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STEERING COMMITTEE FOR THE CONSERVATION AND
MANAGEMENT OF THE ENVIRONMENT AND NATURAL HABITATS

Committee of Experts - Protected Areas
INTEGRAL NATURE RESERVE OF SASSO FRATINO (ITALY)

On-the-spot appraisal

by

Dr. Alfred FROMENT (Belgium)

with comments by the Secretariat Representative

19.304
09.3



Forty years
Council of Europe
Quarante ans
Conseil de l'Europe

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I. INTRODUCTION

1. Terms of reference

The European Diploma was awarded to the integral nature reserve of Sasso Fratino for a five-year period on 23 September 1985.

As the period of validity of the diploma expires in 1990 it is time to consider whether there are grounds for extending it for a further five-years. To that end, and in accordance with the regulations in force (Resolution (73) 4, Article 7), an on-the-spot appraisal has to be carried out, in order to compare the present state of the area which holds the diploma with that which prevailed in 1985.

I was asked to carry out this on-the-spot appraisal. I visited the reserve on 22 and 23 September 1988, accompanied by Mr H HACOURT, from the Secretariat.

We were met and guided by Prof. M PADULA, Administrator of the Casentinesi state forests, at Pratovecchio, and Dr. MARIANI, Inspector General at the Forestry Authority in Rome. I wish to extend to them by very sincere thanks for their highly efficient assistance while I was carrying out my mission and for the open and stimulating discussions which took place throughout the visit, enabling me to reach a personal conclusion about renewal of the diploma.

I also wish to thank Prof. PADULA's colleagues for their help during the visit, namely forestry inspectors C D'AMICO and S PETROCCHI, warrant officer G BETTI, sergeants F NORCINI, G CRUDELE and R DI JULOS and wardens G VENTURINI and M LUSINI.

2. Location, status, management

The integral nature reserve (IR) of Sasso Fratino covers an area of 764 hectares. It is located in the huge forest massif of Casentino, which occupies 10,600 hectares in the northern Appennines, about 50 km from Florence.

Four biogenetic nature reserves (BGRs), covering 4,124 hectares, surround part of the IR and play an essential buffer role.

The whole forest massif is managed by the Ufficio Amministrazione, Riserve Naturali Casentinesi, which has its office at Pratovecchio (Arezzo) and is directly answerable to the Ministry of Agriculture and Forestry.

Figure 1 shows the location of all the reserves in the forest massif of Casentino and the ridge which marks the border between the regions of Tuscany and Emilia-Romagna and forms the watershed between the Adriatic and the Tyrrhenian Sea.

3. Conditions for the award of the diploma

The European Diploma, category A, was awarded on the following conditions:

1. Any intervention or activity within the Reserve should be prohibited;
2.
 - a. the populations of large game animals (1) throughout the Casentinesi forests should be reduced so as not to jeopardise the maintenance of the virgin forest (1) of Sasso Fratino and to ensure natural regeneration of the potential tree populations in the reserve and
 - b. preliminary scientific research should be undertaken on the population of large game animals (1) and their impact on the forests of Casentinesi as a whole;
3. A study of the ecological assets of the Reserve should be carried out, studying in particular the different aspects of vegetation, flora and fauna;
4. The biogenetic reserves of Casentinesi should be regarded as the buffer area of Sasso Fratino. Ecological management should be applied to these sites, with a view to reconstituting forests close to their natural state. To this end, any activity which might run counter to the aforementioned objective should be strictly regulated and certain activities, particularly those associated with winter sports, prohibited.

We shall consider these conditions in the light of the situation found on the spot, examining the following points one by one:

- internal management of the IR,
- major fauna,
- the management plan,
- external management.

Lastly, we shall consider the subject of information, which is also important.

For the purposes of this report, we studied the various documents which pre-date the award of the European Diploma, particularly Mr T HUNZIKER's report on his on-the-spot appraisal of 1984 and the annual reports for 1986 and 1987, which were drawn up by the management.

(1) It should be pointed out that the use of the terms "large game animals" and "virgin forest" is inappropriate, and that these should be replaced by "major fauna" and "forest close to its natural state" respectively.

