



Progetto Life

Natura 2003-2007

"Salviamo l'Orso"

Preservation of the brown bear in the Sirente Velino Park

Premises and finalities. Origins and menaces. Objective species.

The project is included in the ambit of the national and European actions for the safeguard and the protection of the brown marsican bear species (*Ursus arctos marsicanus*), species included as prioritarian in the EEC 92/43 Directive and in the Annex I. It is in line with the strategy of preservation of the bear that is been adopted up to now by the authority with the previous projects "Life" and the regional project "Ponte".

The aims of this project, looking at the results and the experiences, were centralized in order to have lasting results and long-term objectives for the bear preservation.

Unfortunately, facts and adverse dynamics of the population of the brown bear in Abruzzo, attested that the preservation of the species was still threatened by large elements of risk, as:

- a short ecologic-structural capacity of some areas in the passages towards the external and the interior of the Park;
- clashes with breeders;
- the necessity of a deeper knowledge of the specific characteristics of the group of bears living in the Park and the necessity to localize other prominent areas relevant to the biology and ecology of the species;
- the present and potential trouble in the "core areas", in the hibernating areas and in the reproduction areas located;
- an incomplete awareness of the value of the bear and of its natural habitat among the local populations.

Aims of the project: general and specific.

The aims of the project were:

- to extend the natural habitats used by the species and to improve the environmental condition of the ecological passages of the

bear;

- to increase the compatibility between the tutelage of the bear individuals and the practise of the anthropic activities (breeding) inside the sensitive areas mostly attended by the bear (core areas) ;
- to implement the data base of bear presence in order to obtain a more complete degree of scientific knowledge necessary to a greater specificity of the interventions



of conservation to carry out on the territory;

- to reduce the anthropic disturbance in the area of major attendance and in the hibernating and reproduction site;
- to inform, to sensitize and to communicate the importance and the value of a rare and menaced species like the bear and to in-

involve the local population in order to make them contribute consciously to activities of conservation and tutelage promoted by the Park.

Sites involved.

The area of intervention of the project has been the whole territory of the Regional Park Sirente-Velino, that extends for 50.500 hectares, with a greater attention to the Mount Sirente (2348 m).

In the Park the open areas, mostly pastureland, cover about 59% of the territory, while about 24 % is covered by woods. The forest is composed by pure woods of beech (7.44 %), mixed woods of Hardwood (15.19 %) with Oaks, Hornbeam and Manna-ash and for the last 1.1 % by re-afforestation with black pine. The remaining part, about 17 %, is composed by rupestrian areas (1.4 %), agricultural areas (14.68 %) and urban areas (0.95%).

In the Park it's important to notice the presence of various kinds of habitat, which you can see in the Annex I of the EEC 92/43 Directive.

The main actions expected.

The actions foreseen by the project were:

- environmental improvements in the popular and in the connection areas of the park and outwardly;
- control of the stray dogs, entrusting of prevention systems (electrified fences), and management of spatial overlap between bear and livestock in altitude pasture-land;
- naturalistic monitoring of the bear and of the most significant areas for its preservation;
- territory surveillance and restrictions on accesses in the areas sensitive to bears;
- information campaigns, awareness and dissemination of results continuously in the territory;
- specific campaigns to combat the poisons and to control stray dogs.

RESULTS ACHIEVED

We must say that almost all the intervention described below have been actually carried





out by farmers and breeders of the Park. The Life Project has therefore created also a significant economic entry, for the inhabitants of the district so as to integrate their income with resources destined to the conservation of nature. Furthermore, the experience of the other project has taught that the involvement of the local population is always decisive for the success of politics of environmental tutelage.

Enhancement of the forestry cover – plantation of autoctone species

The reduced extentions of tree and shrub cover increase situations of vulnerability of the ursina species in the areas of the corridor and / or attendance, therefore it has become necessary to extend and recreate a series of strips of tree vegetation; the work of reforestation has affected autoctonee fruit-bearing species. With the enhancement of the vegetation cover we tried to achieve a double result in terms of conservation of the Bear species:

- to reconnect some strips of existing vegetation, creating more or less contiguous forests which should be able to provide protection and shelter along the lines of greater attendance in ecological corridors;
- to increase the availability of tree species of trophic interest for bear; areas frequented by the latter, in fact, as well as being fragmented and therefore quantitatively scarce, are also qualitatively weak also because of the impoverishment operated by the actions of man.

