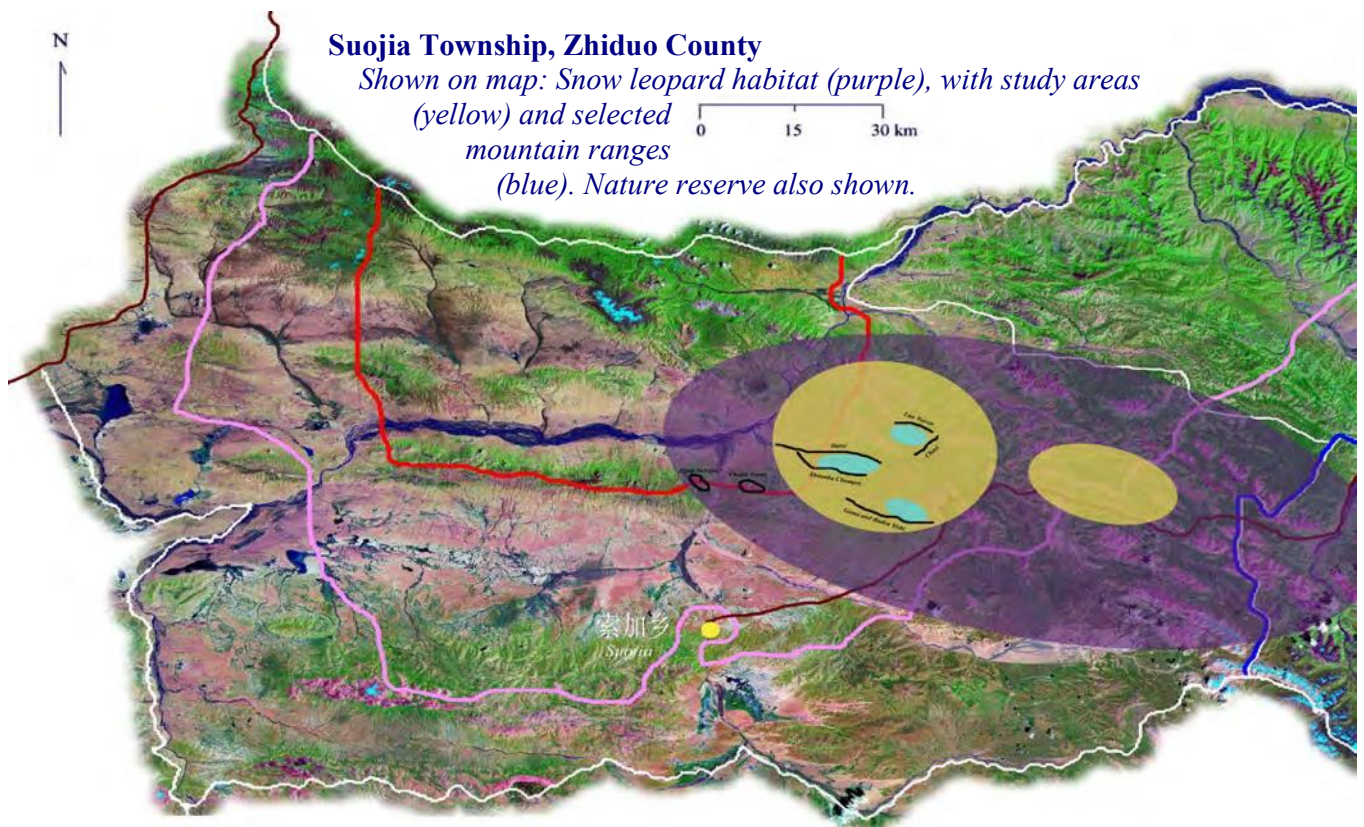
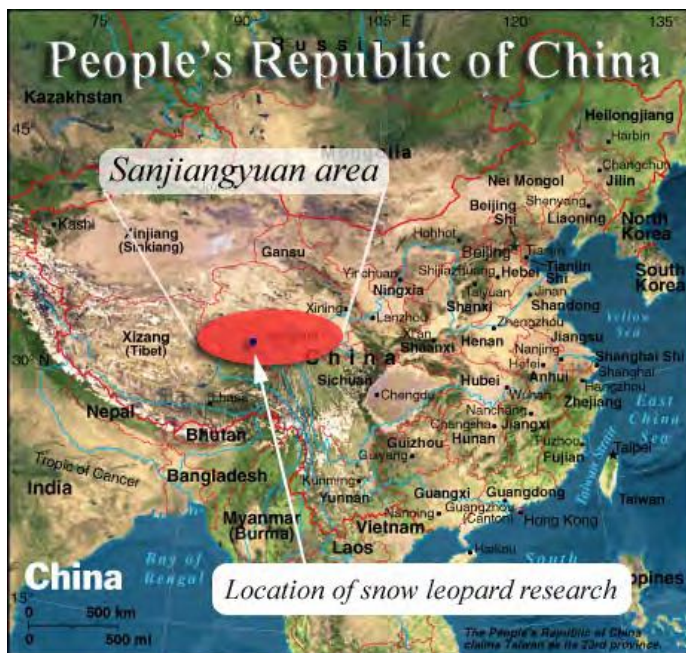
Plateau Perspectives team:

