Council of Europe Conseil de l'Europe

ARCHIVES

0504 92143**92**

Strasbourg, 26 November 1992

PE-S-ZP (93) 47

STEERING COMMITTEE FOR THE CONSERVATION AND MANAGEMENT OF THE ENVIRONMENT AND NATURAL HABITATS (CDPE)

Group of Specialists on Protected Areas

1 - 4 February 1993

Wachau Cultural Landscape (Austria)

Application for the European Diploma presented by the Austrian Government

This document will not be distributed at the meeting. Please bring this copy. Ce document ne sera plus distribué en réunion. Prière de vous munir de cet exemplaire.

CONTENTS

- General Characteristics
- Description of the Geographical Situation
- Geology, Morphology
- Climate
- Plant Life
- Animal Life
- Historical Background
- Human Influences Culture Art
- Measures taken so far to protect the Wachau
- Summary
- Literature

1. EUROPEAN DIPLOMA: APPLICATION FORM

Country: Austria (Lower Austria)

Name of the area: Wachau

Body responsible for its management:

<u>Name and address:</u> Amt der NÖ Landesregierung Abteilung II/3 Dorotheergasse 7 1010 Wien

1. Type of area: cultural landscape

- 2. Description of geographical location and/or sketch or outline on a map (scale: 1:50,000 or thereapouts): Appendix A (description) and B (maps)
- Characteristics and scientific, aesthetic, cultural or recreational value justifying conservation: Appendix A
- 4. European interest justifying the application: Appendix A
- 5. Ownership title: private owners
- 5. Protection scheme:

Measures taken to date or under consideration (enclose relevant legislation and regulations): Appendix A und D

- 7. References to published descriptions: Appendix A
- Photographs illustrating typical aspects of the <u>area</u>: Appendix C

Appendix B, C, D are available from the Secretariat

- 3 -

General Characteristics

The "Wachau" lies in the middle of Lower Austria some 65 km west of Vienna and was referred to in a historical document dating as far back as the 9th century. The Wachau is that stretch of the Danube where the river cuts a roughly 33 km long valley through the basement complex of the Bohemian massif between Melk in the west and Krems in the east, embracing also the hillsides visible from the Danube, including the eastern slopes of the Jauerling facing the Danube at "Spitzer Graben".

By virtue of its scenic, cultural, economic, biological, and geological individuality the Wachau can be said to be a self-contained yet richly variational region with very special, impressive characteristics, high aesthetic and cultural value. As a synthesis of natural landscapes and urbanisation, an ensemble of highly unusual, unmistakable character, it is unique in its kind in Europe. The region is also closed upon itself in an historical sense. Archeological findings made there suggest that the Wachau was one of the first regions in Europe to become civilised. Its villages, buildings, and civilisation point to a continuous cultural development going back for more than one thousand years. Up until this present day the region has been largely spared from brutal intrusions on the part of technical progress.

Description of the Geographical Situation:

"Wachau" in its modern everyday sense is understood to mean that stretch of the Danube valley between Melk and Krems. The exact demarcation as far as the present application is concerned is that stretch of the Danube valley between

<u>In the West:</u> the connecting line "Herrenhaus" from Schloss Luberegg (market town Community Emmersdorf) to the Melk estuary as far as Melk and between and including the old site of the town Melk, and

<u>In the East:</u> the Danube bridge at Mautern with the old village centre of the town Mautern at the southern bridgehead and the old village centre of the town of Stein at the northern bridgehead up to the town wall including the plains on the Danube side as far as the bank of the river Danube.

The northern boundary line runs across the high ridge down to the Danube valley from the Dachberg in the west and roughly through Winterbuehel, Puistlingberg, Hubhof, Haberg, Hinterberg, Grubkogel, Jauerling, Tyregg, Trenning, Aichberg, Windeckberg, Mosinggraben, Kuhberg, Seiber, Pfaffenmaiss, Sandl, Jaegerberg, Schlossberg, Rotes Kreuz, Braunsdorferberg, (Donauwarte) and from there along the ridge of the Goldberg to Stein.

The southern boundary runs from Melk along the Salmannsgraben and the road to Herrenmuehle (Pielach) and through the Atzgraben, then over the ridge Jonaskreuz, Eichholzhoehe, Hochkogel, Klausberg, Hohe Sill, Polakenkopf, Langeggerberg, Kastlkreuz, Felberleiten, Schoberstein, Sieben Graeber, Gochelberg, Mauternbach, and then along the road to Mautern.

This boundary line largely coincides with the boundaries of communities and land-register communities.

GEOLOGY, MORPHOLOGY

On its way through Austria the Danube flows for long stretches along the southern edge of the Bohemian massif but also traverses several of its southern spurs en route. In the Wachau the river separates Dunkelsteiner Wald, which stretches almost as far as St. Poelten, from the main body of the massif of the Waldviertel. This massif is made up made up entirely of crystalline rocks (plutonic rocks, metamorphic or transformation rocks) which were formed during the paleozoic era and are now described as Moldanubicum. The Danube forced its way through these rocks, sometimes following a course already provided for it by geological developments.

The valley which was cut out in the process is characterised by the variety of the underlying rocks and the cultural forms which sprang up as a result. The special charm of the scenery is to be seen in the contrasts - on one side the gentle terrain and the mild climate in those stretches where the valley widens, whilst on the other side the barren unapproachability of the raw, steep, wooded highland of the Waldviertel and Dunkelsteiner Wald.

These steep slopes, frequently interspersed with rock faces, are made up of very weather-resistant metamorphic rocks such as gneiss, granulite, amphibolite, and marble, etc. The sparse and sterile soils support only forest for the main part. By contrast, in the troughs of the valleys and at the foot of the slopes, deposits of gravel, sand, loess, and clay were formed in the Tertiary period and during the Ice Age. The loess in particular provides fertile soil and thus the basis for viticulture and fruit growing.

The Danube approaches the Wachau from the west through a wide valley which is restricted only by the steep flanks of the principal mountain mass in the north.

The first narrowing of the valley is formed by a projecting massif - on which Melk Abbey is perched - on the right bank. A little further to the north-east the River Pielach pierces its way through this massif in a deep valley and flows into the Danube. The change in the direction of the valley from a roughly westeast course to one of north-east to north was caused by a major geological fault along which broad seams of rocks have been profoundly shattered. Known as the "Diensdorfer Stoerung", this fault runs from Wieselburg through Melk and the Dunkelsteiner Wald to Krems and then carries on in a north-easterly direction to Bohemia. It is even discernible as a straight line on pictures taken by satellite. Where the Wachau stretch comes to an end at Mauternbach the Danube traverses this fault once again.

Downstream from the Pielach estuary the valley widens once again by means of its left bank between the villages of Emmersdorf and Gossam, which lie on the gravel and loess terraces, and then after Schoenbuehel (castle and convent on a striking rock spur on the right bank) the river finally enters a narrow V-valley in which it remains until virtually just before Krems.

