

**Wolf Study and Conservation Program**

# **Wolf Analysis and Education About Large Carnivores**

**annual report, 2005**

**Prepared by: Elena Tsingarska – Sedefcheva & Nina Kirova**



November, 2005

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## **Introduction**

Slowly, but steady! This can be a description of our work on the Wolf Study and Conservation Program.

Slowly, because we have limited possibilities for financing, limited human capacity (small team) and not much Government support.

Steady, because since the beginning of our activities we have been convinced that there is a real need of this work and that if don't giving up, finally it will have positive influence on wolf conservation in Bulgaria.

We are convinced that the data we have been collecting and the results which come out will be a key factor when lobbying for better wolf legal status in this country. Our high motivation helps us not to give up even in moments we think that we are at the end of our power.

We are also convinced that the education activities we started with the BTF support in 1999 and which brought to great positive results must be carried out intensively and in a more contiguous way. Having in mind our experience in this field we believe that this will bring to a much better accepting of this species by the wide public.

Last but not least being with permanent contact with local people in mountainous regions and helping them providing livestock guarding dogs for their livestock protection we win their trust and people start thinking about large carnivores in a bit different way seeing us how much efforts we put to study and save them.

## **Acknowledgments**

Our team is grateful to Bernd Thies Foundation, to EURONATURE and to the Anglian Wolf Society, for the given possibility to continue our work in 2005. We are grateful they believed that we are doing a good job. We are thankful to the Ecovolunteer Program, through which a lot of volunteers visited again the project this year, assisted us and supported us.

We would like to express our special thanks to Education4Conservation Society (UK), whose members trusted us and became our partners in realizing our dream – building up the Large Carnivore Education Center. Together with them we won a project for complete equipment of the future center.

We are very thankful to SEMPERVIVA Society and especially the Karakachan breeds conservation project team, for their kind permission to use their project base in Pirin Mts. and for their support in many stages of our work.

Our wolf Vucho is still a magnificent ambassador wolf. We hope he will stay like this. He is really helping us in our public awareness work. I think he already changed a lot of minds! Thanks Vucho.

## **The wolf in Bulgaria**

Still accused for great livestock and wildlife damages. Still presented to be growing in numbers enormously. Still grants given to hunters to kill as much wolves as possible.

All this is ridiculous, but this is so because of the lack of realistic studies on wolves and because the only information about the species is given by forester and hunters, who prefer to present the “Big Bad Wolf”, not the normal animal.

According to the official spring wolf number estimations of 2005, wolves have increased their number up to 2300.

Using this “official” data the Ministry of Agriculture and Forests and the Ministry of Environment and Waters gave permission to the hunters in Bulgaria to organize a National round up for wolves, on 19<sup>th</sup> of February 2005. Immediately, we strongly oppose to this decision. The reasons of our opposition were:

1. According to the Law for hunting and Conservation of Game round up for predators can be organized only between October and end of January. Organizing this event in February was illegal.

2. In second half of February many species from the Bulgarian wildlife already prepare for the breeding season or are already in a breeding season. Thousands of hunters invading forests are big stressful factor for the animals.

3. This method of wolf hunting is always unsuccessful and the result will be poached other animals, because hunters do not like to go home without anything shot.

We expressed our opposition and disagreement by bringing the case to the media, organizing press conference a day before the event. Media presented widely our opinion.

On 19<sup>th</sup> of February more than 20 000 hunters went out for wolf hunting.

The results of the round up were eloquent – only one shot wolf for the whole country. Immediately, different media contacted us asking for interviews, because we were right. Not only because there was really no sense of doing this, but also because Bulgarian Government was not presenting the country well in front of the other countries.

In December 2005 EURONATUR and BALKANI Wildlife Society submitted a letter to the Ministry of Agriculture and Forestry (MAF) and to the Ministry of Environment and Waters. A statement was expressed that the two organizations do not agree with the official species status presented by MAF and with the official policy towards the species. Unfortunately, no response was received by none of the two Ministries. In 2006 the official number of wolves was 2300 again. A few Bulgarian NGOs submitted a statement that they do not agree with this official number and insist for improvement of the number estimation methods. We hope this time there will be some reaction from the officials.

So, we know the officially presented wolf status in Bulgaria is not true and the official policy toward the species is wrong. However, we need years of data collection to prove it with strong arguments. Fortunately, we are already on a stage, when we can publish some results obtained so far and to present it to all the institutions involved in wolf management. This will be a ground to start common preparation of a species management plan, which to be accepted by all the interested parties.

## **Main priorities of the Wolf Study and Conservation Program**

- Analysis of the species status and population trends, data collection about wolf biology and ecology;
- Improve the conditions for co-existence of wolves and humans, decreasing the conflict between them;
- Public awareness and education about large carnivores of Bulgaria;
- Lobby for improvement of species legal status. Elaborate and propose a wolf conservation strategy (management plan).

## **Wolf Analysis**

### **Study areas**

Our work on wolf analysis is continuing in the well known two study areas. These are Kraishte area and West Pirin Mts. area described in details in our past reports.

### **Tracking**

As usually, we expected the winter as the best time to collect data about wolf territories, pack size, pack structure, wolf numbers, etc. As it is known, generally winters become softer and softer. The winter of 2004/2005 was not an exception. The first snow suitable for snow-tracking fell in the beginning of January. Our team was out in the mountain on the first suitable day. The few periods good for snow-tracking were followed by warm weeks, so the time we had for intensive work was short again.

