



Longjiang Forest Industry

Monitoring amur tiger population in Heilongjiang Province

15–16 April 2014

Zhou Shaochun

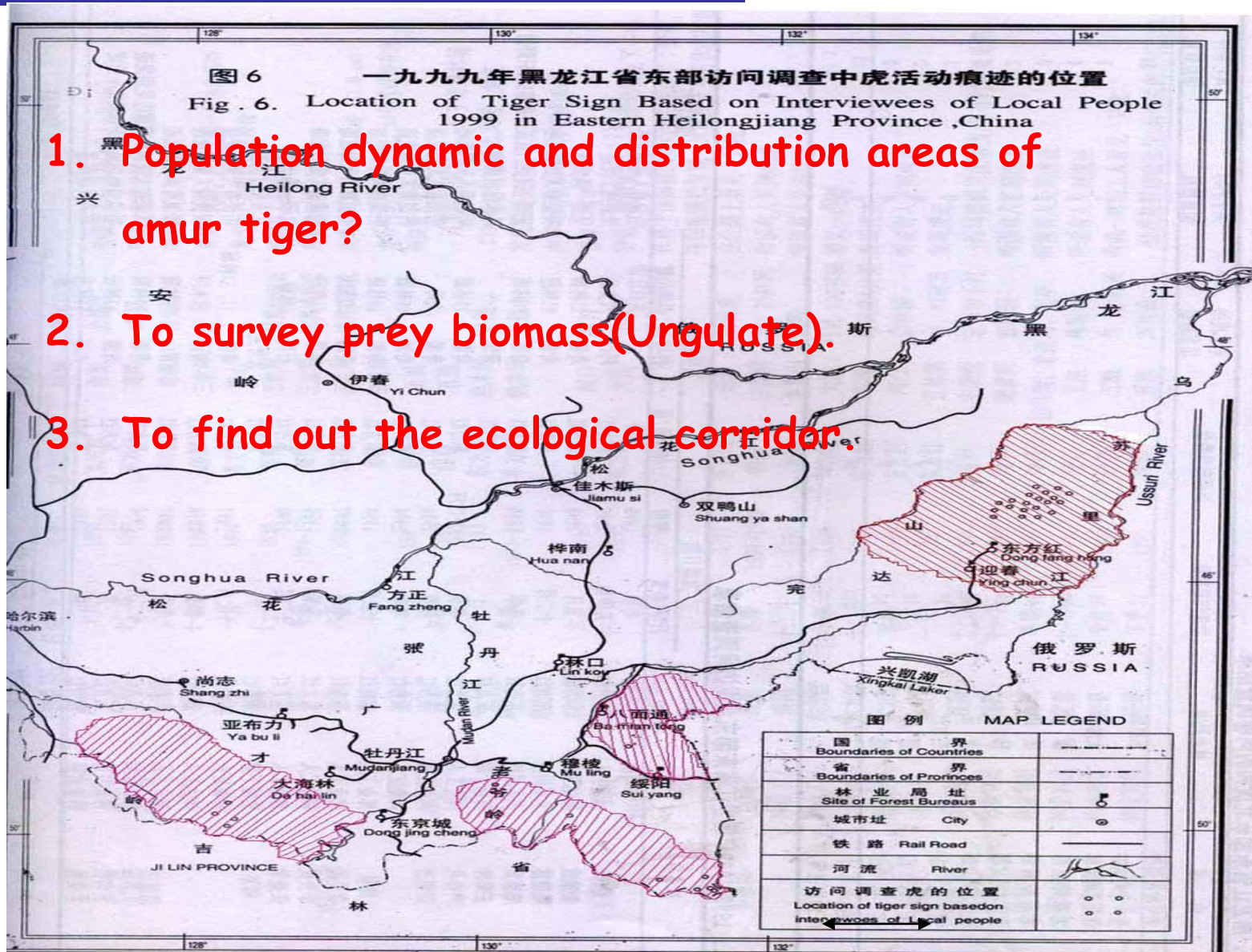
Wildlife Research Institute of Heilongjiang Province

Project sources:

The following research projects entrusted by the country, the province, the ministry and enterprises.