On either side of the valley the steep cliffs, punctuated by boulders extend almost to the river itself, leaving just enough room for the roads which follow the course of the river banks and here and there allowing sufficient space for human settlements. In this stretch between Schoenbuehel and Spitz the scenery is essentially characterised by the Gfoehler gneiss, as well as by the paragneisses, amphibolites, and marbles of what is known as the "Bunte Serie". The first small widening of the valley by the left bank is built up on gravels from the new valley trough with loess and clay from the Ice Age on top. The village of Aggsbach Markt is located in this widening. On the opposite bank the River Aggsbach flows out of the Dunkelsteinerwald into the Danube, whereby en route its lower course also follows the Diendorfer Stoerung. The village of Aggsbach Dorf is located in the narrow estuary region. A little further downstream, high above the river the ruins of Burg Aggstein still stand on sharply descending rocky slopes of Gfoehler gneiss, amphibolite, and paragneiss. The valley widens a little again on the left bank between the villages of Groisbach and Schwallenbach where the valley trough is covered with loess. Traces of prehistoric settlement were found here (Venus of Willendorf).

On the right bank of the river from the hamlet of St. Johann onwards the valley widens with sloping terraces where the remains of Tertiary deposits, gravel and loess extend as far as Bacharnsdorf and support extensive viticulture and fruit growing for a number of villages. The continuous steep valley flank on the left bank - particularly striking is the pegmatite vein of the Teufelsmauer (= "Devil's Wall", a natural monument) just before reaching Spitz - whereby this valley flank is first interrupted by the Spitzer Graben and by a widening filled with Tertiary and Quaternary rocks at Spitz. The marble and gneiss Tausendeimerberg (= Thousand Bucket Hill) rises up from the midst of this widening.

Downstream from Spitz the river swings back onto a northeastern course. After the strikingly steep river bank at St. Michael the forest fringed terrain on the left bank retreats. Now the course of the river is followed by the first formation of a broader lower terrace, along with adjacent, loess-covered higher terrace. There is extensive viticulture here. The villages of Woesendorf, Joching, and Weissenkirchen lie directly on the river. The right bank is formed by steep slopes comprising Gfoehler gneiss, (stone quarry at Ober Kienstock) and amphibolite (rock formations St. Lorenz, natural monument) which extend to the river itself. Between Weissenkirchen and Duernstein the river takes a sharp bend during almost the whole course of which the rocks on the left bank extend into the water whilst the right bank is formed by a broad spur with a meadow, lower terrace, and higher terraces. Known as the "Rossatzer Scheibe" this is the stretch where the villages of Ruehrsdorf. Rossatz, and Rossatzbach are located along with their agricultural cultivations.

Worthy of note on the left bank along this same stretch are the steep Gfoehler gneiss slopes and rock formations of the Vogelberg and the adjacent downstream Schlossberg with its Duernstein castle ruins.

From Duernstein downstream the right bank again takes the form of a steep rocky flank (high rock wall, etc.) whilst a wide valley trough lined with gravel, sand and loess runs along the left bank where the villages of Oberloiben and Unterloiben are situated.

From Rothenhof to Stein the left bank still comprises crystalline rocks (mainly paragneiss), whilst to the right of the river the valley finally widens out from Hundsheim onwards and leaves the Bohemian massif to enter the broad plain of Tullner Feld.

CLIMATE

By virtue of its geographical location the Wachau is influenced by different overlapping climates. In the western region and through into south-north running stretch of the Danube valley the more oceanic-influenced Central European transitional climate with relatively balanced temperatures and generally precipitation in all four seasons of the year prevails. By contrast the heights of the Gneisplateau and the higher valley ridges have a somewhat inclement elevated-plain climate. In the east the flatlands of the Pannonian Plain extend into the end opening of the valley and bring the Pannonian climate with continental influences i.e. relatively dry, hot summers and relatively cold winters to the eastern half of the Wachau - whereby further into the valley the river has an ameliorating effect. Since, by virtue of the deep incision which its valley makes into the peneplain of the Bohemian massif and the course which the valley follows, the Wachau is to a large extent shielded from the stormy north and west winds, it is further favoured from the climatic point of view. Because of the great reach of the heights of the valley slopes and the varying of the exposure as a consequence of the valley's winding course, major climatic contrasts are encountered in close sequence. And thus the average annual temperature ranges from around 9 degrees Celsius in the Krems -Duernstein region to 5 - 6 degrees Celsius in the region of the Jauerling summit whilst at the same time there are decidedly warm-dry regions such as the southern slopes of the valley on the left from Krems to Spitz, just as there are the moist-cool elevated plains of the northern valley ridge.

<u>Plant Life</u>

(According to Beck-Mannagetta, Vierhapper, Werneck, Wagner and Wendelberger)

In keeping with the climate and the location, Wachau is home to a mixed plant world.

The greater part of the vegetation in the Wachau is of Central European provenance, but in the east the immediate interface with the Pannonian floral provenance finds expression in a great number of xerothermic elements. Between the forests and the areas under cultivation there are meadows and stretches of dry grass with the character of rocky steppe. Here you can find the feather grasses (Stipa pennata and Stipa capillata), used as "maidenhair" or "Venushair" tufts to decorate the local costumes worn by the men at festive occasions, Cleistogenes serotina, Avenula pratensis, Artemisia austriaca (Austrian mugwort), Allium flavum (moly), Isatis tinctoria (woad), Festuca valesiaca (fescue), Silene otites (ear curette-campion), Seseli osseum (green stone parsley), Viola ambigua (steppe violet), Campanula sibirica (Siberian bellflower), Jurinea mollis, Nonea pulla, and many others.

A very striking, and for the rocky parts of the Wachau, particularly characteristic plant, is the basket-of-gold (Aurinia saxatilis) with its bright yellow inflorescence.

Here and there the remains of an open wooded steppe have survived, with Quercus pubescens, Rosa gallica (French rose), Prunus fruticosa (dwarf mahaleb), Colutea arborescens (bastard senna), Dictamus albus, and other species, all in the immediate vicinity of Pinus sylvestris and Calluna vulgaris in the shadowy heathland, so that the south-east and the northwest of Europe appear so to speak as next-door neighbours. Plants typical for the individual floral regions are also found here, in many cases close packed close together in such a small space that they all can often be taken in at a single glance.

According to Dr. Heinrich L. Weneck, the following "natural entities of vegetation" are to be found in the Wachau:

I.	Pannonian Oad Region (light yellow and yellow)	In the plains of the Danube and on the hillsides exposed to the south and to the west up to a maximum of 400 metres above sea level in the region Krems- Duernstein-Rossatz to Willendorf- Aggstein.
II.	Intermediate Region, Hercynian branch:	As a narrow stretch above the aforesaid zone, in the valleys of

(orange)

aforesaid zone, in the valleys of the Spitzer Bach and the Aggsbach, and in the section of the Wachau southwest of Willendorf up to a height of about 400 metres.

- III. South-German-Austrian Region:
 - a) Dunkelsteiner Wald: (light green)
 - b) Bohemian Massif: (medium green)
 - c) Alpine Foreland-Lower Alps: (deep green)
- IV. Region of the Alpine Forests, Hercynian branch: (light blue)

At altitudes above about 400 metres.

In the north and in the west above the intermediate region. In Dunkelsteinerwald in the Seekopf and Muehlberg region, above about 550 metres above sea level.

On the Jauerling at altitudes higher than about 800 metres above sea level.



The greater part of the Wachau is taken up by woodlands. Indeed, the valley slopes, except where there are terraced vineyards or drifts of rock, are almost exclusively forest covered. In keeping with the vegetation levels, a very wide range of forest communities is to be found here including Quercetum pubescentis, Querco-Carpinetum, Pinteum sylvestris (wood steppe and heithland wood), Fragetum sylvaticae, and also beechpine-spruce forest on the edges of the high plains and at altitudes higher than 800 metres.