Dr J Marc Foggin

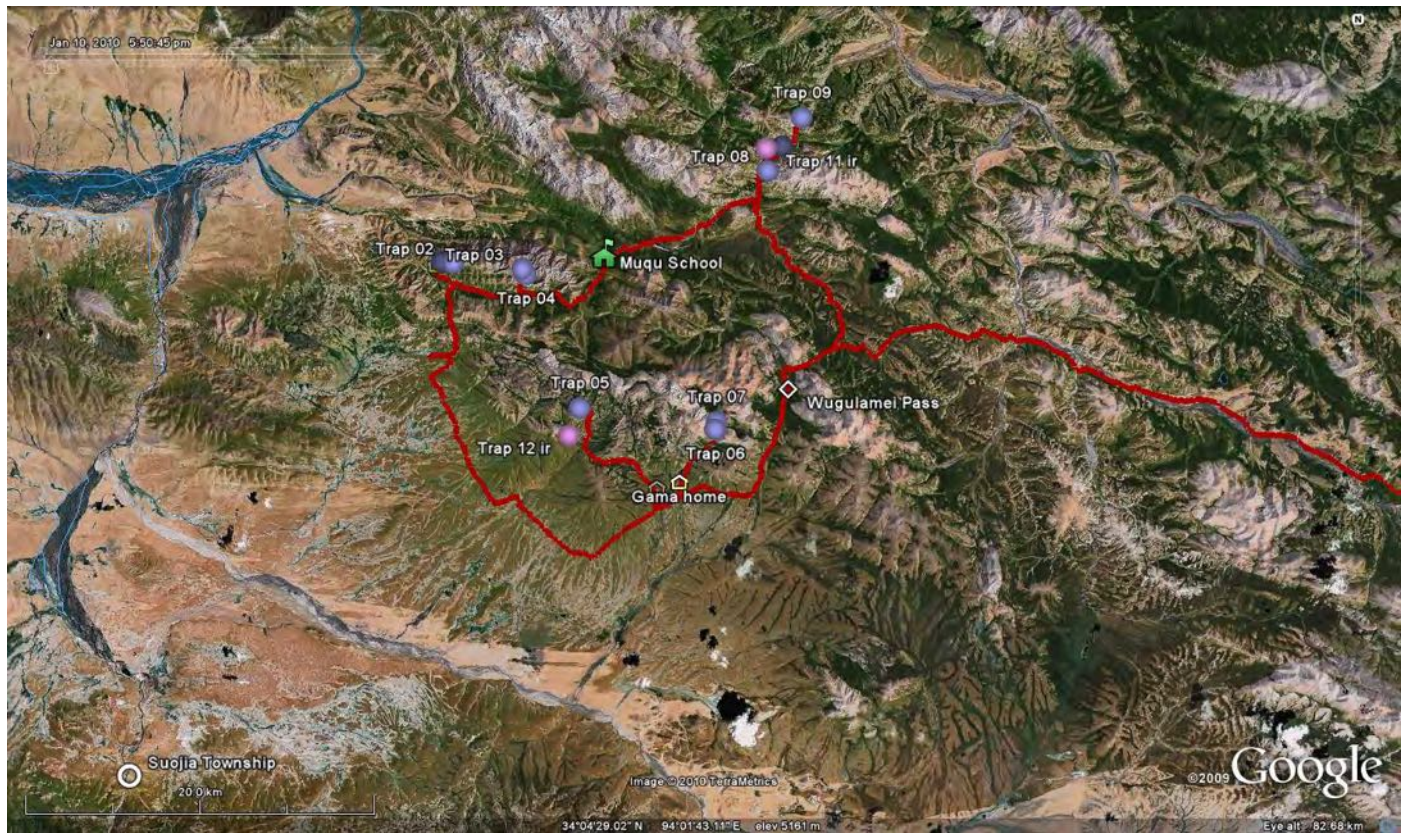
Prof Gongbu Zhaxi (Gongbo Tashi)

and Mr Qingmei Rangding (Jigme Rabden)