Nevertheless, we could add some valuable data thanks to the fact that we used every suitable day for tracking. But we should also say that we were lucky in finding fresh tracks, this winter. As a result, we could follow some long trails, discovering additional parts of packs home-ranges, the size of one of the packs (the number of the pack members), the sites wolves like to rest in during their long roaming throughout the territory.

The home-range of Rabish pack was almost shaped out. The territory of these wolves we already know is about 100 sq.km. We assume that it is even bigger but for proving that we need to continue our work. Following the pack we found that at the beginning of February it consisted of five wolves and they were moving together. On 09<sup>th</sup> and 10<sup>th</sup> of March when we could snow-tracking them last time this year, they were still moving and hunting together. The new part of their home-range we discovered turned to be high in the mountain up to 1600 – 1700 m. In the high mountain part we found a kill of this pack. The wolves had eaten a roe deer.

At the other edge of this pack home-range we tracked a single moving animal. As we recorded its tracks several times we consider it is living alone, not only leaving the pack from time to time, but permanently. From its prints size we found that it must be an adult male.

### **Simulated howling**

This is a very useful method for wolf research, especially in mountainous and forested areas, where field work is generally difficult. Not only because wolves have stealthy way

of life and almost never can be observed, but also because in the rough terrain of the mountain both snow- and radio-tracking meet some obstacles and need supporting methods for collection of data.

Wolves tend to answer by howling to different sounds, which resemble the howling. Biologists from different countries have proved that this method is successful.

It gives possibility to find whether certain pack has reproduced in a given year. In summer time when puppies are still very young, their voices can be clearly recognized among the voices of the other pack members, while answering to human simulated howling.

The other aspect of wolf research the simulated howling is suitable for is defining the location of den sites and rendezvous sites of a pack. The right time for this is also summer time, when puppies are still too young to follow their parents and the other adult pack members and they stay near the den or are brought to the rendezvous site, which is relatively close to the den.

Our experience from using this method shows that it could be really useful. The only two obstacles we met are too shy wolves in Kraishite area and difficulties in hearing wolf answers in Pirin where the terrain is very rough and rocky.

The results we have so far from using simulated howling are: defining one rendezvous site (Rabish pack) and locating several times wolf movements, all in Pirin Mts.

We have many cases, in which the team members hear wolf howling, but it is so low that they are not 100% sure in what they hear. Often we need to work near rivers or in time when it is very windy and it makes the situation even harder.

We believe this method can help us a lot in completing the picture of data we collect about wolves, but we need to renew our equipment with technique, which would enable us to do this work very effectively and to collect very valuable data about wolf biology and ecology in Bulgaria (reproduction rate, using of home-ranges and their size).

## **Work on trapping and radio-tracking wolves**

### ***Trapping efforts***

Starting in February 2005 we set two trap lines. For setting the trap lines we chose an area, which we found out that is permanently used by a pack. They regularly travel on the forest roads within this area. However, this area is only suitable for setting traps in a very short period during the year, because it is not deep in the mountain. It is on a low altitude, between 600 and 800 m, and it is permanently used by local people with their, livestock, horses, etc. from spring till late autumn. Once the hunting season starts on 1<sup>st</sup> October for large game (and even earlier for birds), there are hunters with their dogs in this area. Officially the hunting season finishes on 31<sup>st</sup> of December. "Unofficially", it continues all year round. So, the time when there is a bit less danger that our traps could be found and stolen in this area is only at the end of the winter (February and March).

Every day checking of traps was done on a horse back to avoid leaving human smell along the trap line. As, the end of the winter and the beginning of spring is the breeding season of wolves we mainly used as bait urine from female dogs in heat, we could collect from our Karakachan dogs.

The second and last trap line for 2005 we set on 17<sup>th</sup> of March. On the third day after activating the traps we found one of them closed. It was probably closed by a small animal which could pull out its paw or by a wild boar, because the trap was pulled a bit

from its place. Often wild boars dig to search for their food. Digging near a trap they can easily push it from a side and close it without being trapped. We have had several cases in which we proved that our traps we closed in this way by wild boars, because of the tracks found around the traps.

This case was followed by several days nothing around the traps.

On the eight day in the morning there was still nothing in the traps. I renewed the bait and went back to the village. In late afternoon we got a phone call from a park ranger. He told us that local people had seen a trapped wolf on the forest road exactly where our traps were. We collected our equipment and rushed to the place. Running along all the traps we did not find anything ... except in the last trap. There was a wolf! The animal was looking at me. In few seconds it started barking still looking directly in my eyes. Some authors consider that barking of wolves appear when they warn intruders into their territory, some others write that this is an expression of highly emotional condition. We tranquilized the animal. While we were waiting it to fall asleep it became completely dark. Finally we approached it. It was a male. We took some basic body measurements, surveyed the body and fixed the radio-collar. This was really a special moment for our team, our first radio-collared wolf. Unfortunately, we could not record this moment because it was dark and we did not have flash on our simple camera. We stayed until we saw the wolf started moving his eyes and ears. That meant that the animal was awaking. We left him alone and went away.

The body survey of our first wolf showed that this is an old animal. His teeth were threadbare, telling about 9 – 10 years age. The wolf was comparably skinny, which combined with the state of his teeth was also a sign of old age.

### ***Radio-tracking***

As soon as we already had a radio-collared wolf we knew we have to track the animal as often as possible, because in Bulgaria it is never known when hunters will manage to shoot it. We could not track our wolf every day, but every second or third day we went for radio-tracking. The collar transmitter was working well and we were able to collect interesting data about the movements and the activity of this animal. Soon we realized that this wolf stays in quite a small area.