In the depths of the valleys around Rossatz and on the banks of the river and old water courses at the western entrance to the valley there are lowland forests.

The variational and colourful picture presented by the natural flora in the Wachau is further enriched by the cultivated areas, and particularly so by the extensive orchards when the fruit trees (apricots = Prunus armeniaca) and peaches (Prunus persica) are in blossom in spring, but also in the autumn at the time of the grape harvest with the turning yellow ochre of the leaves in the vineyards which stretch up in steep terraces and gentle slopes between the woodlands in their autumn splendour.

In contrast to the vineyards and orchards, which extend as far as Willendorf, in that part of the Wachau further to the west one finds fields and meadows which have been put to quite other agricultural uses and thus give the landscape an entirely different character. Contrasts of great charm within such a short distance of one another.

<u>Animal life</u>

In keeping with the climate and geographical location, the Wachau is home to a mixed animal world which comprises thermophilic species of the Pannonian Zone of Lower Austria as well as typical petrophilic representatives of the mountain climate zone (Hercynian provenance). The typical thermophilic species are to be found in some density on the sunny slopes between Spitz and Krems, but from above Spitz onwards only scattered in climatically favourable spots.

In particular the slopes at Duernstein provide a home for a very characteristic thermophilic fauna. Here, for example, are breeding places for the Emberiza cia and living space for highly characteristic insects.

By contrast, the typical mountain elements live on the shady side of the valley in regions around the Dunkelsteinwald as well as in suitable places in the hill chains which accompany the Danube valley in the north. In keeping with the ecological conditions, the mountain fauna comprises species which we would mainly encounter in the forested level of the eastern Alps and the German sub-alpine mountain range (Mittelgebirge). The forests and gullies of the Jauerling are inhabited by a very interesting mountain insect world of Hercynian character.

A very rich lowland forest fauna is to be found in the Danube meadows, and countless riverbank beetles are to be found on the sandbanks in good years. The scattered gravelbanks in the river support an unusually rich bird fauna. Thousands of herons, ducks, and geese are to be seen resting on these banks during the autumn migratory season.

Mammals:

Typical thermophilic species: Oryctolagus cuniculus L., Citellus citellus L., Cricetus cricetus L.

<u>Birds:</u>

Selection of noteworthy species nesting in the Wachau region: Criteria: endangered species - Red List status (acc. to Bauer 1989), populations of national importance (I), "special" ecological requirements (II). Sources: Arch. ÖGV, Nesting Birds Atlas, various current mappings.

Ardea cineria: A.4.2, I, II (Melk colony > 30 nesting places) Ciconia nigra: A.4.2, II

Pernis apivorus: A.4.3, II

Falco peregrinus: A.1.2.2, II (reintroduced beginning nineties) Bonasa bonasia: A.4.2, II (no current figures on population size) Actitis hypoleucos: A.2.2, II (Schoenbuehel > 3 nesting places) Columba oenas: A.4.2, I, II

Bubo bubo: A.4.2, I, II (20 terr.; Frey; Egretta 35(1), 1992)

Acedo atthis: A.2.2, II

Upupa epops: A.2.2, II

Picoides major: A.4.2, II

Lullula arborea: A.2.3, I, II (>15 nesting places on the southern slopes of the Jauerling)

Luscinia svecica cyanecula: A.4.1, II (Melk area)

Sylvia nisoria: A.4.2, II (no current figures on population size) Phylloscopus bonelli: II (no exact figures on population size)

Ficedula parva: A.4.2, (I), II

Emberiza cia: A.4.2, I, II (most important population in all of A

u s t r i

a)

.

Reptiles:

Typical thermophilic species: Lacerta viridis L., Elaphe longissima Laur., Natrix tesselata L.

<u>Amphibians:</u>

Thermophylic species: Rana ridibunda Pall., R. arvalis woltersdorffi Fej., Triturus cristatus dobrogicus Wolt., Pelobates fuscus; Mountainous species: Salamandra salamandra L.

Orthoptera:

This list is based on actual surveys carried out for the "Atlas der Orthopteren Oesterreichs" by H.-M. Berg and S. Zelz (1991, 1992). Worthy of note apart from the multitude (37 species without any claim to comprehensiveness) is the existence of numerous Red List species in some cases in considerably-sized populations. Also, depending upon the availability of dry grass areas of the widest variety, rocky moorland, areas of sparse grass, extensive meadows, and richly organised forest fringes there are numerous thermo(xero)philic (more eastern) species (I). At the same time, however, the region also boasts the presence of individual elements more common in mountain (Alpine) regions (II). The presence of species marked with (!) is particularly worthy of mention (ecological requirements, of fauna-geographic interest, or endangered). Reference is also made in the notes as to the Red List status, if any (according to Kaltenbach 1983).

Mantodea

Mantis religiosa (A.2; I)!

Saltatoria

Ensifera

Phaneroteridae

Phaneroptera falcata (A.2., I)!, Leptophyes albovittata

Meconemidae

Meconema thalassinum

Tettigoniidae

Tettigonia viridissima, Tettigonia cantans

Decticinae

Pholidoptera aptera (II)!, Pholidoptera griseoaptera, Platycleis grisea (I), Metrioptera brachyptera (II), Metrioptera bicolor (I)!, Metrioptera roeseli, Decticus verrucivoris (A.3, I)!

Ephippigeridae

Ephippiger ephippiger (A.3, I)!

Oecanthidae

Oecanthus pellucens (A.2, I)!

Caelifera

Tetrigidae Tetrix bipunctata

. .

Catantopidae

Calliptamus italicus (currently endangered, I)!

Acrididae

Psophus stridilus !, Oedipoda caerulescens (I)!, Chrysocharon dispar (A.3), Euthystira brachyptera, Stenobothrus lineatus, Stenopothrus nigromaculatus (A.3., I)!, Omocestus viridulus (II)!, Omocestus haemorrhoidalis (I)!, Chorthippus apricarius, Chorthippus vagans (I)!, Chorthippus biguttulus, Chorthippus mollis (I)!, Chorthippus dorsatus, Chorthippus parallelus, Myrmeleotettix maculatus (I)!, Gomphocerus rufus

<u>Coleoptera:</u>

Thermophilic species: Poecilus sericeus, Calosoma auropunctatum Hrbst., Pterostichus marginalis Dej., Zabrus spinipes Fabr., Harpalus sabulicola ponticus Schaub., H. tenebrosus centralis Schbg., H. hirtipes Panz., Bradycellus csikii cz., Licinus cassideus Fabr., Microlestes schröderi Holdh., Astrapaeus ulmi Rossi, Emus hirtus L., Ctanistes palpalis Reichenb., Ablattaria laevigata F., Hister uncinatus Ill., Aphodius scrutator Hrbst., Sisyphus schäfferi L., Onthophagus vittulus F., Rhizotrogus aequinoctalis Hrbst., Polyphylla fullo Fabr., Potosia aeruginosa Drury, Blabs halephila Fisch., Dorcadion aethiops Scop., D. fulvum[.] Scop., D. pedestra Poda, Antipa macropus Illig., Lachnaea sexpunctata Scop., Cryptocephalus schäfferi Schrank, Timarcha tenebricosa F.