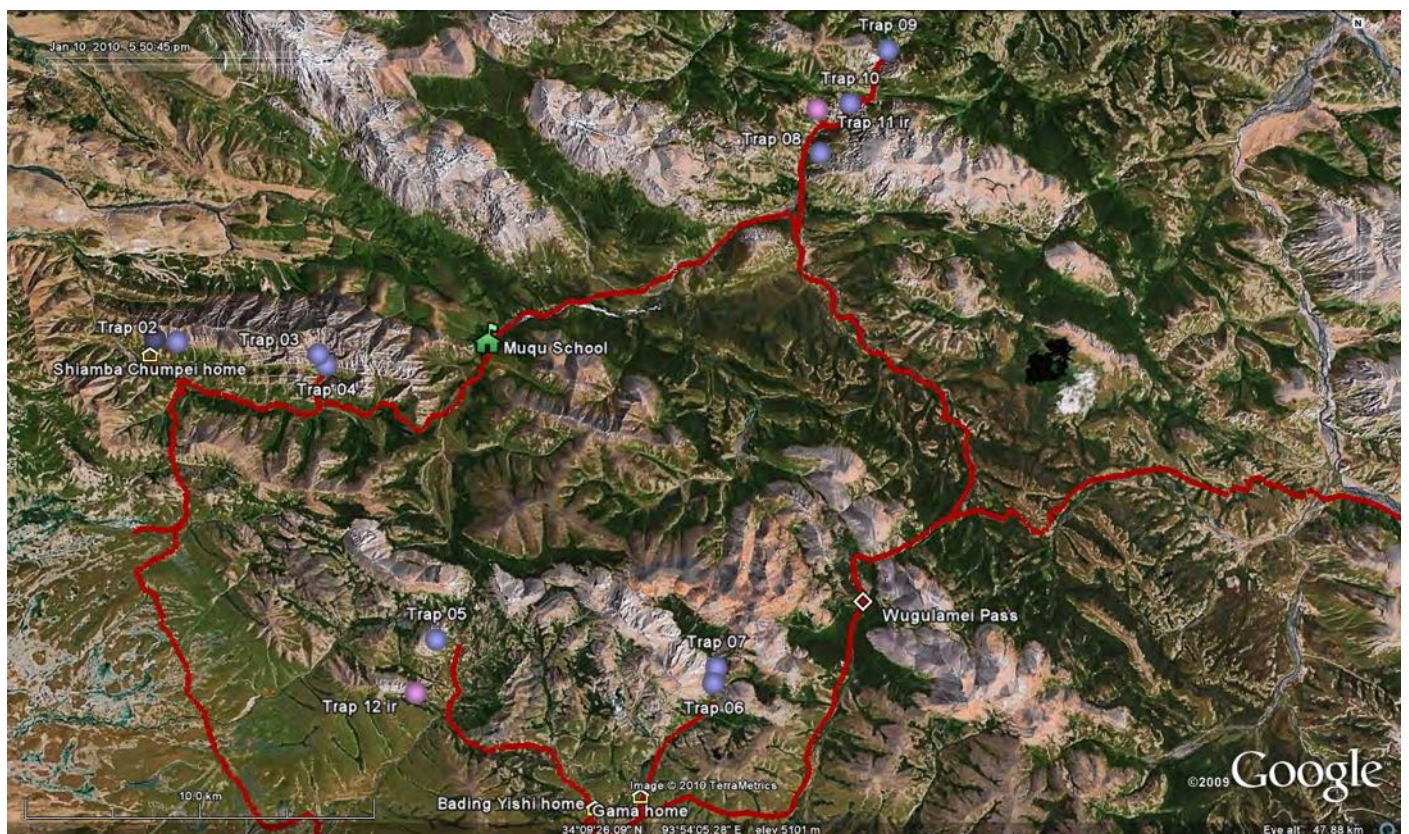
together with Mr Renzin / SNNR Suojia Station