1

① INTEGRAL NATURE RESERVE OF SASSO FRATINO

② BIOGENETIC NATURE RESERVES OF

②a Bada Prataglia

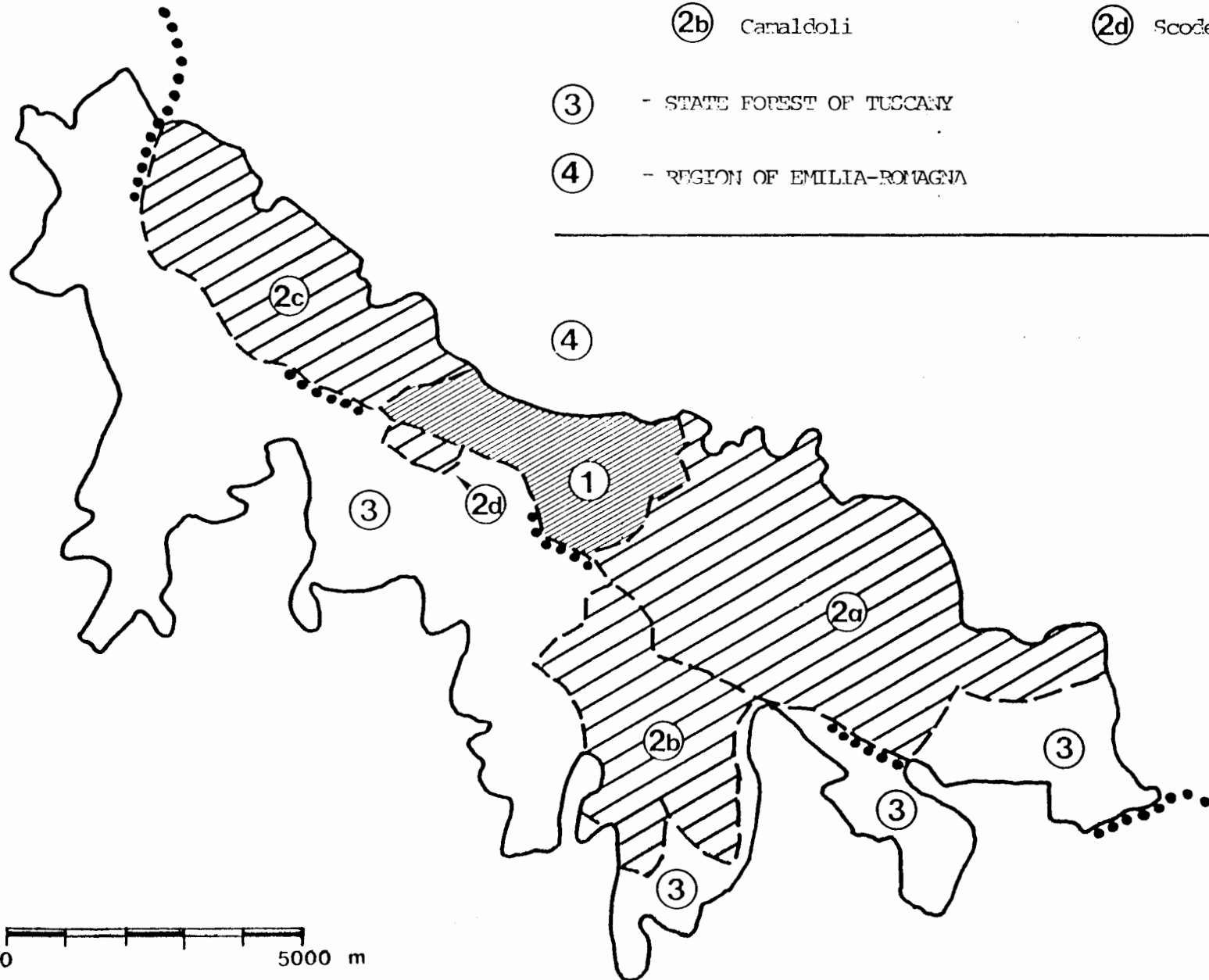
②c Carricma

②b Canaldoli

②d Scodella

③ - STATE FOREST OF TUSCANY

④ - REGION OF EMILIA-ROMAGNA



II. THE INTEGRAL RESERVE OF SASSO FRATINO

1. Internal management

We made two visits, the itineraries and coverage of which were complementary, enabling us to note the specific features of the forest ecosystem of Sasso Fratino (structure, flora, substratum, etc), its major scientific interest and also its aesthetic and didactic value.

On the first visit, we followed the "Professor's path", from the Poggio Scali ridge (1,520 m) to the Ponte alla Sega (650 m), crossing the entire mountainside, which enabled us to note variations at the different altitudes.

On the second visit, we approached the IR from the North, setting out from the Fosso della Porta Gullacce and following a track across the hillside to the Pian del Pero, staying at approximately 1,000 m.

Access to the IR is strictly controlled. Adequate numbers of very explicit notices clearly indicate the specific nature of the IR and formally prohibit entry. It is worth mentioning that copies of the European Diploma are displayed at the entrances.

Authorised visitors are always accompanied by the forestry staff. 532 visitors were admitted in 1986 and 537 in 1987. Details of the visits made in 1987 are contained in Appendix II.

There is no management intervention, as the reserve has the status of an integral nature reserve. Existing paths are repaired each spring. This has to be done, particularly with a view to channelling the movements of visitors and avoiding any disturbance away from the paths.

In this respect, the risk of a certain amount of visitor dispersion in a small number of places, such as ledges, should be noted, and steps could be taken to remedy this situation.

Certain enamel signs indicating place names and altitudes which pre-date the creation of the IR, are too conspicuous and might well be replaced by more discreet signs. Similarly, certain coloured marks on trees indicating old routes could be removed.

The important question of scientific research and the need for fuller reference material will be considered in Chapter II, 3, which deals with the management plan.

2. Major fauna

Considerable progress in controlling the major fauna has been made since the European Diploma was awarded. We noted no significant damage along the paths we followed during our visit.