The radio-tracking was done from the end of March to 9<sup>th</sup> of May. All the locations we made were in a range of about 20 sq. km.

The last time when we radio located him and he was active was on 6<sup>th</sup> of May. On 8<sup>th</sup> of May going out for radio-tracking we received mortality signal. On the next day following the signal we found him dead in a pine forest within the area he was usually inhabiting while followed by us. The animal did not have any injuries and the reason of his death was unknown to us. We took the stomach for analysis and buried the wolf. When we open the stomach we found out that it was completely empty. Only one oak leaf and few pine needles. Possibly, he could not hunt. So, our first radio-collared wolf carried his collar for a short time, but still we are thankful for the data we could collect about him. The area he inhabited was a small part of the Rabish pack home-range we have been following for 2,5 years now and we mentioned in chapter "Tracking". We couldn't combine our radio-tracking with snow tracking because of the season. The period in which we radio-tracked our first wolf, is the time when the den is prepared and pups are born in a pack. This might be the reason, why the wolf stayed in a small area.

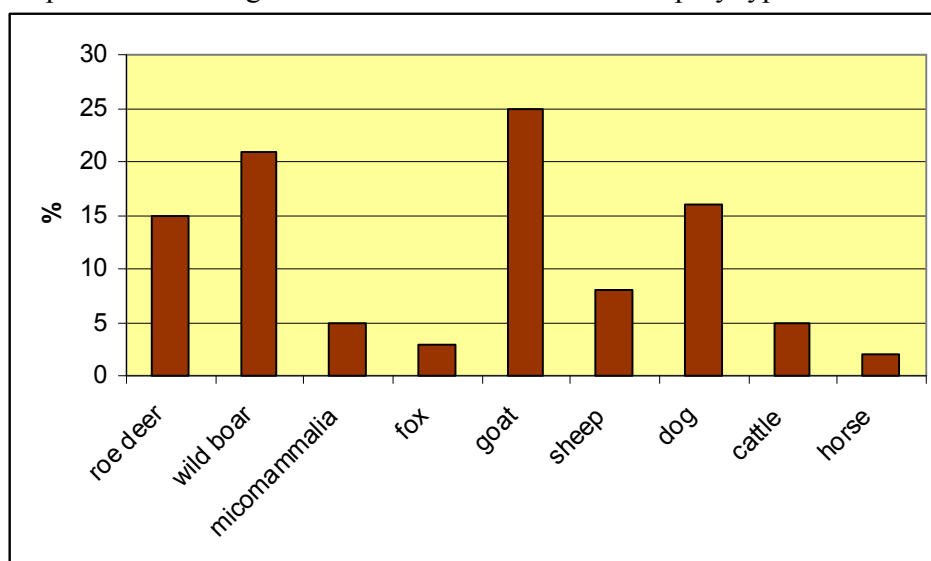


### Collection of scats and wolf diet analysis

Until now, our team has collected about 200 wolf scats during the field work in Pirin Mts. About the same number we have collected from Kraishte study area. More than half of the scats from Kraishte have been analyzed and the results were presented in our report from last year. The material from Pirin is being analyzed as the process is quite long. So far, we have managed to finalize 61 scats and to get the results about their contents.

Despite of the low number of analyzed scats, below we present the results for comparison with the data from Kraishte area.

Graphic 1. Percentage of occurrence of different wolf prey types in Pirin



Comparing the above results with the table of Kraishte area (see report 2004), the first obvious thing is that the number of species, which remains were found in the wolf scats from Pirin is less. Four of the species from Kraishte are missing in the Pirin scats. Three of them are unusual wolf prey, so their absence in the scats from Pirin is not a surprise. These are the domestic cat *Felis catus*, the badger *Meles meles* and representatives of order *Martes*, *Martes sp.*

Something which is strange is the absence of hare *Lepus europaeus* in the wolf scats in Pirin. This is surprising, because the hare in Pirin is not in lower densities than in Kraishte area.

Looking at the wild prey species presence we find other differences too.

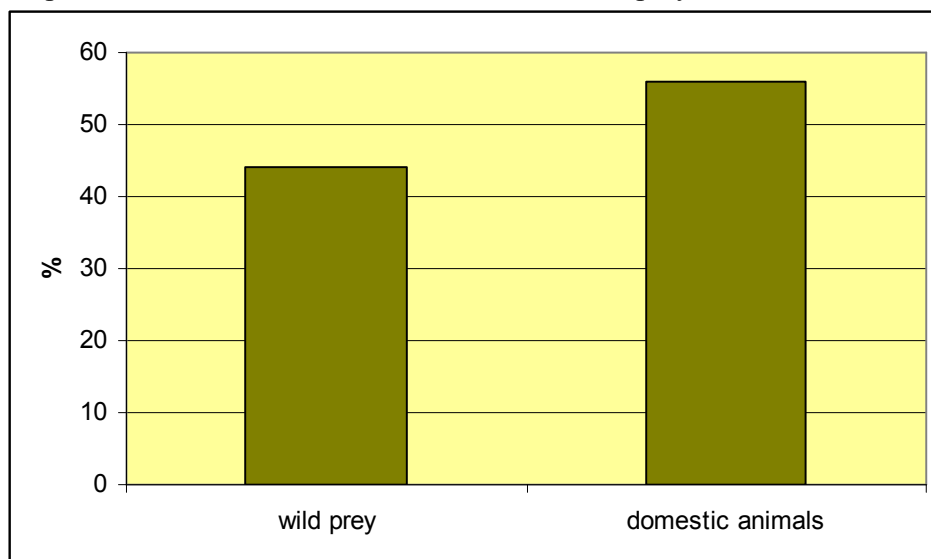
Unexpectedly the wild boar remains represents higher percentage than the roe deer. It is opposite not only in Kraishte area, but also in the third area Osogovo presented in the report 2004 for comparison. Additionally, for whole Bulgaria the information obtained from foresters and hunters is that roe deer is the main natural prey of wolves in Bulgaria and the wild boar is less hunted by wolves. The packs in Pirin study area are not regularly destroyed by hunters as it happens in Kraishte. This may be the reason for the better success of wolves in Pirin in wild boar hunting.

