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EUROPEAN COMMITTEE FOR THE CONSERVATION
OF NATURE AND NATURAL RESOURCES



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Working Party on Flora, Fauna and Landscapes

EUROPEAN DIPLOMA

On-the-spot appraisal of the Natural Reserve
of the "Wollmatinger Ried"
(Federal Republic of Germany)

by Mr. H. Herberigs
(Belgium)

The candidature for the award of the European Diploma to the national reserve of the Wollmatinger Ried was examined by the Working Party on Flora, Fauna and Landscapes, meeting in Strasbourg from 7th to 9th September 1966. In consequence of this examination, it was proposed to the European Committee that an on-the-spot appraisal should be carried out. (EXP/Nat (66) 36 - EXP/Nat (66) 57 Revised, point 8 (b) (iv)).

At its 5th session in November 1966, the Committee accepted this proposal so that an in situ study might be made of "the problems arising in that area and to suggest suitable conservation measures". (EXP/Nat (66) 85, point 5 C (h)).

Mr. Harold HERBERIGS (Belgium) having agreed to carry out this task on the Committee's behalf, the on-the-spot appraisal of the natural reserve of the Wollmatinger Ried took place during the period 23rd-25th October 1967. Mr. Herberigs was accompanied by Mr. H. Hacourt of the Secretariat.

Mr. Herberigs's Report is given in the present document which is submitted for examination by the Working Party, which is now called upon to draw up a fully-justified proposal with regard to the possible award of the Diploma to ~~th~~is protected landscape.

ON THE SPOT APPRAISAL OF THE
WOLLMATINGER RIED NATURE RESERVE

I. TERMS OF REFERENCE

To study the problems concerning the conservation of that area and the measures it would be appropriate to recommend. For that purpose, the expert had to study the influence of human activity, particularly the risks incurred by the expansion of the City of Constance, the problem of water pollution and the possibility of establishing an internationally protected zone on both sides of the lake.

II. GERMAN SHORE OF THE UNTERSEE

1. Introduction

The German authorities, particularly Dr. OFFNER and those of the Land Baden-Württemberg were extremely obliging in doing everything to facilitate the task of the author of this report, and of Mr. Hacourt, the Administrative Officer who accompanied him.

It is thanks to that kindly and valuable collaboration that I was able to prepare a succinct report on the Wollmatinger Ried Nature Reserve. Highly qualified ornithologists and botanists were ready to provide us on the spot with all the necessary technical information. It is, therefore, with great pleasure that I express thanks to those authorities for their most valuable co-operation.

2. Environment

The Wollmatinger Ried protected area may be sub-divided into five closely connected zones:

- To the east of the Riedstrasse the Zugwiesen, a slightly higher area where grazing cattle may occasionally stray into the reeds.
- The Riedzüge zone, more to the west, largely consisting of beds of densely growing reeds, between the Riedstrasse and the Reichenau Dyke.
- To the south of that zone, the islands and channels of the Langenrain.

- Lastly the reed-beds stretching westwards towards the Reichenau Dyke and comprising the Giehrenmoos and the Dreifusswiesen Peak.
- We shall consider below the important part played by the aquatic environment proper (see map).

3. Scientific Value of the Environment

The choice of the site was very judicious and the abundance of bird life bears witness to the very useful importance of the Reserve, as does the abundant available scientific literature. Whilst it would serve no useful purpose to reiterate here all that is adequately explained in the bibliography, it may be briefly pointed out that the five zones of the Wollmatinger Ried form a harmonious whole, both as regards the diversified botanic association and the animal species which populate it. It is a site which is unique in Europe; a veritable turntable of all kinds of aquatic and, in particular, migratory species, of which gather there in compact colonies. During the nesting period, the Reserve provides a haven for rare species of birds particularly the Red-crested Pochard. The Reserve is under the supervision of two keepers.