This favourable development is linked with:

- the capture and subsequent relocation of wild boar;
- the use of a new type of fencing to protect areas of natural regeneration and plantations;
- a decline in the populations of fallow deer in comparison with those of indigenous species.

It must also be pointed out that the research carried out for their degree theses by three students of the Faculty of Forest Science at Florence University (see the annual report for 1987) has provided reliable information about the types, distribution and relationships between the species of major ungulates. The overall results of the censuses carried out in the BGRs in 1985 are given in Appendix III.

The reserves' forestry staff were actively involved in this study and are capable of carrying out annual censuses of major fauna, with a view to monitoring developments, both quantitative and qualitative.

It has been confirmed that there is a golden eagle eyrie at La Lama, justifying the Forestry Authority's proposal to create a new IR at that location, at the centre of the current BGR of Bada Prataglia. Figure 2 shows the location of the suggested 209 hectare area. During our visit, we were able to observe in flight two of the five eagles which have nested on the peak of La Lama.

3. Management plan

3.1 Current management plan

MASSEI's management plan (1981) (1) covers the period 1980-89. This document, which is accompanied by a map on a scale of 1:10,000, relates to the area of the IR as it was in 1980, ie 554 hectares, while the size was increased to 764 hectares in 1983.

MASSEI

MASSEI begins with a general description of the various features of the reserve (geology, pedology, climate, flora and vegetation) and then describes the forest communities, recognising eight major types, some of which are the result of previous intervention. Each of the 35 parcels of land (particella) is the subject of a brief analysis, consisting of a general description, surface area, altitude, exposure, slope and the volume of trees with a diameter greater than 17.5 cm or 12.5 cm.

(1) MASSEI M, 1981. Piano di gestione naturalistica della Riserva Naturale integrale di Sasso Fratino valevole per il decennio 1980-1989. Min. Agric. & Forest. Gestione en Azienda di Stato per le Foreste demaniali, Firenze, 90 p. + 1 map

A comparison is made between the volumetric inventory of a series of plots, carried out in 1953 (P1) and the 1966 inventory (P2), and a distinction is made between conifers and deciduous trees. What is more, a 1933 map has enabled MASSEI to illustrate how the structure of the populations has changed over 40 years.

A more thorough inventory of five representative areas was drawn up in autumn 1978. The diameter at breast height (DBH) of every tree was determined, while heights and IUFRO classifications were specified, and trees numbered, in a smaller sample within a radius of 20 m.

Finally, some consideration is given to the local fauna, particularly the ungulates, and it is noted that fallow deer and moufflon were introduced for the purposes of hunting at the time of the Grand Dukes, and that the large carnivores (wolves and bears) are the missing link in the ecological chain. The populations of ungulates need to be controlled, with a concomitant reduction in the populations of introduced species.

In conclusion, it is stated (p. 86) that the main objective of the IR is aesthetic and educational, and that the scientific goals (the reasons for setting up the IR) stem from the educational objectives. "Detto questo è evidente che l'obiettivo della Riserva è individuato in un motivo estetico ed educativo. I motivi scientifici (che sarebbero istituzionali per le Riserve naturali) vengono come conseguenza dei motivi educativi."

3.2 A new management plan

The information already available makes it clear that there are grounds for drawing up a new management plan for the whole of the present reserve.

As the ecosystem serves as an example, and as priority has to be given to scientific objectives, it is essential that the need for the fullest possible reference material about the major forest types found in the IR be emphasised.

The previous inventories will therefore be supplemented or expanded, providing basic information about sample areas covering the identity and structure of the ecosystem through its:

- constituent parts: detailed surveys of vegetation;
- structure: strata, aerial biomass—living and dead (necromass);
- condition: state of regeneration of wood, productivity, signs of decline due to atmospheric pollution, the condition of elm trees, etc.

A map of the selected areas will be drawn, with grid lines, showing the positions of ligneous species, the projection of treetops, the location of dead trees, areas of dense herbaceous vegetation, the presence of interesting species, etc.

Representative profiles of areas on the edges of the IR would provide an opportunity to describe the morphology of the ground, characterise the type of humus and analyse its main physical and chemical features.

Criticism may be levelled at the preparation of inventories of this kind and at the inevitable disturbance in the selected areas. It must be said that, as these non-destructive inventories were not carried out prior to the reserve being given the status of an IR, it is desirable that the work be done now, so that accurate reference material is available, something which will be particularly valuable for the medium and long-term monitoring of the Sasso Fratino forest ecosystem as it develops towards its optimum state.

This material may also be very useful during monitoring of the changing effects of atmospheric pollution ("acid rain") on Europe's forests. Finally, could the Sasso Fratino IR not also act as one of the Geosphere-Biosphere Observatories in the international network set up as part of the SCOPE project?

4. External management

To be more precise, the term "external management" means all the regulations passed and actions taken outside the IR, the effects of which may be felt inside it.

4.1 Local by-laws

First of all, it is pleasing to note that the eight communes concerned by the Casentinesi forests have passed by-laws which satisfactorily complement the instruments which set up the IR and BGRs (see the 1987 Annual Report). These provide for vehicular access to be restricted, offenders penalised, etc. The most recent by-law was adopted on 22 January 1988.