The representatives of *Micromammalia* are insignificantly presented in Pirin scats. Again the reason may be that packs here are with saved structure and are able to hunt larger prey.

The domestic prey keeps almost same trends as in Kraishte. Goats are most successfully taken by wolves. The reasons have been described in our previous reports. One of the main reasons is that goats are dispersed when they graze and they like forested or bushy places for finding their food. In such conditions they are an easy prey for predators. The percentage of dog remains in wolf scats is comparably high here too. This proves that the many dogs eaten by wolves in Kraishte are not something accidental. One of the reasons must be the high number of feral dogs in our country.

The analysis is continuing and when more scats are analyzed the picture may be changed.

Graphic 2. Correlation between wild and domestic prey in the wolf scats from Pirin



The correlation between the percentages of wild and domestic animals in wolf scat remains in Pirin is almost the same as in Kraishte. So, in this aspect the trend is the same. The domestic animals percent is higher, but not much. It leads the wild prey percent with 12%.

### **Wolf activity towards livestock**

The regular interviewing of local people was done also for 2004. It is always done at the end of a given year in order to collect data about wolf attacks for the whole year, until 31<sup>st</sup> of December. That is why now we have worked out the inquiry we conducted at the beginning of 2005, collecting information for 2004.

According to the results the trends in wolf caused damages on livestock are the same as the previous year. According to interviewed people and according to the actual attacks goats are the most damaged livestock in Pirin. The situation in Kraishte is similar, although the difference between goats and sheep percent is smaller.

Concerning the seasons wolves are most active towards livestock in both areas people consider spring and fall as such periods. It is explainable why it is so. In spring before

puppies are born, wolves and especially the pregnant females need more food and livestock is easy accessible in most of the places being without good protection. In summer when the puppies are already born and while they are very young and vulnerable wolves try not to attract human attentions on them, in order to protect their offspring. In fall when puppies are stronger and can follow adults, they go for hunting with them and adult wolves show them the hunting techniques. In this period most of the wolf caused damages are.

## **GIS model of Kraishte study area**

At the beginning of 2005, we had the GIS model for our West Pirin study area ready and could start using it. Right after that the GIS specialists we are working with, started work on the GIS model of our Kraishte study area.

It was very important to have those models for both study areas, with the purpose to unify the methods we use in our work and to make possible doing important analysis on wolf population and its status in the country. Working with GIS we also increased the work efficiency and we are able to present the obtained results in a modern way.

Some of the GIS advantages which are very important for our work are:

1. We have maps with geographic coordinates.
2. We can do statistics of data.
3. We can sum up different layers and compare data from different layers.
4. We can create and print out maps, which are individually made for particular type of research.
5. The estimation of the wolf packs home-ranges size is more accurate.
6. It is possible to calculate potential locations of den sites.
7. Evaluating the preferred type of habitats by wolves and to make prognosis for such preferred habitats which can be extrapolated for the rest of the country.
8. Accurate estimation of distances wolves move on.
9. And last but not least is the very good visualization of the obtained results.