Snow Leopard research and conservation: Regional overview of study area



Snow Leopard research and conservation: Detailed view of study area



Tseren range

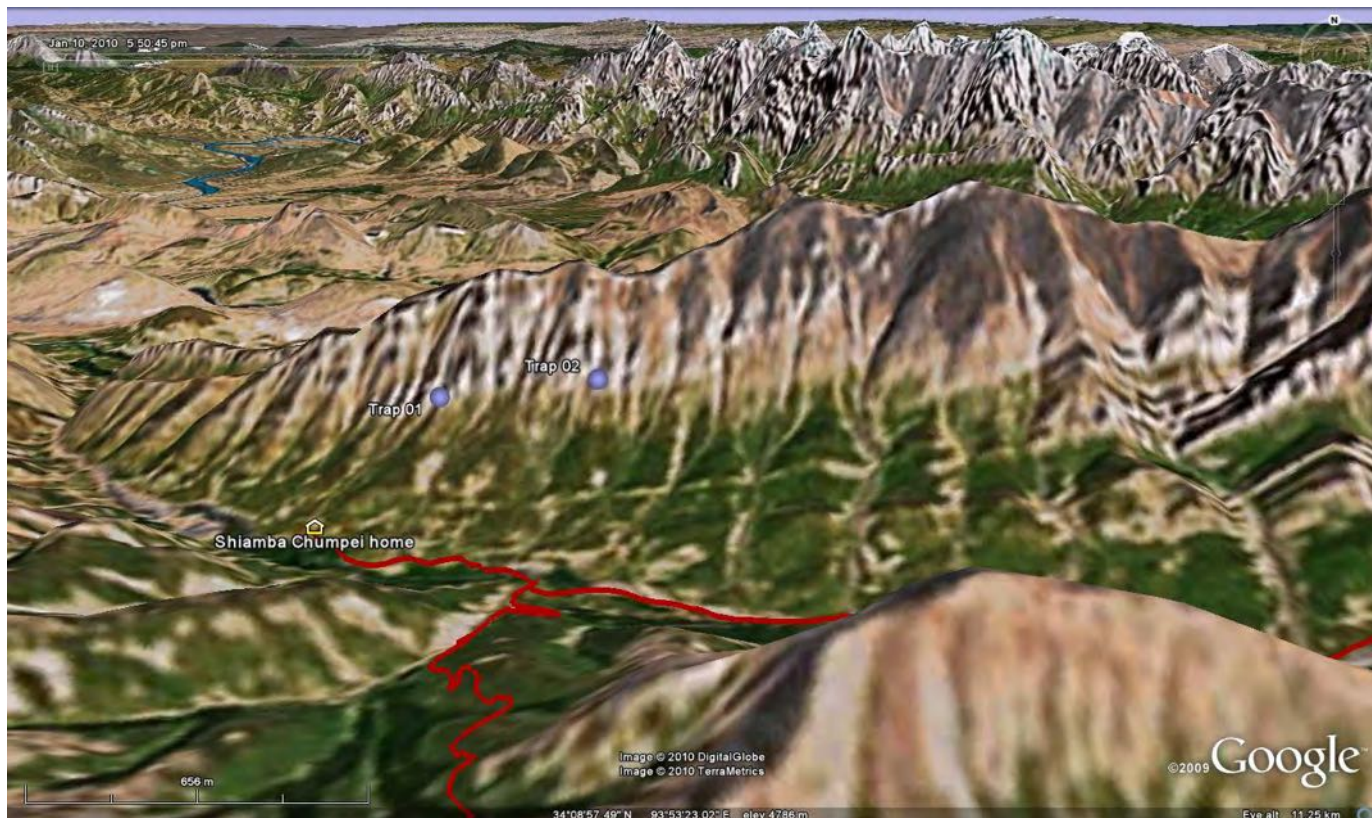


Wugeu Reiju range



Bemenge range





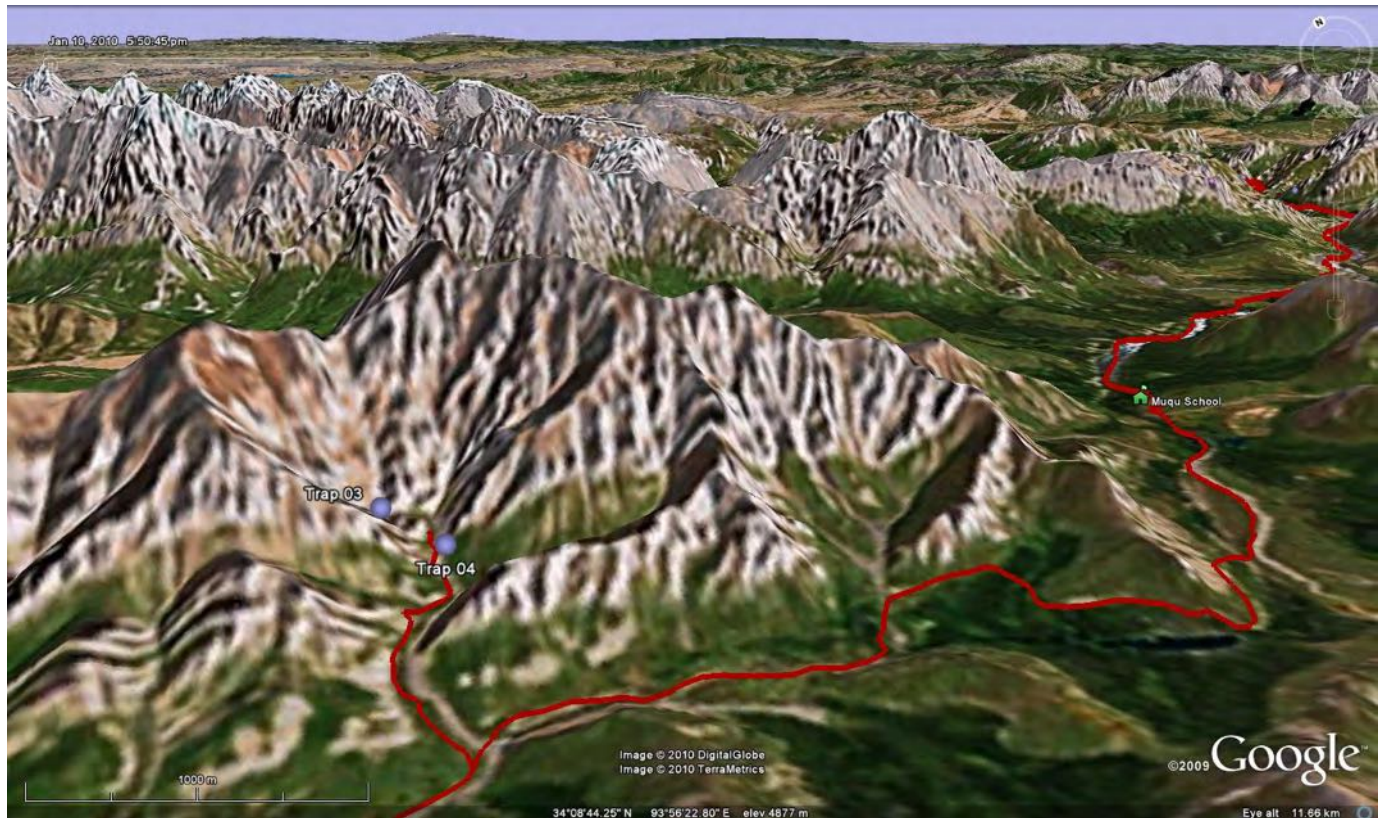