4.2 The regional park (Parco regionale del Crina le Romagnola)

The existence of the four BGRs is another very positive element, as they serve as buffer areas for the IR. The aim of forestry management in these areas is to maintain or restore a forest of trees of varying ages, based on indigenous varieties; this involves a gradual move away from single-species populations of silver fir trees. Furthermore, field sports are prohibited and the collection of products of the forest regulated in the park.

It should be noted, however (cf figure 1), that the IR is not completely surrounded by the BGRs, and that two of its edges, to the south-west and north-east, are therefore more exposed.

It is to be hoped that, for the sake of optimum protection of the IR, this current weakness will be rectified within the framework of the Parco Regionale del Crinale Romagnola, which was created this very year (1988) and does not yet have a management plan. Figure 3 shows the area covered by this park and the positions of the three types of protection zones (A, B and C) which are planned.

The A zone, an area of total protection, corresponds to the current Sasso Fratino IR. The B zones, in part of the Casentinesi forests, are the four existing BGRs; they are managed with a view to promoting nature conservation within them.

The C zones are less strictly regulated, and tourist projects such as cross-country skiing are allowed there; what is more, forest management in these areas could involve the introduction of exotic species which would not be desirable on the edges of the A zone.

Two comments are called for:

- a. the establishment of a regional park is a very positive step which is likely to supplement the current protective provisions applying to the forest massif of Casentino;
- b. there are definite reservations about the delimitation of the two C zones, one of elliptic shape near Campigna, within the current BGR, and the other along the north-eastern side of the IR.

III. PUBLIC INFORMATION

Reception of the public and the provision of information are essential parts of a nature conservation policy.

The way in which this aspect is already handled and the existing projects at the reserves of the forest massif of Casentino are highly satisfactory.

Appendix IV gives details of guided visits to the BGRs during 1987 and of all tourist movements in every category recorded the same year.

1. Tourist map and documentation

A map of the "Foreste demaniali Casentinesi", on a scale of 1:25,000, was published jointly by the Ministry of Agriculture and Forestry and the Region of Tuscany in 1986. It shows 63 signposted

routes throughout the massif, but none in the IR. The reverse side of the map gives historical information, a brief bibliography and a description of the four forests which make up the massif of Casentino, ie:

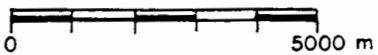
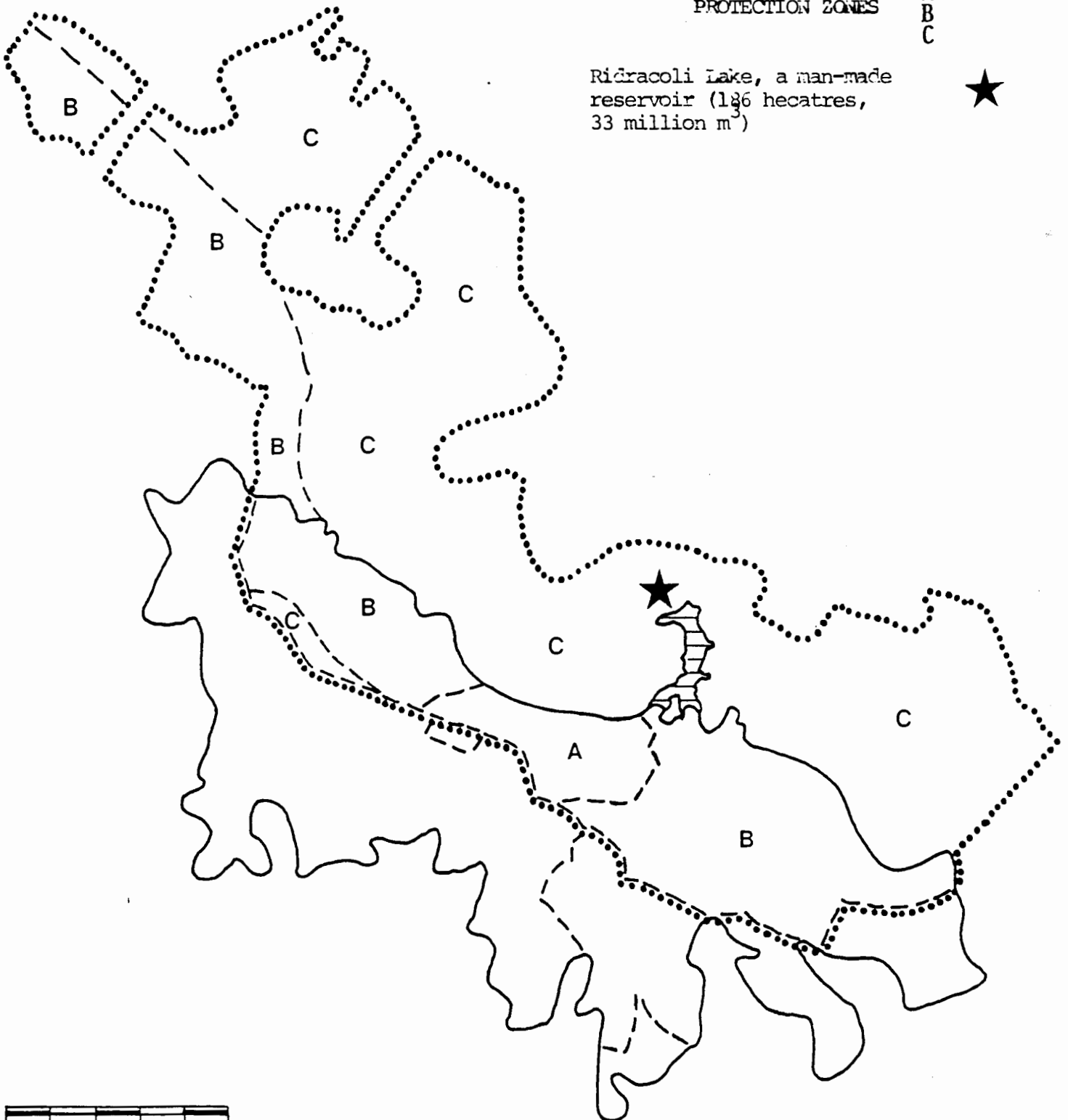
- Bada Prataglia - Lama,
- Camaldoli,
- Campigna,
- Vitrignesi.