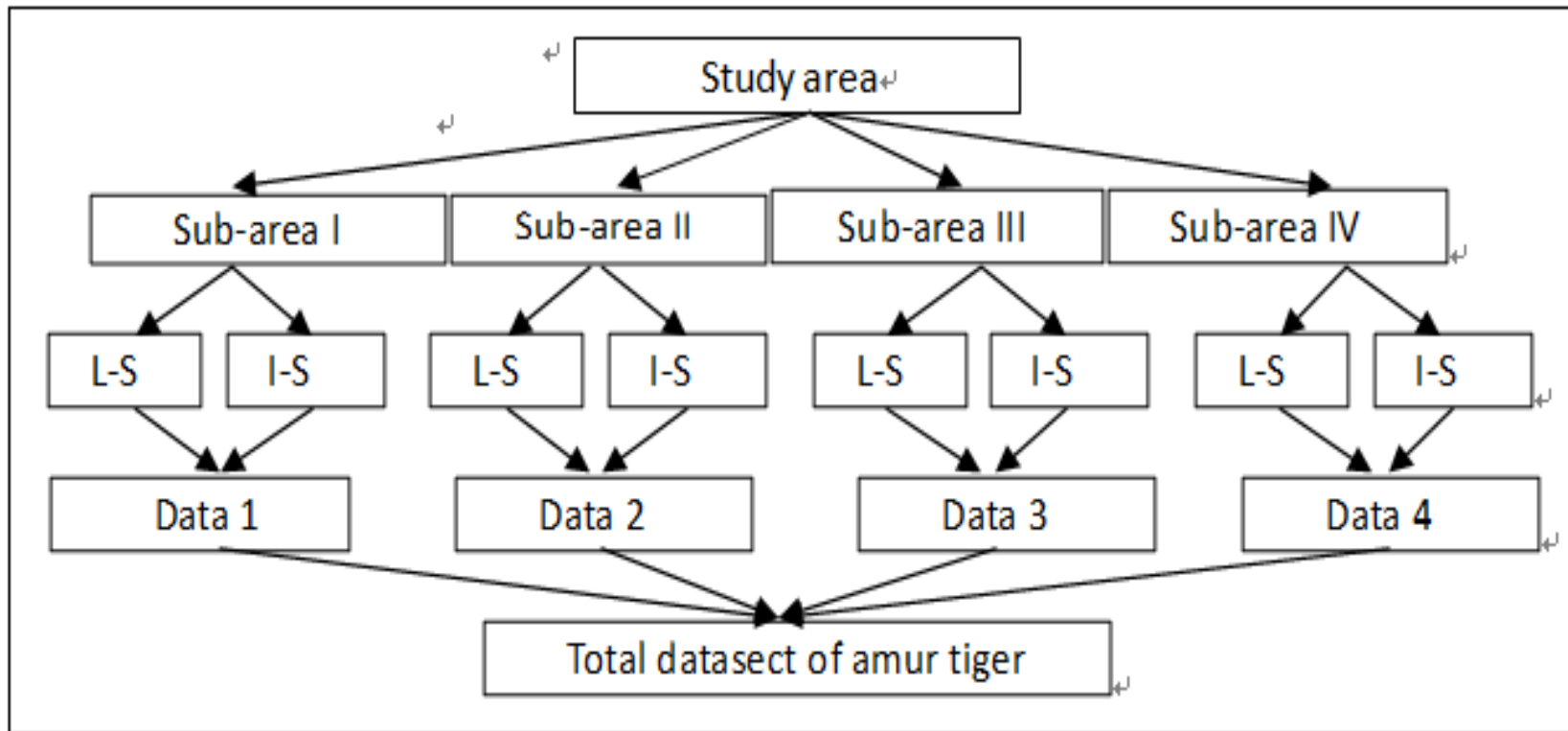
- 1, A study on habitat evaluation and conservation plan of amur tiger in Wanda Mountains.
- 2, Preliminary monitoring of Amur tiger population in Heilongjiang Province
- 3, A study on endangered mechanism and conservation plan of amur.
- 4, Preliminary monitoring of Amur tiger population and ungulate survey .
- 5, Interactions by prey community and spatial distribution dynamics of Amur tiger.
- 6, Preliminary monitoring of Amur tiger population and prey survey in Heilongjiang.