Mountainous species: Carabus violaceus L., C. variolosus ssp. nodulosus Creutz., C. silvestris Panz., C linnei Panz., Trechus alpicola Sturm., T. splendens Gemm. & Har., Synuchus nivalis Panz., Agonum bogemanni Gyllh., Molops austriacus Ganglb., Trichotichnus laevicollis Duft., Licinus hoffmannseggi Panz., Silpha carinata Hrbst., S. tristis Ill., Agathidium bohemicum Reitt., A nigrinum Sturm, Sinodendron cylindricum L., Oreina letzneri Weise, Melasoma collaris L., Cychrus attenuatus F., Carabus auronitens Fbr., C. irregularis Fbr., Trechus cardioderus pilisensis Csiki, T splendens Gemm., Pterostichus metallicus Fabr., Molops piceus austriacus Ganglb., Rosalia alpina L.

Hymenoptera:

Thermophilic species: Bombus hortorum L., B. lapidarius L. Mountainous species: Bombus subterraneus L., B. lucorum L., B. mastrucatus Gerst.

Historical Background

Even as far back as in prehistoric times the morphology of the loess slopes and a relatively mild climate attracted gatherers and hunters into the valley of the Wachau. This accounts for the numerous prehistoric finds which have been made in this region. The "Venus of Willendorf" takes pride of place amongst these findings. The "Venus" is an approx. 11 cm high statuette of a woman in limestone and generally taken to be a fertility idol. It dates back some 25,000 - 26,000 years and ranks amongst the most famous monuments of Stone Age skilled craft.

In the first century AD the Wachau stretch of the Danube valley formed part of the Roman "Limes", namely the system of frontier defences of the Roman Empire to keep out the Celtic and Germanic tribes inhabiting "Barbaricum" to the north. The existence of a number of Roman military bases in the Wachau has been established by archaeologists. The Roman garrison "Favianis" near Mautern was of some significance, and is particularly remembered because St. Severinus (died 482 AD) resided there for many years. In the biography of this saint ("Vita Sancti Severini") we find not only an impressive report on early Christianity in Austria, but also the first reference to viticulture in the Wachau.

The name "Wachau" was first mentioned in history as "Uuahouua" in a written deed drawn up by Ludwig der Deutsche in the year 830. This mention was made in connexion with a deed of gift to the Bavarian monastery at Niederaltaich near Spitz - whereby the first historical reference to the name Spitz itself came only later (864 "ad Spizzun", 1148 "in Spizz)". In later times, the name "Wachau" was frequently mentioned in documents, usually in connexion with gifts of property to ecclesiastical institutions or the confirmation of property ownership for such institutions. The significance of the name is not known with any certainty, but according to Heinrich Weigl, "Wachau" could possibly have some association with a Germanic root word *wanh (= twisted, tortuous, winding). Weissenkirchen, first mentioned as "Liechtenkirchen" in a document dating back to the year 1258, developed into the main centre of the region known from the Middle Ages through to the revolution of 1848 as "Tal Wachau". Duernstein is yet another old settlement which must have been established long before first mentioned in history in the year 1168, when it belonged to the Bavarian monastery at Tergernsee. From their castle at Duernstein the Kuenringers ruled "Tal Wachau" in their capacity as stewards for Tegernsee from the 12th century onwards. Many a legend has been woven around the Kuenringer family but also around Joerg Schreck von Wald auf Aggstein (around 1430) and other landed knights who owned estates in the Wachau. Duernstein is also of historical interest by virtue of the fact that it was in this castle that the English King Richard the Lion Heart was held prisoner from 1192-93. This event has also provided material for sagas.

The oldest parish in the Wachau is that of St. Michael, whose church is of significance to art historians (the present building dates from 1500-1523) and was first mentioned in the year 1159. The parish church of St. Maurice at Spitz is also very old and its patrocinium was transferred from the Bavarian monastery at Niederaltaich to Spitz. We are reminded of the economic importance of the Wachau, particularly the wine growing activities, not only by the numerous wineries which once belonged to various Bavarian and Austrian monasteries, but also by a series of toll-houses and customs stations where the transport of wine, salt, wood, and iron via the River Danube was regulated and taxed. As a consequence of its geographical significance as a trade and communications route, the Wachau stretch of the Danube valley has been the scene of various military campaigns throughout history, with the traces of some of these campaigns still apparent today. The Battle of Duernstein and Loiben fought on 11th November 1805 and commemorated by numerous monuments is just one example taken at random. On this occasion the Austrians and their Russian allies succeeded in repelling the invading French but only at a terrible cost which had catastrophic consequences for the villages concerned.

The late 19th century and early 20th century brought economic decline to the Wachau, with the phylloxera (vine louse) being one of the main contributory causes. In the meantime, the wine trade in the Wachau has managed to regain much of its former importance following a reorganisation and modernisation of vine cultivation carried out after the two world wars. Nevertheless, the total area under vine cultivation is meanwhile smaller than what it once was. The man-made terraced vineyards on the slopes of the Danube valley, some of which are no longer cultivated, remind one of the great expanse of viticulture in earlier time. Together with the many local historical artistic and cultural monuments, the terraced vineyards form the presentday image of Wachau, one of the most visited tourist regions in Lower Austria.

<u>Human Influences - Culture - Art</u>

(According to Dr. Franz Eppel and Dr. Karl Lechner)

Winding river valley, woods dark or in their autumn splendour, peaceful mountains, slopes ringed with vines, bizarre rocky landscapes, impressive ruins perched on lonely heights, churches steeped in legends, romantic villages, quaint markets and towns, embedded in blossoming orchards and vineyards, towering abbeys, wayside shrines, castles and wineries, flourishing art and a zest for life when drinking wine. All these together and a lot more besides add up to the Wachau, one of Europe's most beautiful countrysides.

All cultural epochs from prehistoric times onwards have left their traces here and thus helped to create the picture presented by this stretch of country.

In addition to the archeological finds from the Early Stone Age - just one such find being the "Venus (I) of Willendorf" - there are also significant remains from the times of the Romans in the Wachau. St. Severin carried out his important missionary work here under the Romans. He died in the year 482 at Mautern, which to this present day still shows the broad outlines of the old foundations of the fort Favianis, and where important architectural remains from Roman times can still be seen in the town wall. In the remains of a watch-tower at Bacharnsdorf and in those of a road in "Kupfertal" we have further Roman monuments, alongside the countless other local archeological findings (today in the museums at Mautern, Krems, and Melk).

The Romans were the first to introduce viticulture to the Wachau and in doing so gave an important fillip to the cultural development for future centuries, which then after the Bavarian colonisation about the end of the 7th century, carried on without interruption to the present-day Wachau.

From time immemorial wine has been the main product of the Wachau. Indeed, wines from this district were already in demand in the Middle Ages. In those days almost 50 Austrian, Bavarian, Swabian, and Bohemian monasteries owned vinevards in the Krems region and in the Wachau. The countless wineries, some still in Gothic style, but most of them converted or rebuilt in Renaissance or Baroque styles, are a reminder of these times. These wineries - an architectural characteristic of the Wachau - are to be seen in many different forms ranging from those of simple buildings in the midst of the villages (e.g. Melkerhof in Woesendorf, Subenhof in Rossatz, etc.) to the manorial buildings dominating the villages (e.g. Florianihof in Woesendorf, St. Poeltner or Prandtauerhof in Joching) and the castle-like building complexes such as the Erlahof in Spitz with its rich spiral-formed gables and stucco work. This latter building was formerly the winery of the Bavarian abbey at Niederaltaich and also includes the remains of frescoes dating back to about the year 1300 amongst its treasures. It is an example of how as a result of economic involvement a steady flow of influences from great masters Danube-downstream reached the Wachau where they were eagerly accepted and, combined with local creativity, provided the basis for major works of art.