4. Aesthetic Value

Although the Nature Reserve itself may not, perhaps, be looked upon as a typical European landscape, the richness of its natural environment is nonetheless fascinating and the surroundings greatly enhance its aesthetic value. Apart from these two very positive features, let us consider the various influences of human activity on the protected area and its approaches.

5. The City of Constance and some of the problems peculiar to it

The present population of Constance is 60,000; the estimated population in 1985 is 80,000.

The town has very interesting historical remains and its unique position astride the narrow straits of the Rhine between Lake Constance and the Untersee and its comparatively mild climate attract tens of thousands of tourists each year.

If we add the influence of the paired town of Kreuzlingen (20,000 inhabitants) in Switzerland, it is easy to understand that the Untersee and the Wollmatinger Ried Reserve are directly threatened or influenced by the presence of so many human beings and their attendant essential amenities. Some of these manifold influences warrant closer consideration.

(a) A Mushroom Town

It would seem both natural and necessary for the rapidly developing town of Constance to expand towards the north and north-west. It is equally clear that the Reserve is an obstacle to such expansion. It is, therefore, not at all surprising that authorities should be strongly tempted to encroach upon the outskirts of the Reserve. Our survey has shown that the position is at present static because some of the projects have been either abandoned or modified; for example, an airport was to have been built to the north of the Reserve; a sewage plant has been built outside the Reserve, although the main crosses it along and under the Riedstrasse. To sum up the position, the authorities responsible for conserving the Reserve seem to have the situation well in hand.

(b) Waste Waters and Purification

It is clear that the gradual urbanisation of towns and villages, whose sewage is normally carried off by the Rhine around Lake Untersee and nearer the sources of the Rhine in vast Lake Constance, must seriously affect the purity of the water. The major conurbations, such as Bregenz, Friedrichshafen, Uberlingen, Constance, Kreuzingen, Radolfzell and, further inland, Singen and Ravensburg, not to mention the numerous pleasure-steamers (each carrying a thousand or more persons) cruising up and down Lake Constance may, by the volume of organic and chemical waste inevitably to be found where people congregate, compromise the future of the flora and fauna in the lakes.

It would appear at first sight that, despite everything, certain factors have hitherto militated in favour of conserving the lake waters:

- the strong current of the Rhine which has worn a deep channel down the length of the lakes;
- during the period when the snow melts, especially in May, the volume of the water helps to eliminate phosphates which tend to accumulate during dry weather. It must be borne in mind that Lake Untersee is very shallow.

With the help of the municipalities, the German authorities have taken the initiative nearly everywhere, particularly the City of Constance, which has grouped together in the form of an intermunicipal area the municipalities of Lake Untersee to the north of the Reserve and those **in the** surrounding Alps, so that mains (even pumps) may drain off all the waste waters towards the imposing sewage plant. The managers of the plant, which was built with an eye to the future, envisage dealing also, by means of drains underneath the Lake, with sewage from the Swiss municipalities opposite Constance and the Reserve.

It would appear that other intermunicipalities may be formed and that water pollution will gradually be reduced to a degree wholly compatible with the protection of wild life.

The purified water of the plant is conducted via the Reserve (Riedstrasse) into the Rhine. There is an underground canal and a trench with channels to drain local rain-water into the Rhine so as to relieve pressure on the sewage plant. These works, carefully carried out, have hardly impaired the site. Moreover, plantations bordering the trenches and highway will soon dissimulate the provisional surface-drain.

Lastly, the plant has been constructed in such a way that its output will be gradually increased in accordance with a three-stage scheme. The initial phase is concerned solely with mechanical purification and is working perfectly. The second chemical phase has just begun and the third, biological purification, will follow **very shortly**.

It is estimated that the cost of current construction of a main sewer capable of draining **all** waste waters of the area will exceed 300 million marks.

(c) Phosphates and vegetation

Despite everything, Lake Untersee suffers from the cumulative effects of pollution of two kinds:

1. organic,
2. inorganic, with accumulation of phosphates in the shallow areas.