..... PARCO REGIONALE DEL CRINALE
ROMAGNOLO (15.900

PROTECTION ZONES

A
B
C

Ridracoli Lake, a man-made
reservoir (186 hecatres,
33 million m³)



Also included are useful addresses, access roads, facilities, camp-sites and the location of the forestry museums. There is also an explanation of the restrictions on collecting the products of the forest and a list of protected plants.

Plenty of material covering the forests of Casentino is also available: there are books, booklets, information leaflets and stickers.

2. Forestry museums and reception centre

a. Three museums, located in the Forestry Authority buildings at Bada Prataglia, Camaldoli and Campigna, are open to the public. Each has original features making it an ideal place to obtain information about the general characteristics of the forest and its wildlife and management: It should be noted that a copy of the European Diploma is displayed at each of the museums.

b. A reception centre (Centro visitatori) to be known as the "Casa di Boscaioli" might shortly be set up at Camaldoli. Plans have been drawn up to convert and fit out a huge building which belongs to the Ministry of Agriculture and Forestry but approval has not yet been given for the project (see the 1986 annual report).

The three-storey centre will have exhibition, projection, meeting and reading rooms, a laboratory and offices. It will be able to accommodate courses lasting several days and provide much fuller information about the reserves, whilst still having room for temporary exhibitions on specific themes.

Figure 4 shows the location of the three existing forestry museums and the projected centre at Camaldoli.

3. The policy of restricted access to the integral reserve

An increasing number of requests to visit the IR have been received since the European Diploma was awarded and various articles were published. Only a limited number of requests were granted while the other would-be visitors were directed to the BGRs, where conditions are very similar to those in the IR. Information sheets entitled "Why it is not possible to visit the IR" have also been printed and distributed.

Every encouragement must be given to the management's restrictive attitude. However, the corollary to this is that permitted visits to the IR have to be very strictly justified on scientific grounds. What is more, a maximum number of people per group surely ought to be laid down, enabling the disadvantage mentioned in Chapter II.1 - disturbance away from the paths - to be avoided as far as possible.

4



INTEGRAL NATURE RESERVE OF SASSO FRATINO

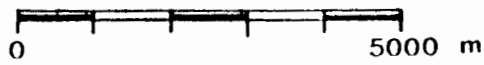


BIOGENETIC NATURE RESERVES



MUSEUMS

- ① Bada Prataglia
- ② Carnaldoli
- ③ Campagna
- ④ Carnaldoli Visitor Centre (projected)



IV. CONCLUSIONS

In the light of the above, it seems clear that the conditions for renewal of the European Diploma for a further five-year period are met, given the excellent management of the reserve and the importance of the projects which are likely to strengthen the conservation status of the integral nature reserve of Sasso Fratino.

I therefore recommend that the diploma be renewed, on condition that the objective of the IR, ie its scientific purpose, is given due priority and respect.

I also advance the following recommendations:

1. A new management plan should be drawn up, including the preparation of non-destructive inventories of small areas which are representative of the major types of forest ecosystems in the IR.
2. Changes in the populations of major ungulates, golden eagles and other carnivores should be subject to an annual survey, the results of which would be included in the annual report to the Council of Europe.
3. Encouragement should be given to the creation of a new IR at La Lama, particularly in the light of the confirmation that there is a golden eagle eyrie in this zone.
4. Encouragement should be given to the setting up of the Camaldoli reception centre, and appropriate staffing should be provided, so that the centre can provide a full information service in respect of the Casentinesi reserves.
5. There should be wider consultation between the various parties involved in the "Parco Regionale del Crinale Romagnolo", particularly with a view to solving the problem of the absence of buffer areas to the north-east and south-west of the IR. The creation of these buffer areas should be regarded as a priority objective during the five-year period for which the diploma is renewed.