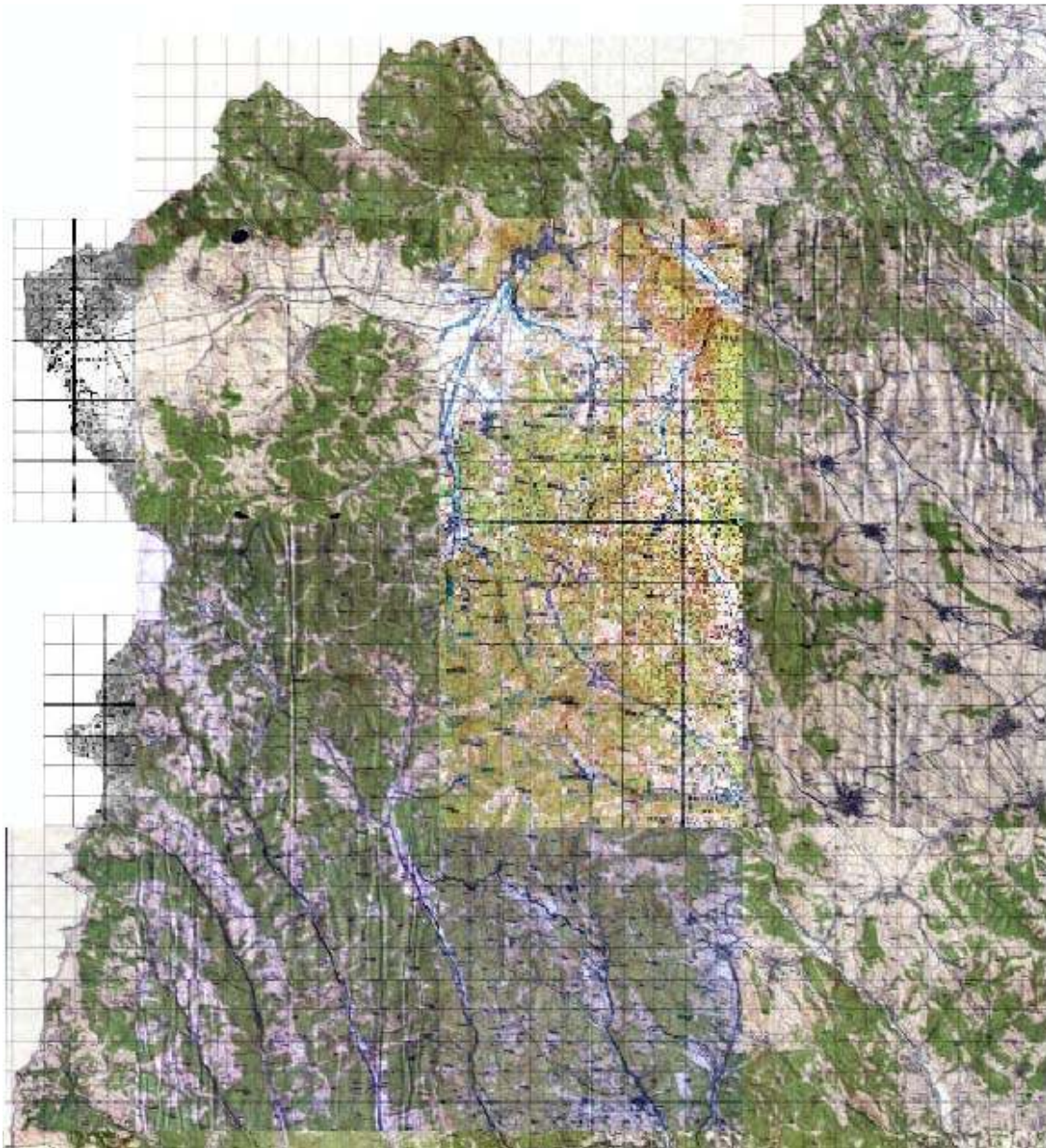
Actually the last point 9 is some very important in achieving our aim to present our results to the governmental institutions and to convince them what is the real wolf status in Bulgaria.

The GIS model of Kraishte is now ready and at the moment we are adding all the data, which have been collected in the area, since 1997.

Some of the layers of Kraishte GIS model are printed on A4 paper as an example of how it looks like. The enclosed maps are of the following layers:

1. 1:25 000 topographic maps of the whole Kraishte study area
2. Satellite image of the area with all the villages and towns
3. Relief
4. Rivers
5. Road system