Viticulture has also had the strongest influence as far as the shaping of the Wachau scenery is concerned. It was for the purposes of wine growing that the now very typical terraced landscape of the vine-clad hillsides were created between the early Middle Ages and the 12th century. Through efforts difficult even to imagine today, and with a remarkable efficiency, generations of vintners in the socage service of the monasteries reshaped entire hillsides and created a new landscape of terraces cut in the loess and dry-built walls of quarried stone which traced lively lines across the flanks of the hills. Even if as a result of a permanent climatic change for the worst in the late Middle Ages - the total area under viticulture has shrunk back considerably in the meantime, with the result that one can now see many abandoned vineyards which have long since gone wild, in many cases in particular those situated on extremely steep slopes, and especially upstream from Spitz where vineyards no longer worked, have already become overgrown with woodland, the terraced vineyards are still the strongest influencing feature of this characteristic and unmistakable landscape even today.

Ore mining was also carried out in the Wachau, copper mining (Kupfertal) in particular, but also iron (Arzberg = Erzberg at St. Michael), but these activities - long since abandoned - were more of local importance only, particularly to the wine-growing trade (copper sulphate or blue vitriol in Spitz).

Apart from the fortified towns and the close knitting together of market towns and farms for defensive purposes, castles were also built to protect the security of the region. The most splendid examples of these once powerful hill castles - whose earlier political and strategic might is instantly apparent from their structures - include Aggstein, Hinterhaus near Spitz, and Duernstein, all of which today can only be seen as ruins of imposing proportions.

There are also still some interesting remains of Roman castle chapels. The one at Duernstein still has its semi-circular altar niche and on the wall the remains of an early Gothic fresco from before 1300; the chapel at Aggstein - although Gothicised - was probably erected on an originally Roman site. Gossam originally had a Roman castle chapel with semi-circular altar niche and frescoes showing a very distinct Byzantine influence already subsequent to 1100 (today in the museum at Krems), but apart from the remains of the castle chapel only the name tells us that a castle once stood here. The same applies in the case of Weissenkirchen where a quaint romantic district still bears the name Burg even today although there is now nothing left to suggest the former existence of a fortress, and at Altenburg in Stein, where recent excavations revealed ancient fortifications. The castle at Melk, where the Babenberger margraves of Austria had their residence for some time prior to the year 1000, was ultimately taken over as a monastery by the Benedictines.

At the time of the Renaissance, a number of castles were built, and those built in the Wachau were entirely incorporated into the villages and showed little in the way of fortifications (e.g. Schwallenbach) but instead usually had arcaded corridors (e.g. Spitz) or heavy rustic features (Duernstein).

The years from the 11th to the 13th centuries saw the building of the big abbeys in the Wachau at Melk, Goettweig, Duernstein, Stein, and Krems and a number of minor abbeys also. The architectural style of the abbeys was freely taken from the castles, and in some cases the abbey was the successor to the castle (Melk). There are still examples of some impressive remains of these Romanesque ecclesiastical fortresses, e.g. the Minorite church at Stein (consecrated 1264) which is a transition between late Romanesque and early Gothic, and which is one of the earliest vaulted Mendicant order churches in our country, and also the Dominican church at Krems (completed in 1265). Otherwise the earlier buildings were later systematically replaced by new buildings in Baroque style - which are nevertheless no less valuable - once the difficult and distressing times of eventful wars during which the Danube became a main highway were over, and around the year 1700 art began to flourish. A number of Italian and Austrian craftsmen, architects, painters, sculptors, and masters in stuccowork, carried out their most important work under artistically minded abbots. Working under the abbot Berthold Dietmayer, Jakob Prandtauer built Melk Abbey which is throned on the high rocks overlooking the Danube and which is one of the most splendid Baroque buildings in Austria and one of the scenic highlights along the Danube as such, indeed in Europe as a whole - an inexplicable phenomenon in conjunction with nature and art. Whilst working under the artistically minded abbot Hieronymus Uebelbacher, Josef Mungennast together with Matthias Steinl, but probably working to Prandtauer's plans, created the architectural pearl of Duernstein Abbey with the miracle of the church tower seemingly rising from the river and the rocks.

Seen alongside these highlights and also Goettweig Abbey, which although not actually in the Wachau, does look directly into the valley of the Wachau from its high hill, the other monastical monuments tend to become eclipsed despite their high artistic and cultural significance:

The Goettweiger royal chapel in Stein (with frescoes dating back to the year 1300). The imposing ruins of the Clarissen church at Duernstein (with frescoes by a Northern Italian migrant artist influenced by Giotto around the year 1350). Schoenbuehel Monastery perched high above the Danube (1674).

The Carthusian monastery at Aggsbach (Aggsbach-Dorf) built deliberately in the loneliness of the forests in the year 1380, all of which now remain are the fortified wall and the characteristically excessively narrow-elongated church.

The Servite monastery of Maria Langegg (1773) high on the hillside with false cupola and rich in architectural paintings.

The parishional development of the Wachau began back in Carolingian times, the first parish to be established being that of St. Michael (first mentioned in history in 984). The church of St. Michael, built in a strategic position, was constructed along military lines. However, little remains of the fortifications today, and of the originally Romanesque building only a few stone figures mounted in the external wall have been preserved.

About the year 1500, art in the Wachau reached a zenith which cannot be accounted for only by the more or less coincidental throwing together of the right components which were certainly also politically favourable. First-class painters and wood-carvers came downstream the Danube, in particular from Augsburg, Regensburg, and Passau where they had enjoyed the facility of excellent workshops under the patronage of rich bishoprics. Important creations in stone also date back to this period (figures in the organ loft at St. Michael's) and the transition to early Renaissance (tomb reliefs at the parish church in Stein, Spitz, etc., Lentl-Altar now in Krems museum).

A zest for life also finds expression in decorating one's home with flowery or ornamental sgraffitti or with colourful frescoes in keeping with the fashion copied from admired foreign example. One can find remains of ornamental sgraffitti in villages throughout the Wachau (Emmersdorf, Schwallenbach, Weissenkirchen, Duernstein, Rossatz, Foerthof, Stein, etc.) and also traces of figural as well as ornamental frescoes (Melk, Spitz, Weissenkirchen, Duernstein, Unterloiben, Stein, etc.). The big Passauer Hof at Stein and the fortified church of St. Michael show the first Renaissance forms in embellished arched gables and rounded corner towers from around 1550. This form soon became popular with civil buildings and finally led to the "Venetian" chimney pots now so typical here.

After the terribly distressing times of the 17th century, numerous houses were given new decorative facades of the style associated with the great Baroque monasteries and in keeping with the fashion of the day, and from the beginning of the 19th century there was extensive building activity, which, despite the availability of only modest finances, still showed good taste (Schloss Luberegg, Posthaus in Melk) and document the rise of the middle class. The middle class and even more the peasant taste for decoration, which after a period of "classical" forms (parsonage at Woesendorf) resulted in the first rural Neo Baroque subsequent to 1830, whereby this style ultimately gave way to "urban" Neo Baroque.