V. SECRETARIAT COMMENTS (by Mr H HACOURT)

Thanks to Professor M PADULA, his colleagues and Mr MARIANI, Dr. FROMENT - the consultant appointed by the Secretary General of the Council of Europe - and myself were able to fulfil our terms of reference in respect of the renewal of the period of validity of the European Diploma awarded to the integral reserve of Sasso Fratino. Our thanks go to all who assisted us.

I find myself in full agreement with the consultant's analysis and conclusions. However, I should like to stress the following points:

1. It is noteworthy that a (full-sized) photocopy of the European Diploma is displayed at all main entrances to the reserve. Another copy is very conspicuously displayed in the main museum, along with a photograph of the ceremony and an explanation in Italian. So no visitor can be unaware of the award of the diploma.

However, there is also the other side of the coin: providing information in this way arouses greater curiosity among visitors, necessitating closer supervision by management in order to prevent unauthorised visits.

This problem will be brought to the notice of the Committee of Experts - Protected Areas - when it considers the question of a symbol to designate areas to which the Diploma has been awarded.

2. The management's original way of responding to requests to visit the integral reserve is noteworthy. An explanation is given of the reasons why the reserve cannot be visited (fragile biotope, the need to avoid any intervention at all and to allow the forest in the area to develop naturally), would-be visitors are invited to go to the neighbouring biological reserves, where they will find a landscape which is relatively similar to that of Sasso Fratino. In our opinion, this is an excellent information tactic.

3. The European Diploma awarded to Sasso Fratino was given to an integral reserve, and that it must remain. In other words, priority must be given to the reserve's scientific interest over and above cultural and didactic elements. This also implies strict management. That is a condition of the utmost importance for renewal of the diploma. As the region sees so much tourist activity, of which we anticipate further expansion, this condition can only make management easier, requiring strict supervision of the reserve, for example.

A draft recommendation for the Committee of Experts appears at Appendix I.

A P P E N D I X I

DRAFT RESOLUTION
ON THE RENEWAL OF THE EUROPEAN DIPLOMA
AWARDED TO THE SASSO FRATINO NATURE RESERVE

(Italy)

The Committee of Ministers, under the terms of Article 15 (a) of the Statute of the Council of Europe;

Having regard to Resolution (65) 6 instituting the European Diploma;

Having regard to Resolution (85) 12 on the Award of the European Diploma to the Sasso Fratino Nature Reserve;

Having regard to the proposals of the Steering Committee for the Conservation and Management of the Environment and Natural Habitats;

Renews the European Diploma, category A, awarded to the Sasso Fratino Nature Reserve until ...;

Attaches to the renewal the following condition: it is absolutely essential that the Sasso Fratino Reserve retain its "integral" character, ie that its scientific purpose be duly recognised as having priority and respected;

Makes the following recommendations:

1. a new management programme should be drawn up, including the preparation of non-destructive inventories of small areas which are representative of the major types of forest ecosystems in the nature reserve;
2. an annual survey of developments among the major ungulates, golden eagles and other carnivores should be carried out. The results of the survey should appear in the annual report;
3. every encouragement should be given to the creation of an integral reserve at La Lama, with a view to this being set up as soon as possible, particularly because of the golden eagle eyrie located in this area;
4. the Camaldoli reception centre should be set up as soon as possible and provided with appropriate staff, so that it can offer a full information service in respect of the Casentinesi reserves;

5. consultation between the various parties involved in the "Parco Regionale del Crinale Romagnolo" should be continued, and even extended, with a view to solving the problem of the absence of buffer areas to the north-east and south-west of Sasso Fratino Reserve. In view of the pressure from tourism, the creation of buffer areas in these locations should be a priority objective over the next five years.

Visite alla Riserva Naturale Integrale di SASSO FRATINO anno 1987

5.3.1987	Istituto Tecnico Industriale "Hertz" di Roma	30 persone
8.4 "	Sindaco di Santa Sofia e Assessori Regionali Emilia-Romagna	14 "
15. "	Delegazione di tecnici Elvetici (dr. T. Hunziker) Zurigo	65 "
1. "	Sig. Vianelli e altri (riv. Monti e Boschi) Bologna	6 "
10 "	Dr. Massimo Seravelli e altri di Pratovecchio	14 "
10 "	Istituto prof.le per l'Agricoltura di Pieve Santo Stefano (AR)	47 "
11 "	Scuola Novegese di Finsas	18 "
10 "	Sez. Pro-Natura di Firenze	45 "
14.6. "	prof. Cantarelli (Sassuolo)	45 "
17 "	Assessorato Sport e Cultura di Sassuolo (MO)	10 "
19 "	Allievi Ispettori del C F S corso Valsugana - Sabaudia	42 "
22 "	Associazione Internazione Giardini Botanici	21 "
26 "	Botanici elvetici (prof. A. Speich) di Zurigo	22 "
28 "	Sezione del C. A. I. di Bergamo	40 "
4.7. "	Dr. Carlo Cogosso (Min. Pubblica Istruzione) Roma	2 "
7.7 "	Filippo Cerrina e Daniele Cavadini della Rivista Gardenia	2 "
11 "	Allievi Guardie Forestali della Regione Friuli-Venezia Giulia	24 "
23 "	ddrr. Dieterle e Kramen (Ministero degli Esteri della Repubblica Federale di Germania)	8 "
25 "	dr. Savini Paola di Perugia	2 "