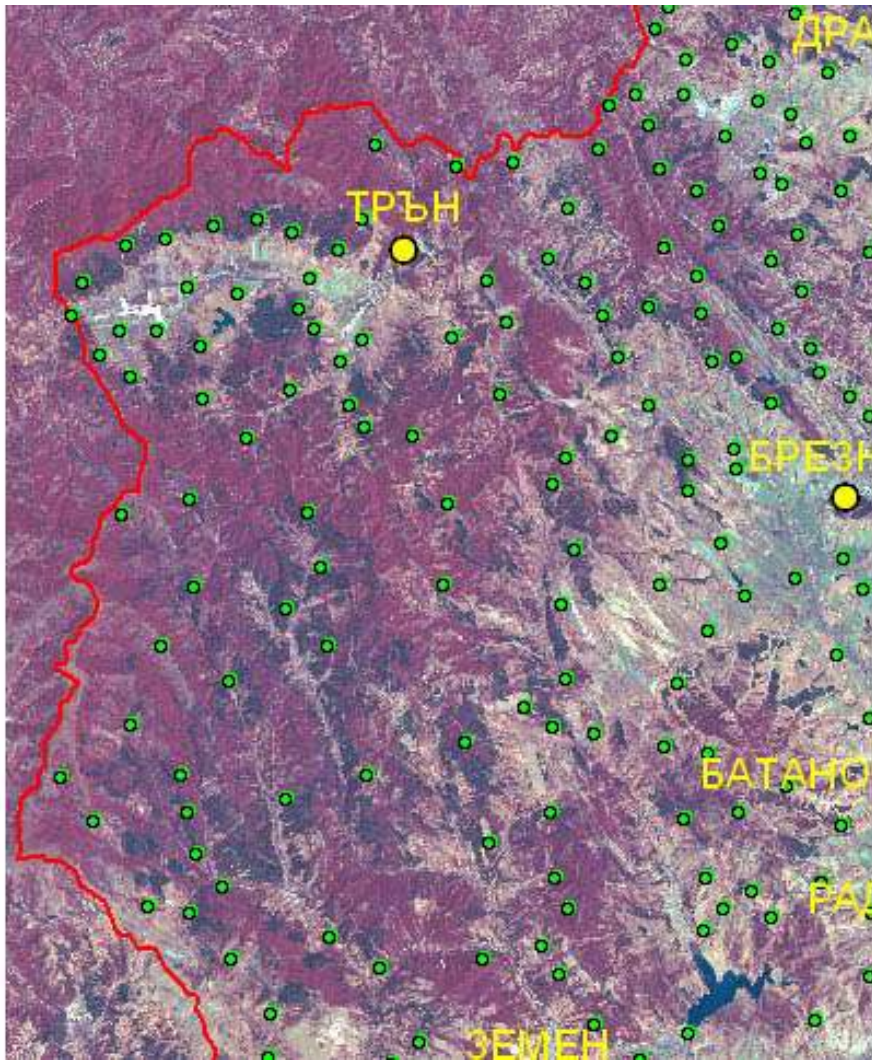
## **Kraishte study area**



**Topographic maps 1:25000**

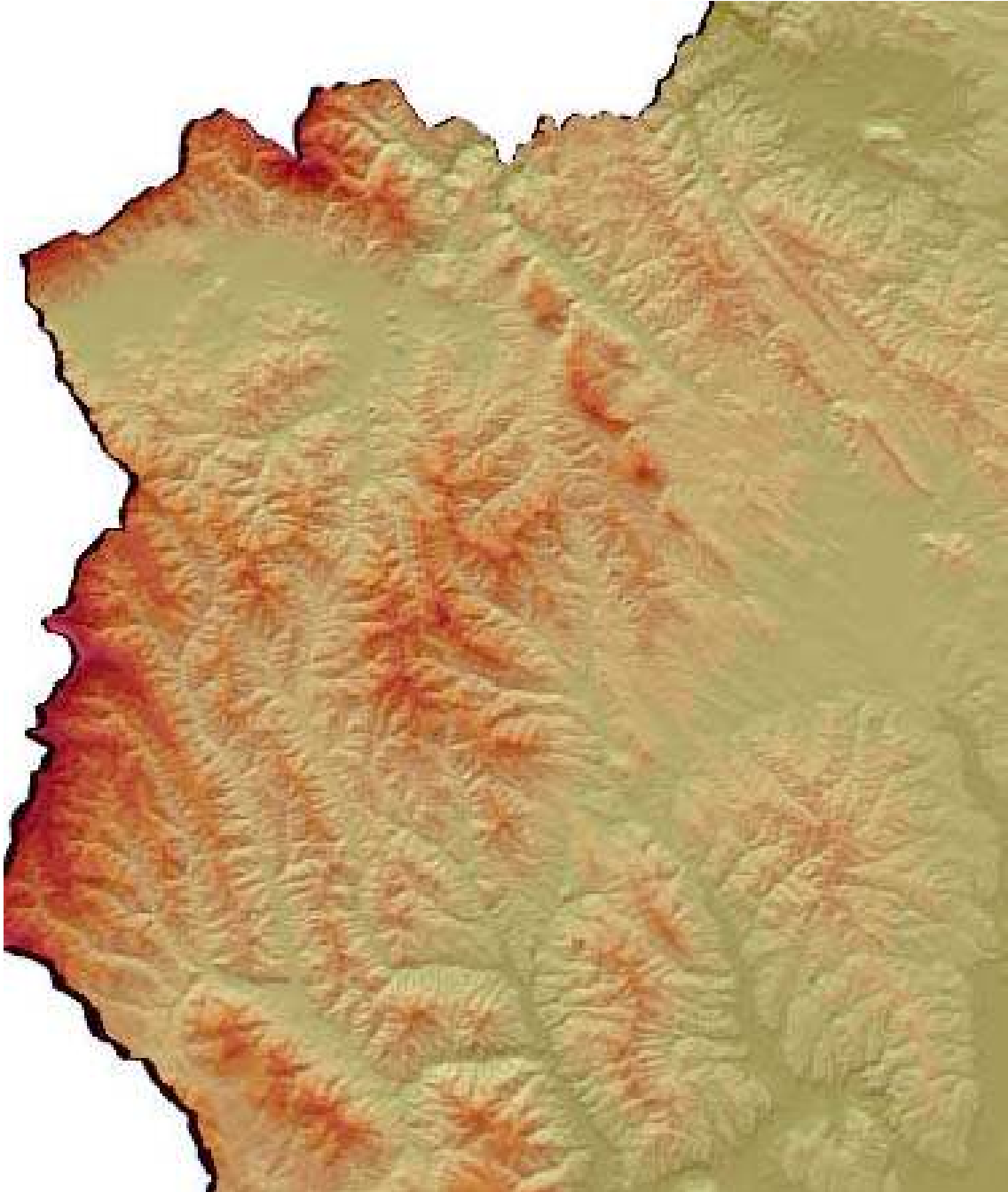


## Kraishte study area



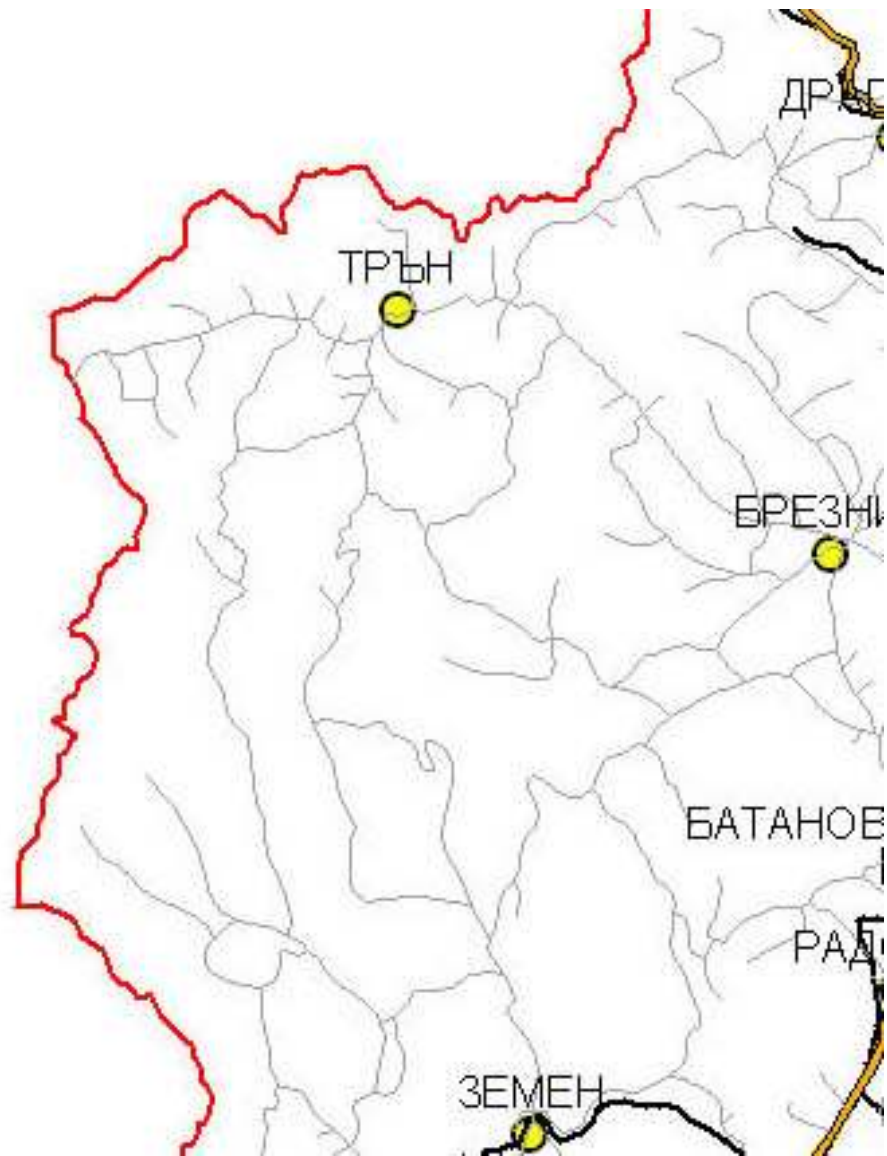
Satelite image with all the settlements

## **Kraishte study area**



**Relief**

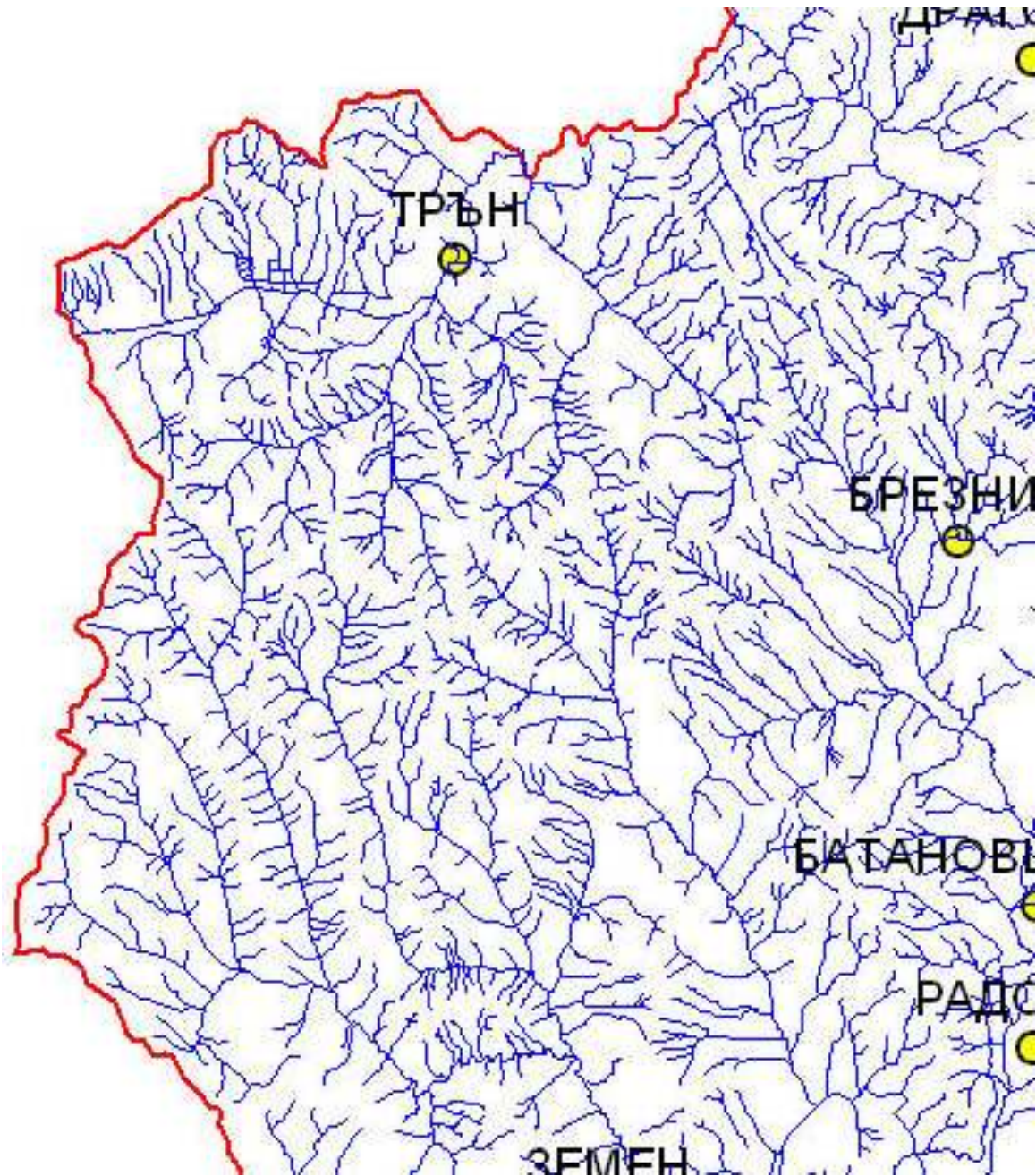
## Kraishte study area



## Road system



## Kraishte study area



Rivers



## **Public awareness and education**

### **Our ambassador wolf Vucho**

Our ambassador wolf Vucho is inhabiting his nice enclosure and implementing his task to be a bridge between wild nature and people. He is very successful in this. He behaves himself when visitors come to see him. People love him after only ten minutes spent with him.

After the death of our old wolf Balkan Vucho left alone. We did not want to leave him living alone in his enclosure. That's why in spring 2005 we started searching information about wolf puppies born in the Bulgarian zoos. We decided to take and socialize a female puppy, because it was better to have second socialized animal to be used for the education purposes. In two of the zoos from where we hoped to get a female puppy, only males were born. Finally, with a lot of difficulties we found in another Bulgarian zoo. However, they did not agree to give us the puppy for free. They also did not want any money, but wished to exchange the puppy for another animal. This was impossible for the wolf team, because we did not have any animal to give. Here our colleagues from SEMPERVIVA helped us a lot. They gave three lambs (two females and one male) from the rare ancient local breed of Karakachan sheep they are working on, to be exchanged for the wolf puppy. Finally, on 5<sup>th</sup> of June we had the puppy. She was 14 days old. A cute creature! We called her Rizha. She started developing very well, with a very good character and very beautiful puppy. Unfortunately, our delight was short. Rizha died when she was 2 months old. She fell down from a very high place and died immediately. Vucho was alone again.