The fact that the Wachau is a self-contained region of its own making also from the cultural point of view can be gathered from the folklore - and particularly from the old local costumes worn by the womenfolk on festive occasions (golden hoods) and the everyday costumes worn by the men (Kalkmuckjanker) in that the geographical region in which these costumes were worn coincides almost exactly with that stretch of the Danube valley taken up by the Wachau.

Measures taken so far to protect the Wachau

In view of the importance of the Wachau as a countryside of great and harmonious beauty and the fact that it is unique, the Lower Austrian Provincial Government passed a decree on the 8th of November 1955 (Provincial Gazette No. 120/1955), declaring it a protected region. Following the revision of law on the conservation of natural beauty and wild life with the law concerning the conservation and care of nature (Lower Austria Conservation of Nature Act 1977), all those regions already enjoying protection and those established as protected regions under earlier nature conservation laws were collectively incorporated into the general decree on protection of the natural countryside dated 24th April 1979 (Provincial Law Gazette 5500/35-0). On this occasion the opportunity was taken to enlarge considerably the protected region Wachau which now extends over 46,300 hectares.

The following "outstanding unique creations of nature" (natural formations) were declared to be natural monuments:

(St = Urban Community, MG = Market Town Community, G = Community, KG = Community according to the Land Register)

MG Emmersdorf an der Donau: KG Grimsing: "Fellnereiche" (= pedunculate oak) KG Gossam: 1 horse-chestnut tree

MG Schoenbuehel-Aggsbach KG Aggsbach: 1 oak-tree KG Aggstein: Line of pear-trees (81 old pear-trees)

MG Spitz:

KG Spitz: "Devil's Wall" (rock formation); 2 (summer) linden trees; 1 chestnut-tree; group of chestnut-trees (4 trees); avenue comprising 3 horse chestnut trees, 3 Norway maples, 6 sycamores, 7 (winter) linden trees, 1 (summer) linden); 1 wild service tree; "Setzberg" (dry grass area rich in species). MG Muehldorf:

KG Muehldorf: 1 ash

St. Duernstein:

KG Duernstein: Rock section (rock towers of Vogelberg and Schlossberg above Duernstein); dry grass area near Hoehereck (above the French Monument)

St. Krems an der Donau:

KG Stein: 1 willow; 1 poplar

St. Melk:

KG Melk: 1 vine

MG Rossatz:

KG Rossatz: group of red oaks (17 oaks) KG Oberarnsdorf: 3 black poplars KG Ruehrsdorf: 3 groups of rocks showing prehistoric geological traces of the Danube; "Evangelisteine" (rock formation)

G Bergern in Dunkelsteinerwald:

KG Unterbergern: Moist biotop near Ferdinandswarte

St. Mautern an der Donau:

KG Mautern: 1 plane-tree

Wide areas on the rocky wooded slopes to the Danube have been declared protected forests.

Summary

The Wachau is that roughly 33 km long stretch of the upper course of the River Danube marked by the towns of Melk in the west and Krems in the east. With tremendous impetus the river wends its way along a channel provided by rock deformation in a valley cut to a depth of more than 400 metres through the crystalline rocks of the Bohemian massif.

It is in keeping with the course traced by the valley and with the local climate that the Wachau should be noted for wooded hillsides interspersed with crags in the west and with loesscovered terraced vineyards in the east. In this way the Wachau shows itself to be a transitional region not only with regard to its landscapes, but also in terms of climate and bio-geographical. criteria. As it progresses further eastwards, the Danube valley opens out towards the great East European plains which from here onwards extend into the Pannonian-Pontic region with wide broadenings. The west-east extension additionally favours the development of milder climatic conditions; because the left bank is exposed to the south in contrast to the more shady right side of the valley, the latter is rich in forests.

Thus within the space a narrow natural stretch there are remarkable contrasts comprising the elements River Danube, narrow necks, forested hills and slopes under viticulture, rocky crags and loess and a flora of various provenances, all of which combine to create a variational landscape rich in motifs, which is home to closely knit and sometimes overlapping species of considerable scientific interest, particularly to the botanist.

Added to all this is an important aspect of the Wachau in that - because of its function as an east-west communications route but equally because of its natural features - the Wachau is essentially one of the early civilised regions and has a history dating back to the Paleolithic period. Indeed, the countryside is characterised by settlements which originally relied on viticulture, shipping, or the strategic importance of the Danube valley, and which now, with their scarcely changed, unique, and highly picturesque villages, streets, alleys, peasant and patrician houses, churches, chateaux, castles, wineries, and monasteries with their extensive gardens and vineyards put an unmistakable stamp on the countryside and lend it a unique aesthetic charm. This combination of widely differing natural, European, historical, architectural, cultural, folklore, and economic elements enables the Wachau to claim to be amongst those Austrian landscapes which are the most worthy of protection and importance - and even to be a representative river landscape for Europe as a whole. As a synthesis of natural countryside and civilisation, the Wachau is an ensemble of highly unusual and unmistakable character, and in this respect it is unique in Europe.

In Europe, the river landscapes are amongst the most endangered natural regions (regulation, loss of wooded meadows, water pollution, hydroelectric power station construction etc.). A further consideration to be borne in mind here is the fact that rivers, with their valleys as natural communications routes (roads, railways, and shipping, etc.) are also the preferred regions for residential and industrial projects. In other words, they are particularly exposed to civilising, denaturalisating, and other foreign influences. River landscapes of particular beauty and uniqueness are therefore rare and thus valuable countryside.

In the best possible sense the Wachau with its still preserved harmonious beauty and impressive features is in this context a unique example for Europe.

LITERATUR

Über die Wachau mit all ihren Aspekten existiert eine weitgespannte Literatur, die von der naturwissenschaftlichen Arbeit bis zum Bildband reicht.

In der Folge eine Auswahl ohne Anspruch auf nur annähernde Vollständigkeit.

Geographie

- SAYER, J. (1927): Entdeckung von Ablagerungen der ersten Mediterranstufe in der Wachau. Verh.d.Geol.B.-A, Wien.
- BAYER, J. (1927): Eine Station des Eiszeitjägers im Mießlingtal bei Spitz a.d. Donau in NÖ. "Die Eiszeit" IV, 91-94.
- BECKE, F. (1883): Die Gneisformation des nö. Waldviertels. Verh. d.Geol. Reichsanstalt, Wien.
- BECKE, HIMMELBAUER (1913): Das niederösterreichische Waldviertel, Tschermaks min. petr.Mitt.32, Heft 3, Wien.
- BRANDTNER, F. (1955): Willendorf Verh. GBA, Sh. D, 67 - 69.
- DIWALD, K. (1928): Beiträge zur Entstehung des Wachauer Donautales Mitt. Geol. Ges. Wien 20, 153 – 155.
- FUCHS, G., MATURA, A. (1976): Zur Geologie des Kristallins der südlichen Bönmischen Masse (Erläuterungen zur Geolog. Karte der südl. Böhm. Masse 1:200 000) Jahrb. Geol. B.A., Bd.119,
- GRILL, R. (1955): Exkursionsweg Enns-Krems. Verh.d.Geol. B.-A, Sonderheft D, Wien.
- GRILL, R. (1957): Die stratigraphische Stellung des Hollenburg-Karlstettner Konglomerates. Verh.d.Geol.B.-A., Wien.
- GÜTTENBERGER, H. (1924): Die Donaustädte in Niederösterreich als geographische Erscheinungen, Wien.
- HEKSCH.A.F. (1881): Die Donau von ihrem Ursprung bis an die Mündung. Wien-Pest-Leipzig.