1987	dr. Vittorio Dal Corso (I.B.M.) Roma	2	persone
6.8. "	Prefetto di Forlì e Presidente del Consorzio Acque di Forlì e Ravenna	6	"
5.9. "	dr. Jean Gottesmann (Einsiedeln) Svizzera	2	"
7 " "	Ordine dei dottori Agronomi di Firenze	20	"
.10. "	dr. Angelo De Marchi (riv. Parma-Natura) Parma	7	"
. " "	dr. Mauro Bonciani (Aquarius editrice) Firenze	2	"
2 " "	dr. Bernardo But (Basilea) Svizzera	3	"
7 " "	m.llo CFS Benassi Mario (CFS di Modena)	8	"
4 " "	delegazione di esperti della Repubblica Popolare Cinese	8	"
5 " "	dr. Gargioli Giancarlo (Azienda Regionale Foreste Emilia-Romagna) Pavullo (MO)	8	"
2.11. "	prof. Gori Loredana di Arezzo	14	"
<hr/>		<hr/>	
		537	"

A P P E N D I X III

Situazione faunistica degli ungulati
nelle Riserve naturali biogenetiche
casentinesi.

Dal censimento effettuato dai tre laureandi in Scienze forestali nel 1985 e accuratamente seguito dall'Ufficio Amministrazione di Pratovecchio risulta la seguente presenza di fauna ungulata.

Negli anni 1986-1988 sono stati effettuati dei periodici controlli:

Cervo (Cervus elpahus)

Riserva di Campigna	n° 18
Riserva di Badia Prataglia	n° 80
Riserva di Camaldoli	n° 35
	<hr/>
	133

Daino (Dama dama)

Riserva di Campigna	n° 37
Riserva di Badia Prataglia	n° 75
Riserva di Camaldoli	n° 30
	<hr/>
	142

Capriolo (Capreolus capreolus)

Riserva di Campigna	n° 95
Riserva di Badia Prataglia	n° 115
Riserva di Camaldoli	n° 70
	<hr/>
	280

Cinghiale (Sus scrofa)

Riserva di Campigna	n° 80
Riserva Di Badia Prataglia	n° 120
Riserva di Camaldoli	n° 60
	<hr/>
	260

Mufione (Ovis musimon)

Riserva di Badia Prataglia n° 20

Riserva naturale biogenetica di Badia Prataglia

3.3.1987	Scuola Media Beato Angelico di Firenze	56	persone
6 " "	" " Arrigo da Setticello Firenze	28	"
7 " "	" " " " " "	33	"
8.4. "	" " di Agliano (Pistoia)	22	"
8.4 "	Sindaco del Comune di S. Sofia e Assessori Regione Emilia-Romagna	14	"
4 " "	Scuola Media "Giulio Cesare" di Savignano sul Rubicone (FO)	56	"
5 " "	Istituto tecnico per Geometri di Ancona	34	"
7 " "	Scuola Media "Buricchi" di Prato (FI)	35	"
9 " "	Centro di Educazione esercitazione attiva (CEMEA) di Roma	54	"
0 " "	Scuola Media di Scandicci (FI)	48	"
0 " "	Scuola elementare di Scandicci (FI)	33	"
.5. "	Scuola Media "Don Facibene" Forlì	26	"
" "	" " di Forlì	48	"
" "	" " " Subbiano (AR)	46	"
" "	" " della Repubblica di S. Marino	23	"
" "	" " "A.Panzini" di Bologna	41	"
" "	" " di Bucine (AR)	50	"
" "	Liceo Scientifico "G.Ulivi" Borgo S. Lorenzo (FI)	50	"
" "	Scuole elementari di Corezzo (AR)	24	"

5.1987	Operatori Forestali Norvegesi (Finsas)	35	persone
" "	Scuola Media "Galuzzo" di Firenze	34	"
" "	Scuola Media di Soci	75	"
" "	" " " Subbiano (AR)	39	"
" "	" " " Mercato Saraceno (FO)	45	"
" "	" " " Capolona (AR)	68	"
" "	Operai Forestali Svedesi	23	"
6. "	Scuola Media di Santa Sofia (FO)	85	"
" "	Scuola elementare "Saffi" di Forlì	39	"
" "	Istituto Botanico dell'Università di Camerino (MC)	36	"
" "	Allievi Ispettori CFS "Valsugana" di Sabaudia (LT)	32	"
" "	Azienda Provinciale Turismo di Forlì (alcuni giornalisti)	22	"
" "	Forestali elvetici (Berna)	30	"
" "	Associazione "Il Gineprone" di Castellina in Chianti (FI)	49	"
3.10 "	Operatori del verde di Monaco di Baviera (Germania)	40	"
7 " "	Responsabili dell'Aquarius editrice di Firenze	3	"
1 " "	Dottori in Scienze forestali di Torino	10	"
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		1.386	"
<u>Riserva naturale biogenetica di Campigna</u>			
4.1987	Scuola elementare "Lambruschini" di Rimini (FO)	47	"
" "	Scuola Media "Granarolo dell'Emilia" Bologna	39	"
" "	Scuola Media di Castrocaro Terme (FO)	46	"
" "	Scuola Media "Mercuriale" di Villa Romiti (FO)	34	3