Two camera trap sites monitored by Shiamba Chumpei in the *Tseren* mountain range

Location A N 34° 09.320'
4,790 m E 93° 52.080'



Location B N 34° 09.274'
4,873 m E 93° 52.534'





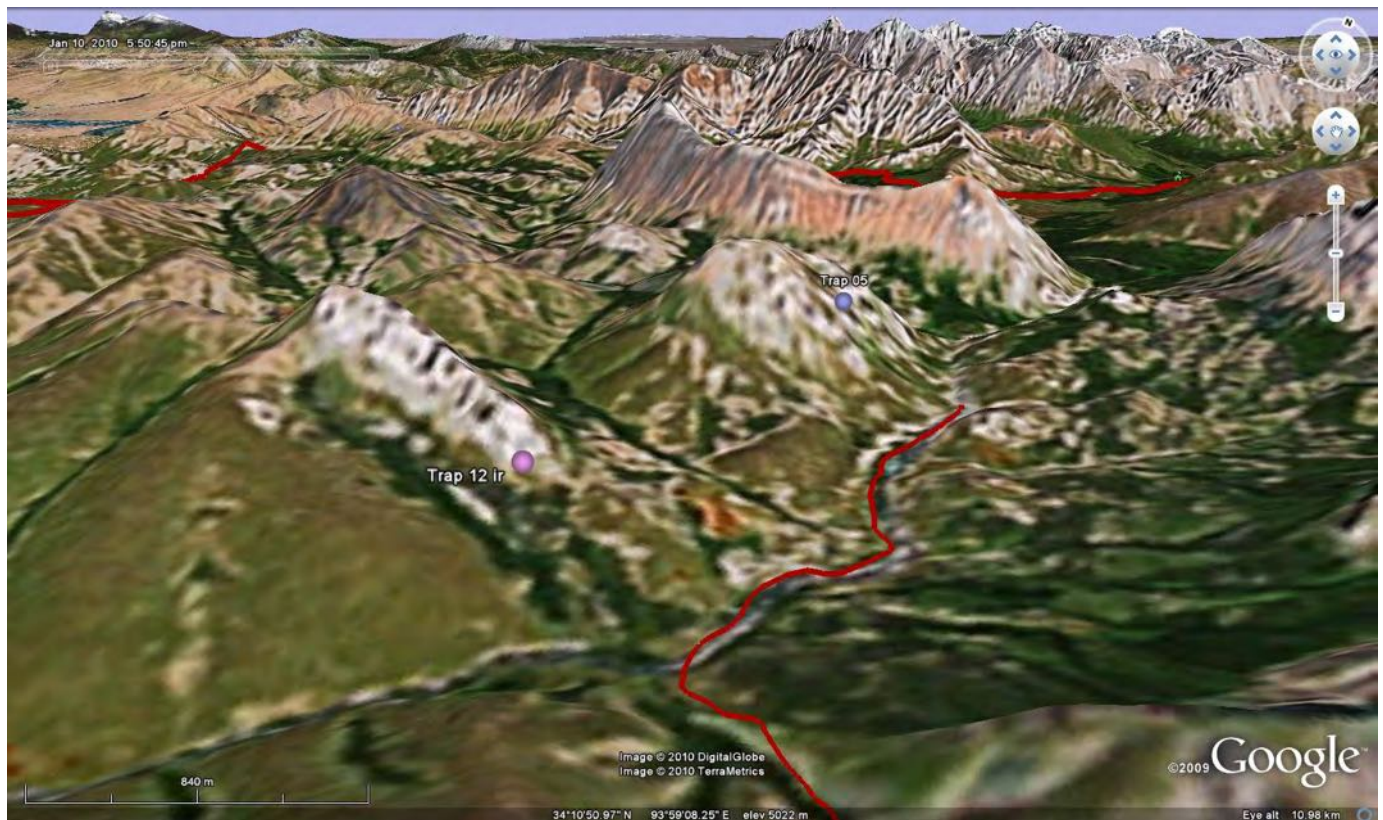
Two camera trap sites monitored by Datse in the *Tseren* mountain range