In September we decided to take an adult female wolf from the Sofia Zoo. They have a big pack of eight wolves there. The reason we decided to make this is that we did not want to have Vucho alone for another year. We chose one of the females and in October we transported her to Vlahi. Now the two wolves are together and are doing comparably well. They still do not have much interactions, but we hope it will be better and they will become good friends.

### **The bear Medo**

The big news is that the LC Education Center will have also an ambassador bear. We named him Medo. By now he is already three years old. Medo was a former circus bear, but his owner could not keep him anymore. Medo needed a new home, but none of the Bulgarian zoos wanted him, because all they have bears. People from an authority of the Ministry of Environment and Waters, who know about our work, called us to ask if we can take the bear. Of course, we could not take just like this, because we did not have a good enclosure to put the bear in. But we liked the idea and decided to inform some organizations about the case and that we would keep the bear if we have the funds to make the enclosure. Again together with our colleagues from SEMPERVIVA Society we managed to get a project for construction of a large strong enclosure and for food and veterinarian costs for Medo for 5 years. The enclosure was built and since the end of April 2006 Medo is with us.

### **The Large Carnivore Education Center**

We are in progress with this activity too. As we are absolutely convinced that it is very important to have this long term education facility, we never gave up despite of the difficulties and went through a lot of obstacles for moving things ahead. Now we have funding from Darwin Initiative (UK) for complete equipment of the LC center plus for the first three years of its functioning (costs, salaries, maintenance, advertizing). We had bigger complications with the funding for the old building refurbishment. However, we got from the Anglian Wolf Society (UK) some amount for the building work of the LC center. We also expect to hear very soon from a German organization (DBU) if they would be able to support the rest of the refurbishment.