It is worth noting here some of the effects these factors have upon Lake Untersee.

Some fish in the coregonus clupeodes group (powan), feeding almost exclusively on plankton, very rapidly grow to an abnormal size. Perch (perca fluviatilis) multiply quickly and frequently oust other species.

Phosphates have a gradually debilitating effect on vegetation; moreover the hundreds of swans inhabiting the Lake decimate what remains of the vegetation, for when the water is low in autumn and especially in winter, they tear out the sapid aquatic plants from the depths and then eat the young shoots and roots (as was apparent from personal observation). This problem requires urgent study, for the swans not only nest there but remain on Lake Untersee throughout the year.

Suggested remedy: discreet removal of most of the eggs during incubation.

Additional measures, apparently already envisaged by the competent authorities, should be taken to remedy certain harmful effects of pollution.

- (1) Extension to the deep bed of the Rhine of the dispersal mains for purified water along the Riedstrasse and then into the bed of the river in the direction of the current;
- (2) Construction of a stone-built bank to divert into the river current the waters which otherwise, via the Langenrain narrows, directly affect the vegetation in the Riedzüge; if this project could be carried out, it is probable that the accumulation of phosphates would have less effect in that area.

The disappearance of aquatic plants from the shallow parts of Lake Untersee, off the Riedzüge reed-beds, have undoubtedly greatly reduced the number of birds which in summer has fallen from 30,000 to 5,000.

Since then the site acquires its true value only in autumn and winter when the aquatic birds arrive. These are carefully counted every month.

In conclusion it should be mentioned that the city of Stuttgart obtains its drinking-water supply directly from the Lake.

6. Shooting

Shooting rights in the Nature Reserve held by the municipality of Constance, only affect the Island of Langenrain and its channel. As in other areas of Lake Untersee, shooting is permitted with prescribed dates for a given number of guns (see map below).

Ideal protection of wild-life would be achieved by wholly prohibiting shooting in all the aquatic areas around the Reserve. The authorities would no doubt meet with difficulty in prohibiting shooting, since local shooting rights date back to the sixteenth century, and it would be vain to under-estimate opposition to do away with them. Bearing these facts in mind and in the hope that it would gradually be possible to achieve it, the abolition of shooting privileges on the Island of Langenrain and in its channel should be urgently envisaged.

For the other areas of Lake Untersee, an interim solution might be adopted in the event of it proving difficult to abolish shooting forthwith. A system of rotation might, for example, be established to prohibit shooting one year in every two or three years. It would also be desirable for the City of Constance to make clear to sportsmen the importance of protecting the fauna in that area. Were a "gentleman's agreement" reached, it would, it is true, be only an interim solution, but there is no gainsaying the fact that more and more sportsmen are becoming aware of the need to protect wild-life. In that respect there are numerous encouraging precedents in Europe.

It should also be pointed out that the number of young persons applying to take a test for a shooting licence is becoming smaller.

7. Pasture-land

Grazing, restricted to the area east of the Riedstrasse, does not seem to affect that part of the Reserve. The reed-beds used to be cut each season so that very valuable heliophilous species (e.g. the Swordflag and the Yellowflag) were able to flourish. As this is no longer done, cutting has been superseded to some extent by cattle-grazing; it might be enlightening to make a more thorough study of the evolution of the flora, for the guidance of authorities in determining what control measures should be taken.

8. Hegne Camping Site

This camping site is an enclave within the Reserve (see map) in pursuance of an Order of 14th June 1957. In our opinion it is regrettable that authorisation for the camping site was given. It seems however that in current circumstances use of the camping site does not present any major inconvenience to the Nature Reserve.

9. Order of 26th November 1963

Under this Order a total area of about 4.9 hectares (see map) was excluded from the Wollmatinger Ried Nature Reserve. Upon enquiry we learned that the territory was not in fact outside the Reserve; but had merely been loaned to the farmers on the Island of Reichenau for grazing and market gardening. So far, however, no use has been made of the land, since the farmers have shown no desire to avail themselves of it.