Therefore the improvement of the habitat along the ecological corridor through which the bear moves by the planting of 6,700 trees in areas without forest cover was undertaken. Thanks to the work of reforestation, the bear, bashful and reserved animal, will be encouraged to reach and settle in the Sirente – Velino area.

Pruning of wild fruit-bearing trees

For the trophic support the pruning of 1500 fruit trees like pear, apple tree, cherry and sorb necessary to the mainly vegetarian diet of plantigrade was also made; this activity of the wild pruning has been often used also in the previous projects Life to stimulate the production of fruits well appreciated by the bear. The very simple action has been highly effective and has been revived after the previous Life experience. The direct results have been the speed of the increase and the persistence over time of increasing production of small wild fruits that

are essential as food sustaining for the protected fauna and, of course, the bears.

Sustainable forestry management

In general, the presence of forest areas from a quality and quantity point of view is fundamental to the protection and frequency of plantigrade along the existing ecological corridors in the park. Indeed forests connotated by a high degree of structural complexity, a high level of biodiversity (many trophic chains and expanded ecotonal areas) represent favourite sites by the bear to satisfy trophic and shelter needs. It is understandable that local governments and populations for both consolidated habits and for civic uses of wood do not share the suspension of normal forestry cuts; through Life models of integrated management of the forest ecosystem were introduced, but although according to a sensitive species such as bear, may lead to a “by-product” (modest revenues of wood) requested by the people. Ultimately we preferred to initiate a process of “sustainable use of a natural resource” that is an example to extend rather than propose compensation solutions resulting costly and limited in time and space. In order to create optimal conditions in the woods of the Park, where bears can find an adequate habitat, the basic concept of use by the local realities has been reversed, pursuing greater structural differentiation of groups of plants and of the composition of the forests,

proposing selective and detailed cuts and possibly continuous over time.

The selection of plants is done not so much on morphological characteristics cutting the worst plants, as on the role and relationships of competition and development. The forestry naturalistic interventions have concerned some beech of the northern side of the Sirente, in the area of Piani di Pezza, in hardwood sub-mountain woods of the ecological corridors of connection between the above areas. Through these silvicultural selective cuts, working with specific drawings and in full awareness of the laws of nature, we considered to transform about 40 hectares of aged coppice and irregular woods in upper grounds, which tend towards greater stratification and specific diversification.

Improvement of pasture-land and reduction of contrasts with the breeders

To improve the habitat of bears we can not simply describe the environment surrounding the species, but we must also consider the relations that the animal establishes with the context in which he lives and the human population, particularly farmers. Within the whole project, considerable attention has been given to this relation, too often conflicting, also to try to eliminate episodes of intolerance, resulting in acts of poaching. For this reason we launched an action aimed at improving the quality of the pastures .





The pasture was therefore enhanced by the elimination of unwanted and weed species, by sowing the natural scything. The areas affected by the improvement were of about 25 hectares of pasture, located in the area of Prati di Cerro and Prati Santa Maria (Aielli-Celano-Ovindoli) and surroundings.

Implementation of watering points for fauna

The karst nature of the territory, which makes rarefied water resources, the numerous reports of sighting of bears at the spring and fountains, the promiscuity at the point of watering between livestock and wildlife led to conditions of vulnerability for the bear. On the contrary, an offer of alternative water resources can help to improve the habitat and to reduce the risk of poaching for the bear. To increase the supply of water resources for the bear, two watering points for wildlife, of a total capacity of 30.000 lts, were made. Thanks to this intervention bears and other wild animals can find the water they need without being forced to approach dangerously to fountains used by livestock.

Implementation of a excursionistic path

Access to high altitudes of Mount Sirente recalls both a summer and winter hiking; up to now unregulated. The regulation and the canalization of touristic flows along predefined routes can help to reduce the disturbance in the areas where there is the presence of bears. In order to promote a guided and controlled use, as well as raise public awareness about the importance of the species and its conser-

vation, a thematic path, approximately 8.5 km, has been made. The guided trail presumes a controlled entry, which allows access to the top of the Mount Sirente.