In parallel with all these efforts to get the building done, we are preparing the exhibition, education materials and planning the whole interior of the LC centre. A lot of literature was reviewed and a lot of information we needed was collected. Some of the centre materials have already been made.

In 2005 we received from EURONATUR support for equipping the seminar hall of the LC centre. This is a very important room, because it will be multifunctional. This will be the working room for the pupils groups who will be visiting the LC centre. There will be possibility to make different projections and (video, slide and multimedia) in it. Last but not least this room will be available for organizing meetings and seminars. This is one of the ways for the LC centre self-financing.

All the equipment of the seminar hall has been chosen and purchased. These are flooring, tables, 40 chairs and some cupboards. A screen 210/210 cm was purchased for the different projections. Two boards for the pupil work and for use in workshops/seminars were purchased. These are white board and clip board.

Last year we purchased a multimedia projector for the LC centre with the support of EURONATUR. For 2005, we had funds to buy audio/video system for the seminar hall. However, we decided that a computer would be better complement to the multimedia projector and makes possible all audio and video performances. That's why a computer was purchased to complete the audio/ video system for the hall.

Now all the equipment for the seminar hall is available, but the building is still not refurbished.

### **Media work**

More and more national and international media wish to present our conservation work. This year in May, we had a French team making a documentary about the work we do. In July, a German team from the ARD channel visited us and included Vucho in a documentary about the Bulgarian biodiversity.

There were articles about our work in different national newspapers again. In July and August, number of national and regional TV channels made reportages about the project and its aims.