The Landratsamt authorities gave us formal assurance that no land would be ceded or loaned beyond the limits laid down by the Order.

10. Navigation on Lake Untersee

The movement of shipping, except where the Rhine is deep, presents real problems and should be made the subject of at least seasonal regulations. Regulations should in any case be limitative, to prevent the birds from being constantly disturbed. It is a problem calling for special attention.

Winter flocks of birds, especially certain colonies such as those of Common Tern, may be decimated by the prolonged presence during the nesting period of outboard motor-boat and rowing enthusiasts.

III. SWISS SHORE OF THE UNTERSEE

The stay in Switzerland enabled the study to be completed which had been carried out in Germany on the preceding days. Under the guidance of Dr. A. Schläfli, President of the Thurgovian Commission for the Conservation of Nature, and of Mr. Ernst Thalmann, a well-known ornithologist living on the spot, a study was made of the general problem of the conservation in Switzerland of the Lake opposite the German "Naturschutzgebiet".

On crossing the German frontier at Constance, on the edge of the Untersee, one is struck by the fact that it is absolutely impossible to differentiate between the landscape on the Swiss shore and that along the rest of the Lake in the quadrilateral Constance-Ermatingen on the one side, and the ruins (Schopflen) on the Dyke linking Wollmatinger to the Island of Reichenau and the eastern part of the Wollmatinger Ried, between the access area of the Dyke and the City of Constance on the other side.

Between Constance and Gottlieben the landscape is monotonous. From a fairly narrow stretch of reeds woodlands extend to where the cultivated land begins. Between Gottlieben and Ermatingen the landscape is more picturesque, an impressive mass of reeds extending for several kilometres; in places reed-beds are from 100 to 400 yards wide. Opposite, large flocks of birds congregate to the south of the Rhine Channel running across the Lake and forming the frontier between the two countries.

As regards nature reserves to the north of the Constance-Ermatingen road and railway line, the situation is very favourable; they are mostly common lands and some municipalities are busily trying to buy back possible enclaves. It is forbidden to build there or to alter the panoramic view in any way. The fields on the edge are classified as an agricultural area with the same restrictions. The panorama of the whole area studied seen from the heights above Tribottingen reveals at a glance the monolithic aspect of the Germano-Swiss site and the vital necessity of making it an international reserve.

The Swiss section, as is more or less common in the German section, is burdened with shooting privileges which are probably difficult to withdraw without trouble. In Switzerland, as in Germany, all applicants for a shooting licence are required to pass a theoretical and practical test, thereby greatly reducing the danger of harming protected species. The fact remains, however, that repeated disturbance is dangerous to species wintering on the Lake.