Accommodation of agro-silvan-pastoral tracks and limitation of accesses

The reduction of disturbance caused by human activities in the areas of the presence of bears has represented an important intervention, aimed at the conservation of the species. Controlling access to areas, where the stable presence of bears was verified, allowed to reduce anthropic disturbance and increase the degree of protection given to species. In particular interventions were carried out on two tracks: one in the place Prati S. Maria Valle-Valle Arzano – Faito – Monacesca, which constitute the main tracks of service to areas of pasture





in altitude. In particular the access trail to the southern side of the Mount Sirente has been closed through a mobile bar that preserves the upper areas in a circle of about 30 km of dirt road. In these the road-bed has been fixed and the regulation of meteoric waters has been improved and uncontrolled transits in grazing areas at high altitude has been eliminated. The second track, on which some intervention was made, is that in the towns Terranera – Pagliare of Fontecchio – Pagliare di Tione.

Cleaning pasture areas in altitude

The park has defined that the improvement of environmental conditions of altitude pastures would have improved the collaborations of farmers in the management choices of the Authority. In this regard the removal of iron and wooden waste, present in the pasture areas in high altitude, has been entrusted to the farmers and entrusting transportation and discharge at authorized landfills to specialized firms. About 100 hectares of grazing areas at a high altitude have been cleaned up.

Honeybees distribution and bear monitoring through drawing of hair samples and their genetic analysis

After the signing in August 2002 of a specific Memorandum of Understanding between Sirente – Velino Park Authority and the State Forestry Corps, aimed at monitoring of bears in a coordinated form in various sectors of its distribution areal in the central Appennine,

systems of non-invasive drawing of biological samples of brown bear have been carried out. To support the monitoring and inventory of the group of bears were set up attractive sites equipped with barbed wire fence with the function of “hair trap” in order to analyze any hair samples for genetic analysis aimed at census of individual bears present. Five spread systems of honeybees have been prepared by the beekeepers working within the Park. The increase of bees for their pollination action keeps intact a high floral richness, a high value in quality of the environment and in the balances of the ecosystem.



Testing systems of prevention through the entrusting of electrificated fences to breeders

A number of interventions were aimed at preventing attacks to the cattle breedings, trying to remove an important factor of conflict. Electrified fences were distributed directly to the breeders in order to prevent damages caused by the bears. During testing there have been no cases of predation on protected livestock by the electrified fence freely entrusted and stoked with solar panel, and achieving excellent results in terms of cooperation and adherence by farmers on the general purposes of the Project.



Starting of control of stray dogs

Another action that has contributed to protect the species was the starting of the management of stray dogs. The action contributed also to mobilize public opinion on the problem and to increase the collaboration of the owners of dogs to functioning of the dog birth register with positive effects on the control of the phenomenon of stray dogs. This action was accompanied by a parallel campaign of information on a local scale. The operation was carried out together with a monitoring program of wandering dogs in collaboration with the Institute for Applied Ecology,

University of Rome. On the other hand, we have created a program of direct management of dogs in collaboration with Asl Unit of Avezzano – Sulmona, through periodic visits to sheep farms, the enrollment to dog birth register of the shepherd dogs not registered, free sterilization of female dogs, sanitary checks of shepherd dogs and flocks, free pesticide treatments, capture and release of wandering dogs unregistered in the dog birth register. The activities were carried out in 4 municipali-





ties where the phenomenon of stray dogs and the incidence of cases of livestock predation was of greater incidence.

Naturalistic monitoring

To collect significant data on the presence and behavior of bears, the project Life had to provide a continuous monitoring and a supporting activity to surveillance, with the following purposes:

- to contribute to improve the state of knowledge on the group of bears present,
- to direct the management choices,
- to undertake safeguard actions in the long term.

Four operating units active in the territory selected from qualified personnel and properly trained have been involved in the data collection activities. The monitoring program includes:

- collecting data of presence reported by third parties – observation of bears (sightings, attacks to livestock, etc.) reported by agents of the State Forestry Corps, students, experts, volunteers; survey on the ground made by two different techniques: transects and surveys. The technique of transects has involved a periodic walk of a network of fixed routes of sampling. The survey technique has involved patrols, on foot, of territory targeted to seek presence data in periods and places where there is greater possibility to

detect presence data.