Location C N 34° 09.090'
4,824 m E 93° 55.076'



Location D N 34° 08.931'
4,802 m E 93° 55.190'



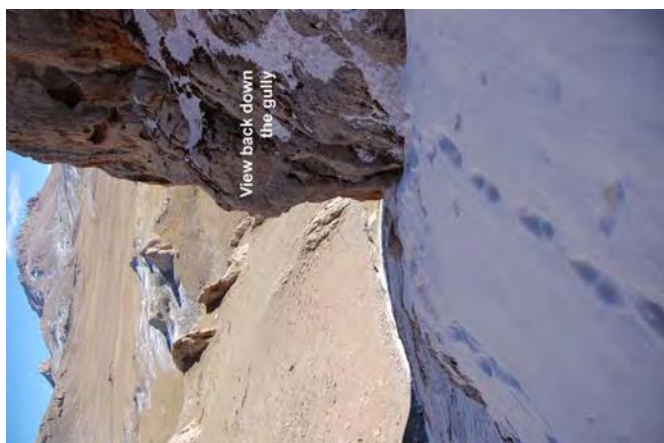


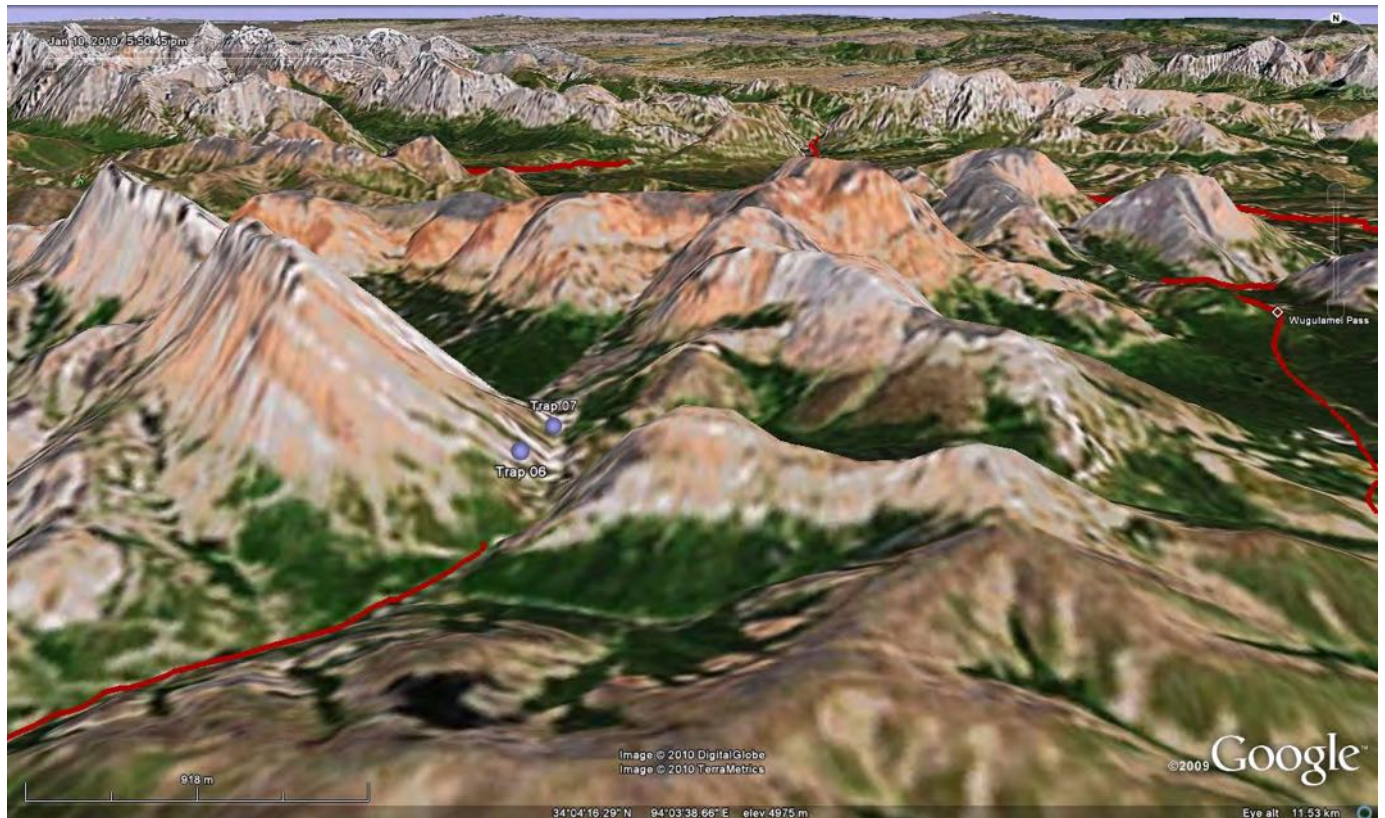
Two camera trap sites monitored by Baden Yishi in the *Wugen Reiju* mountain range