Three questions



Monitoring method

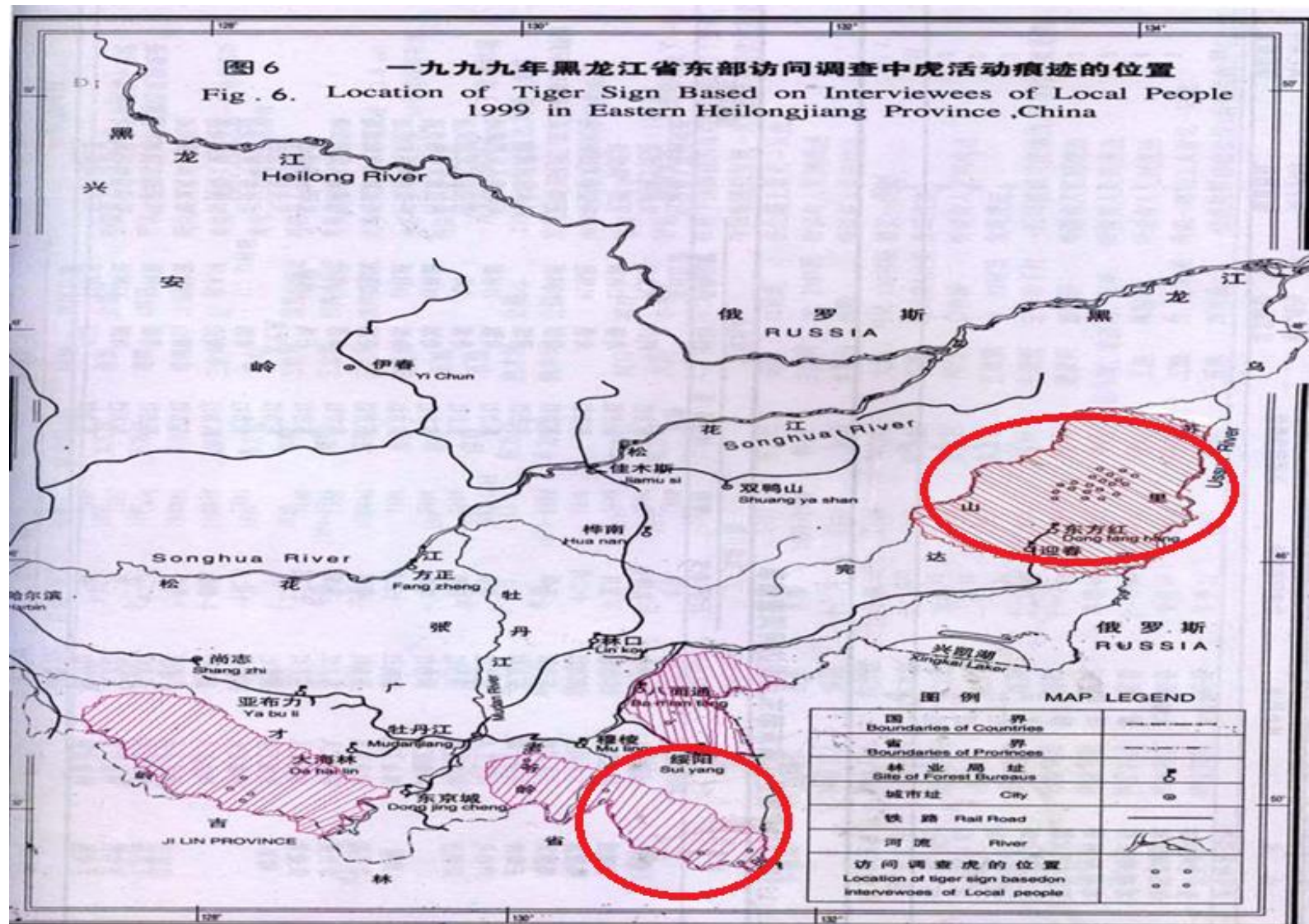
Network monitoring technique(partitioning regional methods) (Su HY 2011) since 2002



L-S, line transect survey; I-S, interview survey.