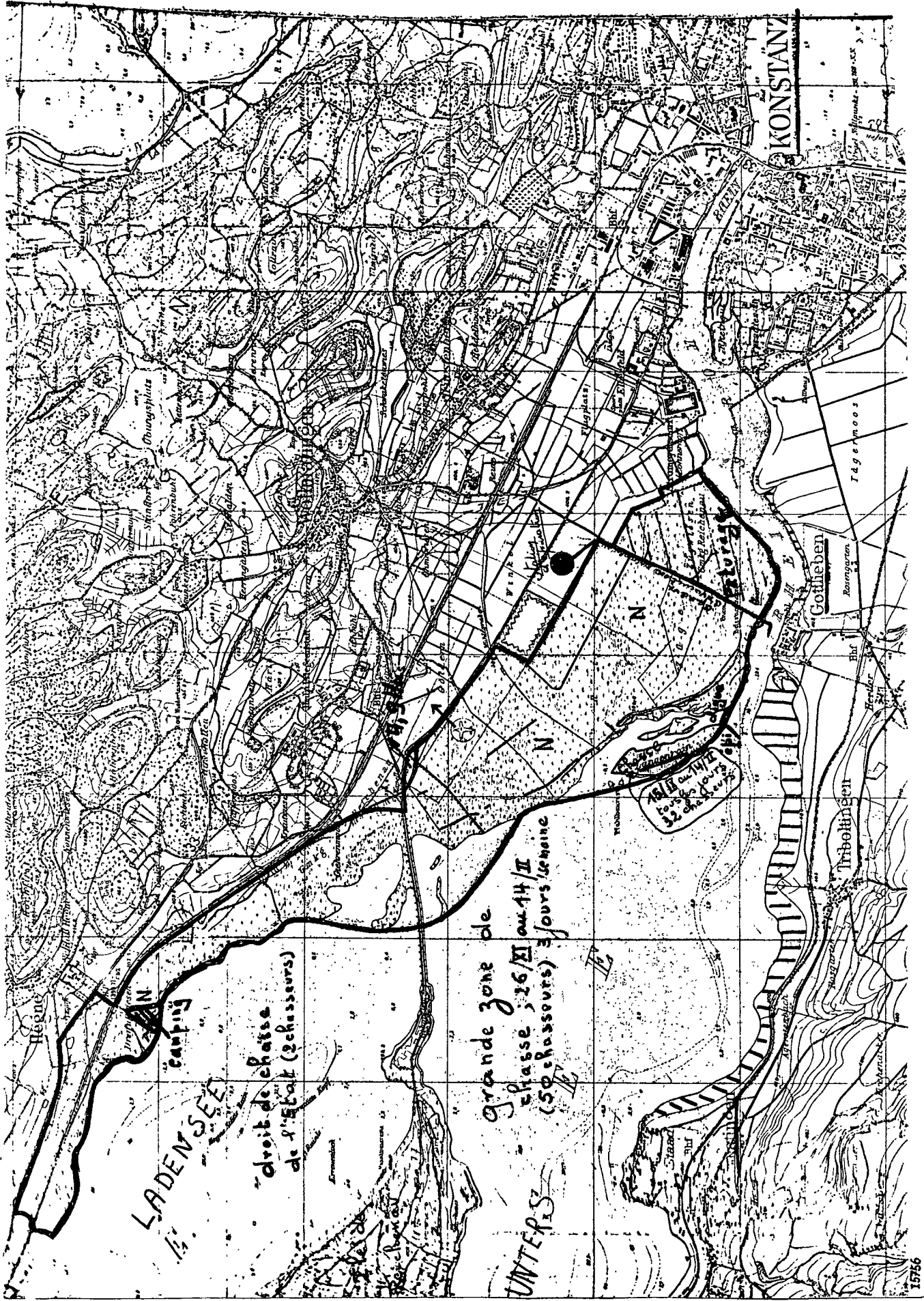
IV. CONCLUSION

The award of the European Diploma to the Wollmatinger Ried Nature Reserve is very likely to induce the German authorities to take additional effective conservation measures and enable them gradually to improve the present situation in the ways we have just mentioned.

The award of the Diploma should be contingent upon formal guarantees by the German authorities that no change would be made in current regulations or the recommended improvements; it must be insisted that the perimeter as shown on the official 1/5.000 map (see attached map) shall not undergo the slightest modification. Written acceptance of these conditions by the German authorities would be highly desirable.

The Swiss authorities have reached similar conclusions with regard to shooting restrictions and the control of pleasure boating.

The Swiss representatives showed a keen interest in the proposal to create an internationally protected area on Lake Untersee, and they hoped that action be taken on the suggestion made by the European Committee.



LADENSEE

camping
droit de chasse
de l'Etat (chasseurs)

grande zone de
chasse, 16/II ou 14/II
(50 chasseurs) 3 jours/semaine

UNTERS

KONSTANZ

Taggermoos

Gotheben

Rosenparken

Tobelhinger