6.1987	Scuola Meda di Cesena	45	persone
3 " "	Scuola Media di Santa Sofia (FO)	49	"
5 " "	FORLIVERDE (Provincia di Forlì)	11	"
3 " "	Scuola Media "Pascoli" di Forlì	26	"
1 " "	Sig.ra Giovanna Marchesi di Piacenza	3	"
3 " "	Sezione C.A.I di Bergamo	12	"
9.7 " "	Colonia "S.Agostino"	50	"
5 " "	Movimento Cristiano Lavoratori di Pratovecchio (AR)	50	"
7.8. " "	FORLIVERDE (Provincia di Forlì)	12	"
3 " "	Azienda di Soggiorno di Vallombrosa (FI)	30	"
5 " "	Comune di Misano Adriatico (FO)	26	"
0.9. " "	Assessorato all'Ambiente della Provincia di Forlì	75	"
7 " "	Dopolavoro Montedison di Ferrara	10	"
9 " "	Colonia di S. Francesco di Campigna	23	"
6.10 " "	Scuola Media "Matteucci" di Ravenna	38	"
5 " "	Scuola Media di Campiano	76	"
8 " "	Dopolavoro manifattura Tabacchi di Lucca	42	"
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5		1.952	"

Riserva naturale biogenetica di Camaldoli

9.3.1987	Scuola elementare di Badia Prataglia (AR)	18	"
7 " "	Scuola Media "Margaritone" di Arezzo	28	"

6.4.1987	Associazione Cattolica Coltivatori di Friburgo (Germania)	13	persone
2 "	" Istituto Tecnico Industriale "Galilei" di Arezzo	26	"
4 "	" Scuola Media di Mezzano (RA)	53	"
4 "	" Liceo Classico "Vitruvio" di Latina	49	"
7 "	" Scuola elementare di Montecchio (Castiglion Fiorentino)	62	"
7 "	" Liceo Classico "Mameli" di Roma	44	"
7 "	" Scuola Media di Rocca S. Casciano (FO)	17	"
8 "	" Scuola elementare di S. Leo (AR)	51	"
5.5	" Istituto Tecnico Statale di Rimini	44	"
5 "	" Scuola Media di Ravenna	18	"
8 "	" Scuola elementare "Don Minzoni" di Firenze	58	"
8 "	" Scuola Media "Borozzi" di Modena	51	"
9 "	" Scuola Media di Bagno a Ripoli (FI)	28	"
11 "	" Scuola Media "Panzini" di Bologna	41	"
13 "	" Scuola Media "Mazzanti" di Firenze	33	"
15 "	" Scuola elementare di Quarata (AR)	40	"
15 "	" Scuola Media di Rigutino (AR)	66	"
18 "	" Istituto d'Arte di Forlì	33	"
21 "	" Scuola Media "Novella" di Ravenna	53	"
23 "	" Scuola elementare di S. Piero in Frassino (AR)	11	"
26 "	" Scuola elementare di Isola Montagnolo (FI)	83	"
26 "	" Scuola Media "Redi" Antella (FI)	44	"
27 "	" Istituto tecnico Aeronautico di Forlì	207	"
2.6.	Scuola Media "Carducci" di Lucca	52	"

3.6.1987	Scuola Media di Forlimpopoli (FO)	55	persone
11 " "	Scuola Media di Terranova Bracciolini (AR)	39	"
23 " "	Centro Estivo di Scandicci (FI)	34	"
26 " "	Arca ENEL C.O.C.E.A.	31	"
27 " "	" " -"-	31	"
27 " "	Sezione C.A.I di Bergamo	30	"
28 " "	Associazione ecologica il Gineprone (Castellina in Chianti)	49	"
26.7. "	Movimento Cristiano Lavoratori di Pratovecchio	50	"
12.9. "	Sezione C.A.I. di Salò (BS)	30	"

n° 35		1.568	"
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n°116	t o t a l e	<u>4.906</u>	"
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Appendix IV (a)

MOVIMENTO TURISTICO (giorni festivi) ANNO 1987
NELLE RISERVE BIOGENETICHE CASENTINESI

IV b

	Pulman	Autovetture	Roulotte	Motocicli	Tende	Persone	Soggiorni alberghi
Posta di Badia Prataglia	193	14.316	359	1111	508	45.778	9.530
Posta di Camaldoli	145	20.346	252	738	354	67.318	5.900
Posta di Campigna	19	8372	124	730	-	30.521	2.470
	357	43.034	735	2.579	862	143.617	17.900

161.517

Persone in visita guidata nelle Riserve biogenetiche casentinesi n° 4.906
" " " alla Riserva naturale integrale di Sasso Fratino n° 537

APPENDIX IV (b)