FIG.1 Flowchart of data collection on the amur tiger.

We conducted on a camera trapping for capturing wild animals since 2011 in Wanda Mountains and Dongning forestry area



Four monitoring areas:

1) Eastern Wanda Mountains

Dongfenghong Forestry Bureau, Yingchun Forestry Bureau, Raohe County, Hulin City, Baoqing County.

2) Southern Laoyeling

Suiyang Forestry Bureau, Muling Forestry Bureau, Dongning Forestry Bureau,

3) Northern Laoyeling

Northern region of Suiyang Forestry Bureau, Bamiantong Forestry Bureau, Fenghongshan Nature Reserve, A part of forest area within Muling City.

4) Southern Zhangguangcailing

Dongjingcheng Forestry Bureau, Dahailing Forestry Bureau, Shanhetun Forestry Bureau, A part of forest areas within Ningan city, Hailing City, Wuchang county.

Results



Bushnell 055°F 0 06-19-2013 17:55:20



ScoutGuard 06.30.2013 05:00:29

Footprints of female and juvenile tiger





Population size

Amur tiger datasets from long monitoring work.

Regions	Population size	Activity information	Years
Eastern Wanda Mountains	5-6	62	2002-2006
Southern Laoyeling	3-4	49	2002-2006
Nothern Laoyeling	1	2	2002-2006
Zhangguangcailing	1	12	2002-2006
Eastern Wanda Mountains	6	67	2007-2012
Southern Laoyeling	2	25	2007-2012
Nothern Laoyeling	1	1	2007-2012
Zhangguangcailing	1	2	2007-2012

Ungulate

in 2003 winter

Footprint/km

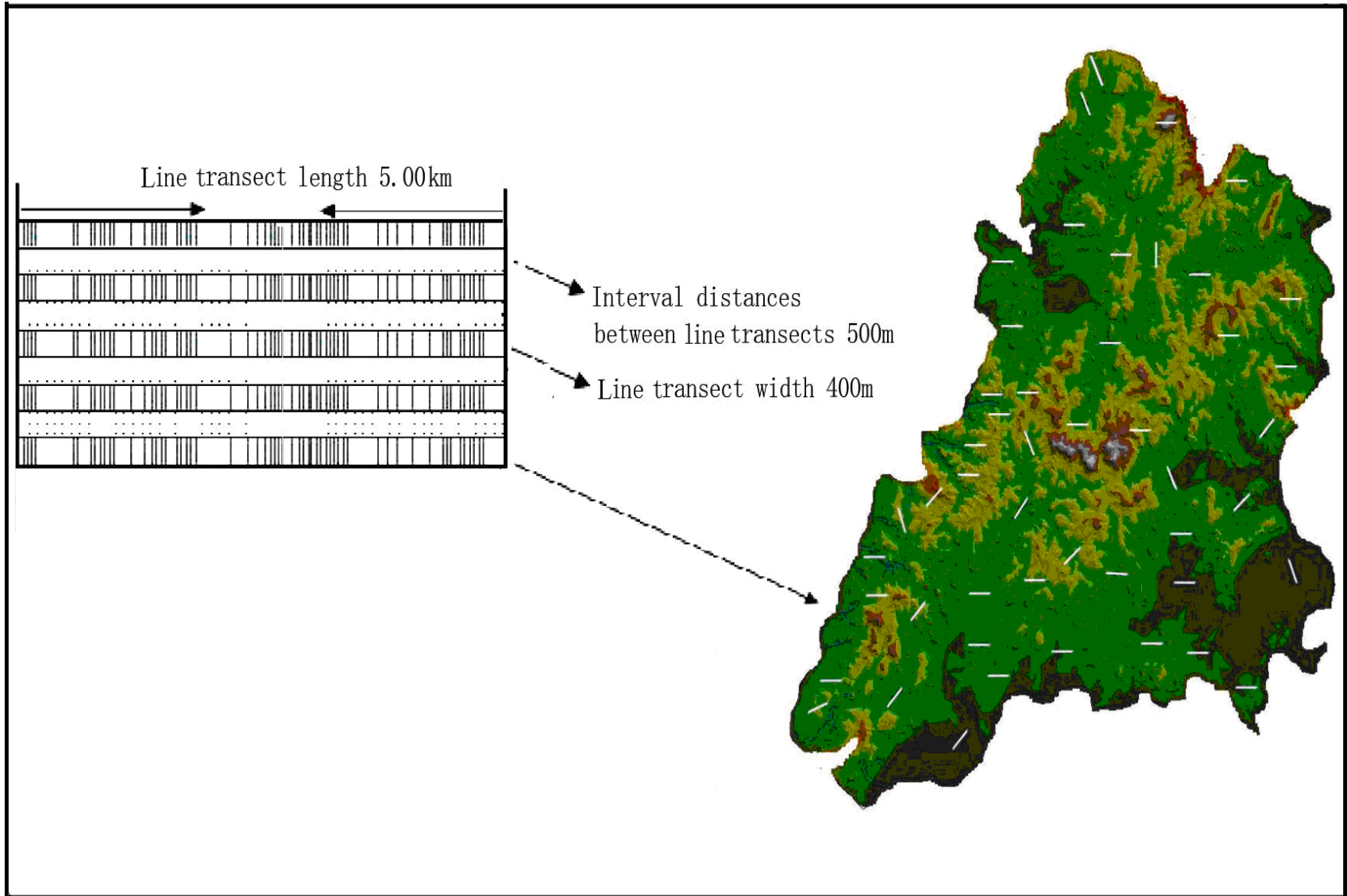
Regions	Line transects	Wild boar	Roe deer	Red deer
		Foot print abundance	Foot print abundance	Foot print abundance
<u>Wandashan</u>	7	0.57	1.34	0.32
<u>Southern Laoveling</u>	9	0.39	0.83	0.26
<u>Nothern Laoveling</u>	5	0.38	0.76	0.15
<u>Southern Zanguan gcailing</u>	6	0.32	0.81	0.22