- monitoring hair traps – development and control of attractive sites associated with hair traps targeted for the collection of hair samples of bears to be submitted to genetic analysis and contribute to non-invasive genetic census in the site of the marsican bear.

All data related to the surveys carried out (transects, routes surveys, specific monitoring sites) and to the data collected (tracks, droppings, signs of feeding, etc..) were mapped using GPS recording system.



From the examination of the data collected, in extreme synthesis, the following information of the presence of bears have been drawn:

- the importance of the Sirente Velino as connection area in the center Apennines areal;
- the presence of areas mostly attended and significant to the bear (core areas);
- the attendance of some areas also during the hibernating phase;
- the presence of reproduction sites;
- the stable presence of 4/5 individuals estimated in the territory of the Sirente Velino.

Campaign of information and awareness on large scale on the project and conservation of brown marsican bear

One of the most important actions in the project was the carrying out of a detailed program of awareness and communication as well as dissemination of results. To reach the authorities, associations and the entire resident population, meetings for the submission and verification of the work of the project to illustrate the information programme on the Project Life in its entirety and the actions that the park intended to undertake in the short period to give continuity to previous initiatives for the conservation of the brown marsican bear were organized. From February to June 2006 meetings were held in Rocca di Mezzo, Secinaro and Celano, the three representative municipalities of the macro areas respectively of the Altopiano delle Rocche, Sirentina and Marsica. At the meetings representatives of municipalities, the Pro Loco, cultural associations, moun-

tain communities, animal welfare organizations on the territory and the local population of the municipalities of the Sirente Velino Park, namely the towns of Rocca di Mezzo, Rocca di Cambio, Ovindoli, Ocre, Acciano, Castel di Ieri, Castelvechio Subequo, Fagnano Alto, Fontecchio, Gagliano Aterno, Goriano Sicoli, Molina Aterno, Secinaro, Tione degli Abruzzi, San Demetrio, Aielli, Celano, Cerchio, Collarmele, Magliano de ‘ Marsi, Massa d’Albe, Pescara were present. Each meeting was supported by an incisive advertising campaign widespread throughout the territory interested, through the distribution of printed materials (posters, leaflets, brochures) in the municipalities, in commercial premises and tourist accommodation centres with the goal of reaching the largest numbers of players acting with the Park. The communication and awareness plan that “gave voice” to the activities of the park was in fact an integrated system because it involved both the “traditional” communication channels such as the printed material and the modern Web and TV media channels.

In fact, an audiovisual product projected at the beginning of each meeting with new images of brown marsican bear inside the park made with digital Broadcast technology has been realized. Thanks to Project Life, the park has set up a press office, involving all organs of the press, regional newspapers and television stations in order to give a prominent place to the Project and all activities of the Authority; for each meeting video services for television news and special investigations which went on air on some local television stations who have the highest audience in the regional and returned on the web through www.abruzzo24ore.tv,



news portal, accessible from all sides the world, which keeps indefinitely in the news within the editorial system have been carried out.

Campaign of specific information about the deterrence from the practice of the use of poisons by the farmers and in general about the phenomenon of stray dogs, indirect cause of the illegal practice.

This campaign, with a more specific target than the first one, has involved shepherds, breeders and farmers in the fight against the use of poisons and in the control of the phenomenon of stray dogs. Qualified operators of the Park and of the ASL spoke at the meeting that was held in April 2006 in Rocca di Mezzo, and that interested the municipalities of Ovindoli, Secinaro, Celano, Aielli. During the meeting the Park has shown farmers, shepherds and breeders its commitment, the formality and the executive timing in the control of stray dogs in areas frequented by the bears and the objectives of the action such as the launching of control and management intervention of guard dogs in collaboration with the local health authorities of Avezzano – Sulmona. Even for this information campaign leaflets and posters to advertise the event and leaflets to explain the project and the objectives of the Authority in relation to the idea of stray dog phenomenon and to the fight against the use of poisons were designed and produced.

Environmental education program directed to schools.