Location E N 34° 04.861'
4,894 m E 93° 57.196'



Location F N 34° 04.038'
4,832 m E 93° 56.781'





Two camera trap sites monitored by Gama in the *Wugou Reiju* mountain range

Location G N 34° 04.211'
4,882 m E 94° 02.145'



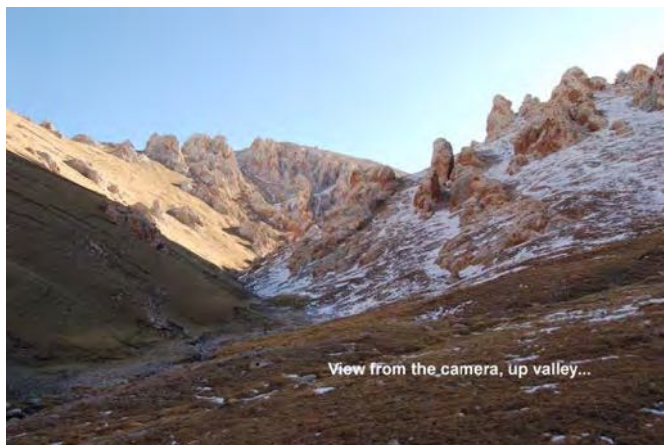
Location H N 34° 04.438'
4,828 m E 94° 02.200'