`.en

- KÖHLER, A. und MARCHET, A. (1941): Die Moldanubischen Gesteine des Waldviertels und seiner Randgebiete. Fortschritte und Mineralogie, Kristallographie und Petrographie, Berlin.
- KÖLBL, L. (1929): Führer zur geologischen Exkursion ins böhmische Grundgebirge im Donautal c.) Wachau.Mitt.d.Geol. Ges.Wien.
- KÖLBL, L. (1927): Der Südrand der böhmischen Masse. Geolog. Rundschau.
- MATURA, A., FUCHS, W. (1983): Geol. Karte der Republ. Österr., Blatt 37 Mautern 1:50 000, Geol.B.A., Wien.
- MATURA, A., FUCHS, W. (1984): Geol. Karte der Republ. Österr., Blatt 38 Krems 1:50 000, Geol.B.A., Wien.
- NAGL, H. (1988): Naturraumpotential Wachau - Forschungsprojekt NC 21, Wien.
- OBERHAUSER, R. (Red.), (1980): Der geologische Aufbau Österreichs Springer-Verlag; Wien.
- darin Kap. 3.1. FUCHS, G., MATURA, A. Die böhmische Masse in Österreich
 - Kap. 3.13. FUCHS, W. Das Werden der Landschaftsräume seit dem Oberpliozän 3.13.3.1. Der Donauraum
- PAPP, A. (1952): Zur Kenntnis des Jungtertiärs in der Umgebung von Krems a.d. Donau. Verh.d.Geol. B.-A., Wien
- PENCK, A. (1903): Exkursionen in das Durchbruchstal der Wachau und die Lößlandschaft von Krems, IX. Int.Geol. Kongreß, Wien.
- PIA, J. (1939): Zur geologischen Geschichte des Donautales, Wiss. Donauführer, Wien, Waldheim-Eberle.
- PINDUR, L. (1940): Landeskundliche Skizze der Wachau, Wien 1920 (unveröff. Diss.), Geogr.Jahresber.
- THENIUS, E. (1952): Die Säugetierreste aus Stein a.d. Donau, Verh.d. Geol. B.-A., Wien

THIELE, O. (1961): Zum Alter der Donaustörung, Verh.d.Geol. B.-A., 131 133.

TOLLMANN, A. (1985): Geologie von Österreich, Band II, Außerzentralalpiner Anteil; Verlag Deuticke, Wien.

darin Kap. III Der österr. Anteil der Böhmischen Masse

TOLLMANN, A. (1986): Geologie von Österreich, Band III, Gesamtübersicht; Verlag Deuticke, Wien.

darin Kap. L 4. Das Schicksal der Donau

- VETTERS, H. (1927): Aufnahmebericht über Blatt Krems. Verh.d. Geol. B.-A., Wien
- WALDMANN, L.: Das außeralpine Grundgebirge aus F.X. SCHAFFER, Geologie von Österreich
- ohne Autor (1977): Arbeitstagung der Geologischen Bundesanstalt 1977 "Waldviertel" Exkursionsführer Geol.3.A. Wien.

Botanik:

- BECK MANNAGETTA, G VON (1898): Die Wachau. Eine pflanzengeographische Skizze aus Niederösterreich, Blätter der Vereines für Landeskunde von Niederösterreich, 32: 3-18.
- HÜBL, E. u. HOLZNER, W. (1977): Vegetationsskizzen aus der Wachau in Niederösterreich, Mitt.flor. – soz. Arbeitsgem. N.F. 19/20 Todemann-Göttingen.
- KERNER, A. von (1851): Die Flora des Donautales von Melk bis Hollenburg. Verh.zool.bot.Ges. Bd. 1, Wien.
- KERNER, A. von (1855): Der Jauerling, eine pflanzengeogr. Skizze, Verh.zool.bot.Ges. Bd 4, Wien.
- KRETSCHMER, L. (1930): Die Pflanzengesellschaften auf Serpentin im Gurhofgraben bei Melk. Verh.zool.bot.Ges. Wien 80: 163-208
- SERGLHUBER, M. (1974): Die Vegetation der aufgelassenen und der rezenten Weingärten im Wachauer Gebiet. Diss.phil.Fak. Univ. Wien.

VIERHAPPER, F. (1925): Die Pflanzendecke des Waldviertels, in "Das Waldviertel", herausg. von E. Stepan, 1.Bd. Wien.

- WAGNER, H. und WENDELBERGER, G. (1956): Die Wachau, in "Angewandte Pflanzensoziologie", veröff. d. Institutes für angewandte Pflanzensoziologie des Landes Kärnten, Heft XVI, Wien.
- WERNECK, Dr.L. (1953): Die naturgesetzlichen Grundlagen des Pflanzen- und Waldbaues in Niederösterreich, Forschungen zur Landeskunde von Niederösterreich, Bd. 7. Wien.

Zoologie:

- AMON, R. (1931): Die Tierwelt Niederösterreichs, 1. Folge, Wien 40 Karten in Farbdrucken mit kurzgefaßten Erläuterungen.
- BAUER, K. (1989): Rote Liste der gefährdeten Vögel und Säugetiere Österreichs und Verzeichnis der in Österreich vorkommenden Arten. Öst.Ges.Vogelkunde, Klagenfurt 55pp.
- CABELA, A. & TIEDEMANN F. (1985): Atlas der Amphibien und Reptilien Österreichs. Neue Denkschriften des Naturhistorischen Museums Wien, Bd.4, Wien - Horn, 80pp.
- DICK, G. (1989): Die Vogelwelt der österreichischen Donau, Wiss. Mitt. NÖ Landesmuseum 6:7-110.
- KRAUS, E. & SINN E. (1990): Zur Naturkunde des Bezirkes Melk. S.65-122 in: Der Bezirk Melk - Herzstück Niederösterreichs: Melk, 85pp.
- PINTAR, M. & WARINGER-LÖSCHENKOHL A.(1989): Faunistisch-ökologische Erhebung der Amphibienfauna in Auengebieten der Wachau. Verh. Zool,-Bot.Ges. Österreich 126:77-96.
- PROKOP, P. & RASTL P. (1986): Brutvogelkartierung 1981–1985 Vorläufiges Endergebnis. Orn.Informationsdienst 42, Wien, 53pp.
- SCHWEIGER, H. (1955): Die natürlichen Grundlagen der Tierverbreitung in Niederösterreich. Atlas von Niederösterreich.

- 35 - 1

- SCHULZ, A. (1991): Die Ameisenfauna (Hym.:Formicidae) des Setzberges in der Wachau (Niederösterreich). Zeitschrift der Arbeitsgemeinschaft Öst. Entomologen 43(1/2):55-61.
- WÖSENDORFER, H. LEBERL S. & BENZ G. (1987): Uferzonen der Wachau. Landschaftsökologische Kartierung von Melk bis Krems. Gutachten der Wasserstraßendirektion, Abt. 24.