Finally the upgrade course “My invisible friend ...Let’s adopt the Bears!” for teachers of all schools of all levels of the park territory and of the municipality of Avezzano, L’Aquila and Pratola Peligna for school years 2005/2006 and 2006/2007 was realized. The upgrade course has been regularly included in individual school POFs. The projectual idea of the course has been to make available the natural and animal values linked to the bear habitat housing to all children who can not know directly the territory of the Sirente Velino Regional Park (disabled children, children admitted in hospitals, far away children, etc.). The computer and computerization of pupil product have represented the operational tools to bring and to discover Sirente Velino Regional Park to far away children and young people, making them adopt an “invisible friend”!



Progetto Life – Natura 2003 – 2007 “Salviamo l’Orso”

To activate the Update course the following activities were carried out:

- Design and planning of the course to carry out in the school years 2005/2006 and 2006/2007;
- Presentation of the project to all schools of all levels of the territory of Park Sirente Velino and of the municipalities Avezzano, Pratola Peligna, L’Aquila, through a mailing and telephone contacts;
- Meetings with School managers interested in the project and with the teachers responsible;
- inclusion in the POF of the Project of the various schools involved;
- organization and definition of the dates of meetings planned and identification of the three sites of the course based on the needs identified for the first year, identification of two seats for the Update course for the second year;
- Notice to interested teachers and registration of participants, number of teachers involved 51;
- construction of 12 meetings for the first year;
- construction of three meetings for the second year and definition of the program which will take place over the next 14 meetings (path on the ecotheatre);
- designing an operating aboutb the Ecotheatre.

In the first year locations were identified in Avezzano at the “Centro Natura Marsica “ in

Pratola Peligna at the premises of the school in Secinaro at the Center for Environmental Education of the Park Sirente Velino. For the second year, the theme was “Training to environmental education” and to the meeting with the territory of the park Velino Sirente, in particular of the marsican brown bear, through the theatre destined to teachers of kindergartens, primary and middle schools. The project has provided the meeting with the natural places of the territory of the park Velino Sirente and with stories relating to the relationship of man with nature and its preservation; we embarked on a journey through practical experiences and imagination, with the body and its expressiveness, putting forward the senses, collaboration and personal creativity.

Through the course of environmental education and the awareness of teachers we have been able to gather the material needed in the drafting of 5 issues of the newsletter “La voce del Parco” (The voice of the park), circulation 1,500 copies per issue, distributed in all schools in the district. Also the activity of environmental education has been supported by the press and communication office that has spread to the web special information made during the course lessons in various locations. In light of the results achieved at the end of the project, we can say that the level of awareness of the need to protect and general to know bears has definitely increased. A good cognitive basis for further actions to protect this species has also been created.





ECONOMIC DATA OF THE PROJECT

CATEGORIES OF EXPENSE	ESTIMATED EXPENSE	TOTAL EXPENSES
Staff (personnel)	385.700,00	320.193,75
Travelling allowance	18.000,00	1.920,73
External assistance	283.000,00	350.500,77
Long-lasting goods	93.500,00	77.871,33
Land rights/purchases		
Non-lasting material	23.600,00	23.538,18
Other expenses	10.500,00	3.500,00
General expenses	50.500,00	35.483,88
Total	864.800,00	813.008,64

PROGETTO LIFE ORGANIZATION CHART

NAME	STATUS
Oremo Di Nino	Project Responsible
Emilio Sinibaldi	Administrative
Paola Morini	Faunal
Luigi Logiudice	Agricultural Forestal
Gianfranco Di Giacomantonio	Communication Coordinator
Domenico Ciofani	Natural Monitoring
Francesca Ferlini	Natural Monitoring
Luca Maria Nucci	Natural Monitoring
Stefano Cecala	Natural Monitoring
Ruffino Sgammotta (in part)	Natural Monitoring
Chiara D'Angeli (in part)	Natural Monitoring
Elisenda Pasquali	Administrative Secretariat
Gina Di Nicola	Office Accounting
Leucio Angelosante	Technical Office
Patrizia Di Meglio	Auditor
Luca Di Giacomantonio	Press Office
Alessia Bonaduce	Communication Organization (secretary's office)
Massimiliano Nibid	Graphic Design
Paola Morgia	Environment Advice
Antonella Bambagini Oliva	Environment Education
Silvia Cardarelli	Responsible of Training Courses
Rossella Frozza	Environment Communication