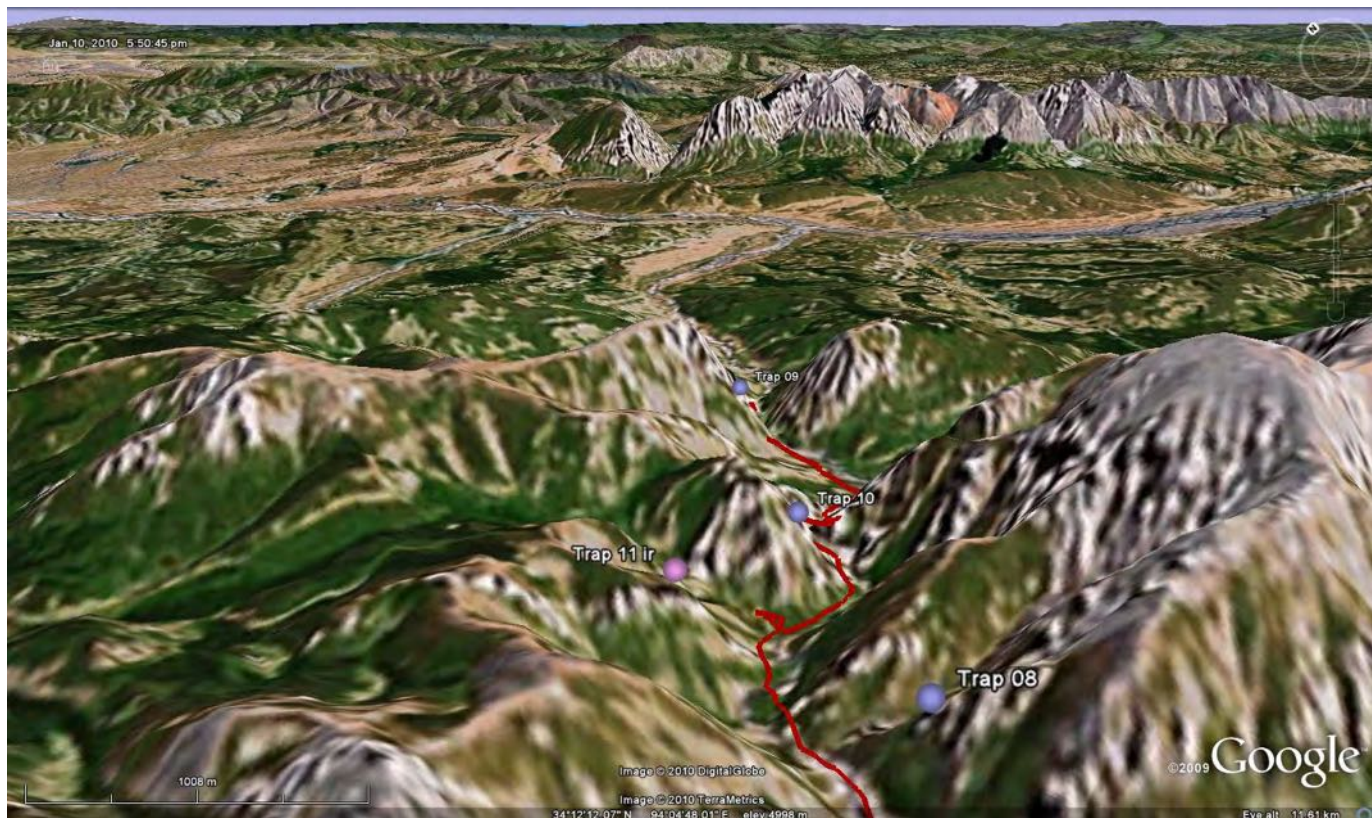
Two camera trap sites monitored by Chayi & Luo Tseren in the *Bemenge* mountain range

Location I N 34° 12.116'
4,653 m E 94° 04.104'



Location J N 34° 13.733'
4,612 m E 94° 05.373'



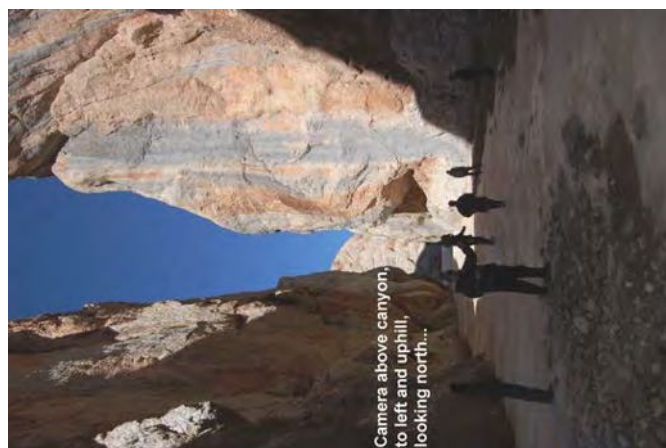


Two camera trap sites monitored by Chayi & Luo Tseren in the *Bemenge* mountain range

Location K N 34° 12.898'
4,642 m E 94° 04.662'



Location L N 34° 12.803'
4,668 m E 94° 04.063'





Tseren “Many small side valleys” (camera locations # A - D)



Tsamre Jiayi
“The hermit’s white mountain”
(camera location E)

Zhe Zhusong
“White cliffs”
(camera location F)



The entire mountain range between Wugulamei Pass and Muqu School: ***Wugeu Reiju***



Bengen Chengnga
“Old monk’s prayer beads”
(camera location G and H)

Bemenge (bottom-left & below)
(camera locations I - L)

Lhadre Rayon (see trap picture, above)
“God and Devil’s Fighting Cave”
(camera location L)





Team 1: Jigme Rabden, Renzin, Shiamba Chumpei, Tarshin, and Gongbo Tashi (also Marc Foggin, not in photograph)

Team 2: Jigme Rabden, Nanka, Marc Foggin, Baden Yishi, and Gongbo Tashi



Team 3: Jigme Rabden, Gama, Gongbo Tashi, and Baden Yishi (also Marc Foggin)

Team 4: Gongbo Tashi, participant from Cuochitan (Dangqu cun), and Gama (also Marc Foggin, Jigme Rabden, and Renzin)