Geschichte und Kunstgeschichte:

ANGELI, W. (1989): Die Venus von Willendorf, Wien.

BIBERSCHICK, F. (1951): Krems-Stein und Mautern, Krems.

BINDER, G. (1925): Die niederösterreichischen Burgen und Schlössen. Wien.

BÜTTNER, R. (1964): Burgen und Schlösser an der Donau.

DWORSCHAK, F. (1961): Wachau und Nibelungengau, München-Züricn.

ECKHARDT, J. (1929): Die Wachau, Wien-Leipzig.

- EGGER, R. (1965): Das Gefecnt bei Dürnstein-Loiben 1805. Militärhistorische Schriftenreihe 3, Wien.
- EPPEL, F. (1964): Die Wachau, Nibelungen- und Strudengau, ihre Kunstwerke und Historische Kultur, Salzburg.
- FREISINGER, A. (1987): Heimatkundliche Bibliographie Niederösterreichs I: Viertel ober dem Manhartsberg, Nachträge 1992, im Selbstverlag des Verfassers.
- FRIES, G., E. (1874): Die Herren von Kuenring, Blätter des Vereins für Landeskunde von Niederösterreich, 8/1874.
- GUTKAS, K. (1983): Geschichte Niederösterreichs 6. Aufl. St. Pölten-Wien.
- HAGEN FEUCHTMÜLLER (o.J.): Durch die Wachau. Die Donau von Linz bis Krems. München-Pullach.
- KANDLER, M. und VETTERS, H. (1986): Der römische Limes in Österreich. Ein Führer. Wien. Österr. Akademie d. Wiss.

- KÜHNEL, H. (1966): Die städtebauliche Entwicklung von Krems und Stein. Berichte zur Raumforschung und Raumplanung. Jg. 10/1966, Heft 3-4.
- PETRI, G. (1947): Beiträge zur Besitzgeschichte der Wachau von Spitz bis Aggstein, Diss. Wien.

PLÖCKINGER, H. (1928): Beiträge zur Heimatkunde 1925 N.F.

- REISCHL, F. (1922): Wachau-Studien. Kulturgeschichte und Kunst im Donautal, Leipzig und Wien.
- RIEHL, H. (1926): Die Wachau zwischen Melk und Stein, Österreichische Kunstbücher, Bd. 53-54, Wien-Augsburg.
- RIESENHUBER, M. (1923): Die kirchlichen Kunstdenkmäler des Bistums St. Pölten, St. Pölten.

SCHAFFRAN, E. (1948): Die Wachau, Wien.

STEINLEIN, G. (o.J.): Altbayrische Gasthäuser in der Wachau.

- STOWASSER, O.H. (1926): Das Tal Wachau und seine Herren von Kuenring, Wien.
- WEIGL, H. (1964-1981): Historisches Ortsnamenbuch v. Niederösterreich, 8 Bände, Wien.

ZINNER. R. (1957): Die Wachau, romantisches Donautal, Wien.

- DEHIO Handbuch (1990): Die Kunstdenkmäler Österreichs. Niederösterreich, nördlich der Donau, Wien.
- Handbuch der historischen Stätten Österreichs I: (1970): Donauländer und Burgenland, 1. Bd. Herausgeg. von K.Lechner, Stuttgart.
- Historischer Atlas der Alpenländer (1910): Hrg. von der österr. Akademie der Wissenschaften, Bd. I/2/1.
- Katalog Die Wachau (1967): Gegenwärtige Kunst. Malerei und Graphik, Wien.

Josef Kinzel, ein Maler der Wachau. Aus der Reihe der Eckhart-Kunstbücher, Wien, o.J.

- 37 -

Österreichische Kunsttopographie – Band 1 (1907): Die Denkmale des politischen Bezirkes Krems. Wien.

Österreichische Kunsttopographie – Band 3 (1909): Die Denkmale des politischen Bezirkes Melk. Wien.

Reclams Kunstführer Österreich. Baudenkmäler. Band I, Wien, Nieder- und Oberösterreich, Burgenland. Stuttgart 1961.

Topographie von Niederösterreich. Alphabetische Reihenfolge und Schilderung der Ortschaften in Niederösterreich, bearb. von W.A. Becker, 7 Bände, Wien 1879-1885.

Die Wachau. Österr. Kultur- und Städtebilder. Wien 1911.

Weiters zahlreiche auf die Wachau bezogene Artikel in periodisch erscheinenden Zeitschriften z.B.:

Geschichtliche Beilagen zum St. Pöltner Diözesanblatt, St. Pölten. Das Waldviertel, Zeitschrift des Waldviertler Heimatbundes für Heimatkunde und Heimatoflege des Waldviertels und der

Wachau. Krems.

Unsere Heimat. Monatsblatt des Vereins für Landeskundes, Wien.

Denkmaloflege:

Atlas der historischen Schutzzonen in Österreich, (1970): I.Städte und Märkte. Graz.

KÜHNEL, H. (1974): Denkmalpflege und Althaussanierung in Krems a.d. Donau.

Wirtschaft-Soziales:

ALTMANN, H. (1986): Der Weinbau in der Wachau, in: Unsere Heimat, Z.Ver. F. Landeskunde von NÖ, Jg. 57,28-32.

JURSA, D. (1961): Das Wachauer Weinbuch. Salzburg-Stuttgart.

KUNZE, E. (1966): Das Städtedreieck Krems - Stein - Mautern.Diss. Wien.

PLÖCKINGER, H. (o.J.): Die Wachau und ihr Wein. Krems.

PLÖCKINGER, H. (1938): Der Wachauer Weinbau. Wien.

SCHNAUBELT, P. (1960): Die Wachau als Wirtschafts- und Verkehrsraum, Wien. (Hausarbeit). Reiseführer:

Führer durch die Wachau und kurze Beschreibung der in derselben gelegenen Ortschaften. Krems, o.J.

GERLACH, Mu.WICHNER, J. (o.J.): Die Wachau in Wort und Bild, Wien und Leipzig.

HOLLNSTEINER, F.X. (1960): Durch die Wachau.

HOTZ, W. (1939): Wachauer Laubenhöfe, in Volk und Welt.

HOTZ, W. (1938): Melk und die Wachau. Berlin.

HUBER, J. (1927): Wachauführer, Kremstal, Dunkelsteiner Wald. Krems.

HUBER, J. und BIBERSCHICK, F. (1953): Wachauführer. Krems.

Reisen in Österreich. Ill. Reisehandbuch, Band 10: Wachau, Strudengau, Waldviertel, Mühlviertel. Hrg. vom Österr. Verkehrsbüro, Wien, o.J.

SEELINGER, H. (o.J.): Kleiner Führer durch die Wachau. Karte gezeichnet um 1850, Wien.

ZEHETNER, H. (1972): Führer durch die alten Wachauorte St. Michael, Wösendorf, Joching, Weißenkirchen. Krems.

ZETSCHE, E. (1902): Bilder aus der Ostmark. Ein Wiener Wanderbuch. Die Wachau,Innsbruck.

Dichtung und Saga:

BARTSCH, R,H. (1923): Die Wachau, Berlin - Wien.
CLOETER, H. (1923): Donauromantik. Wien.
FILEK, E. (1944): Besinnliche Wachaufahrt. Wien.
RIED, K.T. (o.J.): Sagen der Wachau.
PLÖCKINGER, H. (1926): Sagen der Wachau. Krems.