In 2012 winter

Footprint/km

Regions ^o	Line transect ^o number ^o	Wild boar ^o	Roe deer ^o	Red deer ^o
		Footprint abundance ^o	Footprint abundance ^o	Footprint abundance ^o
<u>Wandashan</u> ^o	62 ^o	0.3172 ^o	0.0196 ^o	0.32070 ^o
<u>Southern Laoyeling</u> ^o	41 ^o	1.1433 ^o	0.0384 ^o	0.2301 ^o
<u>Nothern Laoyeling</u> ^o	40 ^o	0.4734 ^o	0.1279 ^o	0.2258 ^o
<u>Southern Zhangguangcailing</u> ^o	30 ^o	1.0158 ^o	0.3068 ^o	0.0663 ^o

Wanda Mountains



$$B_u = \sum_{i=1}^3 N_i W_i$$

Where B_u is the total ungulate biomass within each region, N_i is the population size of species, (adult or sub-adult) within each region and W_i is the mean body weight of species (adult or sub-adult) ($i=1$ as wild boar, $i=2$ as red deer and $i=3$ as roe deer).



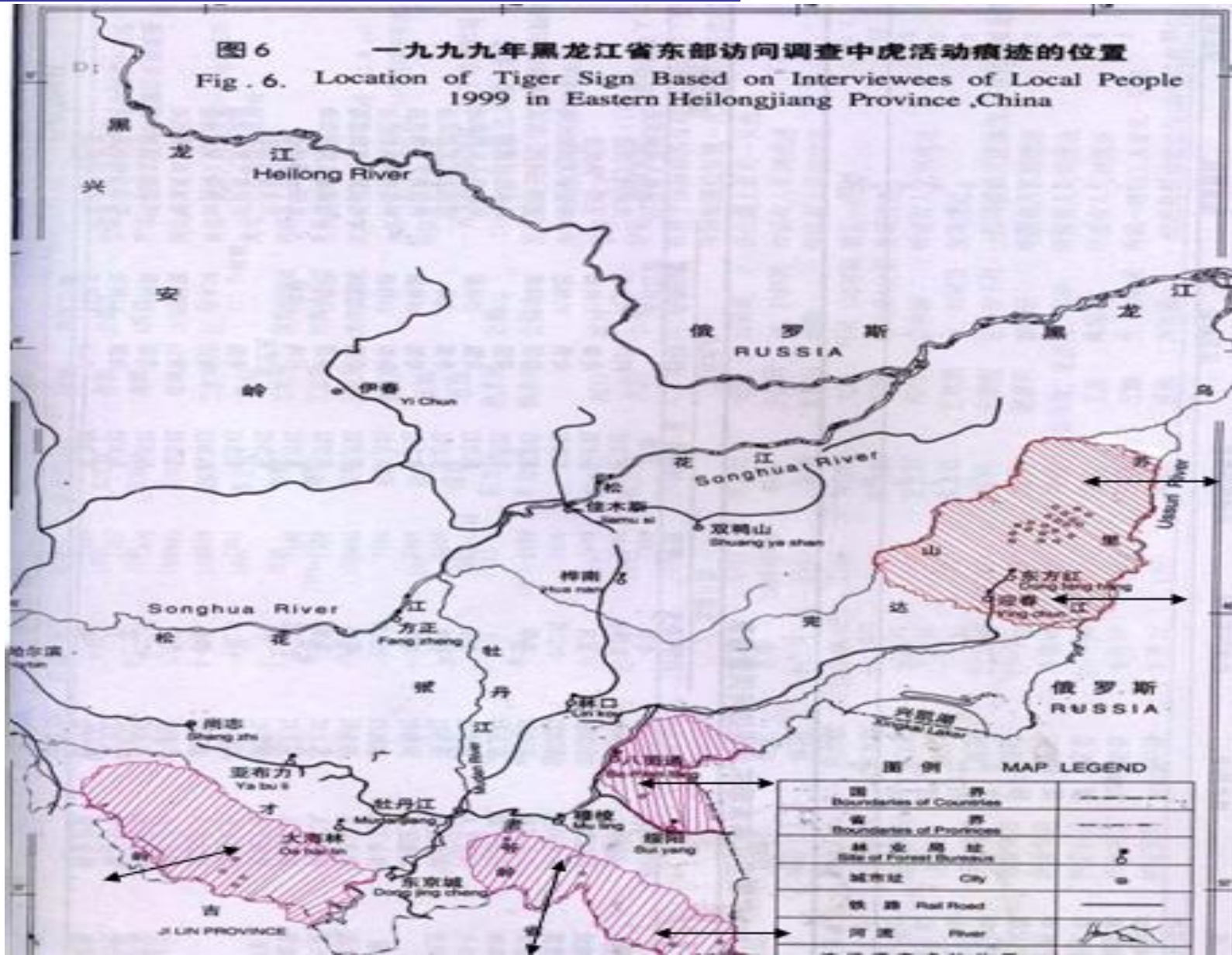
-
- The prey biomass, represented by the three ungulate species, were respectively 79 744.50—85 984.50 kg from red deer, 31 337.00—31 525.50 kg from roe deer, 74 767.50—87 825.00 kg 4kg form wild boar in Eastern Wanda Mountains.



ScoutGuard



Ecology corridor



Our works in the future

- 1. Suitable habitat and ample resources for population recovery**
 - 1) Habitat quality and quantity, resources (prey!)**
 - 2) Potential population size that can be recovered basing on suitable habitat and prey resource**
 - 3) Connectivity (barriers, corridors)**
- 2. Human dimensions**
 - 1) Attitude of people to amur tiger conservation.**
 - 2) Potential conflicts and threats (livestock, hunting, etc.)**
 - 3) Present and future land use patterns (forestry, agriculture, gathering, development, etc.)**
- 3. Species biology and ecology**
 - 1) Status/dynamic source population**
 - 2) Life history (demography, dispersal, ecology, etc.)**

Conclusion

- 1, Network monitoring technique is very important for us to collecte amur tiger imformation in China.
- 2, Dongning and Suiyang Forestry Bureaus are two key regions for camera trapping.
- 3, Our research is closely connected with your project.

A leopard is captured in a natural, wooded environment. The animal is walking from left to right across a field of tall green grass. The background is filled with dense, green brush and trees. The word "Thanks!" is overlaid in large, black, sans-serif font across the center of the image.

Thanks!