

INFORMATION SHEET ON RAMSAR WETLANDS

Note: General Information refers to the whole Ramsar site
Information under A refers to Fulderaue + Ilmenaue, in
the Bundesland Rheinland-Pfalz
Information under B refers to Rüdeshheimer Aue
Information under C refers to Mariannenaue, both B & C
in the Bundesland Hessen

Country: Germany

Date:

A: May 1992
B & C: 7 July 1992

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Name and address of compiler:

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- Staatliche Vogelschutzwarte für Hessen, Rheinland-Pfalz und Saarland, Steinauer Str. 44, 6000 Frankfurt/M 60
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Name of wetland: Rhein, Eltville - Bingen

Date of Ramsar designation:

A: 1976
B & C: November 1974

Geographical coordinates:

A: 50°N 008°E
B: The centre of Rüdeshheimer Aue lies at 49°58'33''N 007°56'E
The area extends from Rhine River km 524.7 - km 527.3
C: The centre of Mariannenaue lies at 50°N 008°5'E
Shallow water bodies: Rhine River km 512.04 - km 517.35, including sandbanks (km 514.4 - km 515.2) and island (Mariannenaue, km 513.1 - km 516.1).

General location:

A: in the Bundesland Rheinland-Pfalz; District of Mainz-Bingen, between Bingen and Mainz
B: in the Rheingau-Taunus Area, island in the Rhine in front of the city of Rüdeshheim (Bundesland Hessen)
C: Island in the Rhine, to the South of Erbach and Hattenheim, including the northerly and southerly empennages, the sandbanks and shallow waterbodies in-between (Bundesland Hessen)

Area:

General: Distribution of the area:
Rheinland-Pfalz: 250 ha (Fulderaue + Ilmenaue)
Hessen: 196 ha (Mariannenaue)

29 ha (Rüdesheimer Aue*)

Total Area: 475 ha

B: * The wetland Rüdesheimer Aue consists of ca. 28.75 ha, but the island itself is only 5.62 ha in size.

Wetland type:

A: 1 a
B & C: M W X

Altitude:

A: ca 80 m above sea level
B: The western part of the island reaches 1.5 m, and the eastern part 5.3 m above mean waterlevel of the Rhine (78 m). The highest point in the island lies at 83.9 m above sea level.
C: The wetland lies between 81.1 m and 82.8 m above sea level.

Overview:

A: Floodplain with extremely valuable shallow water bodies, which serve as feeding grounds for waterfowl and as breeding and stop-over areas for wetland- and water-birds
B: The area is in a process of progression from soft-wood meadow (thicket and shrubs) to the very rare hard-wood meadow. The ground harbours patchy areas with mud-plant vegetation. The Rüdesheimer Aue is amongst the richest waterfowl stop-over places in the whole of inland Germany, due mainly to the ideal ecological conditions of the Rhine.
C: Rhine Island with soft- and hardwood vegetation, riverine reedbed areas, floodplains and shallow waterbodies, meadows and orchards, as well as stagnant pools, sandbanks, booms (= tail units?) and "Kribben" (= cribs?) extending to the front. The Mariannenaue forms part of the cross-Länder Europe Reserve "Rheinauen Bingen-Erbach", which was established to provide resting, wintering and breeding habitat for endangered bird species. It is one of the most important inland stepping stones in Europe on the migration route of waders and waterfowl, due mainly to its diversity of habitat.

Physical features:

A: Thick alluvium of several meters makes up the substratum of the meadows. A covering layer of fine sand and clay lies on top of the layers of rough sands and gravel. The Rhine normally has high waterlevels between spring and early summer, due to the late thaw of the snows in the Alps, and to heavy rainfalls in the catchment areas during summer. In autumn and winter the waterlevels are usually low. Average annual precipitation: ca. 550 mm; Average temperature 9-10°C.
B: The Rhine-islands lie in the Mainz-basin, which was formed by the rift in the Upper Rhine area during the "mid-oligocene". In this process, the previous rock layers (conglomerates of Taunus-rubble) sank deeply and were covered by marine sands, "Septarycenes". These tertiary sediments were followed by dilluvial Rhine- and Main-gravel, which now reach up to the "sole" of the Rhine. The Rhine-islands as such were formed entirely from younger

layers. Clay and sand are prominent especially along the edge of the main island. The main part of the Rüdeshheimer Aue was formed by "meadow ground" (Paternia, Vega). (There are two sentences on the geology of the site at this point in the text, which I am unable to translate. Generally, the grounds are rich in chalk and mineral nutrients.) The Rüdeshheimer Aue is part of the "Ingelheim-Mainz Rhine-plain". Due to the narrow stretch in the area of "Binger Loch", the Rhine is partially dammed there and therefore enlarged. It flows through narrow floodplains on the right-hand bank and wide floodplains on the left-hand bank, which are bordered by the "low step". The slow-flowing river has the character of a lower-course and constantly creates varying and new islands. The main island has been used for agriculture since ancient times because of its fertile soil and its ideal climate. The Rüdeshheimer Aue was made "secure land" by corrective measures to the river bank and forms the point of the Rüdeshheimer harbour. Looking up at the Rüdeshheimer Aue it takes the shape of a big ship with a bow pointing westwards. The banks are secured with walls of gravel, which are sticking out along the north-bank and only become flat towards the western point. To the North-West there is a sandbank in front of the island. The wall of gravel is encircled by a broad strip of sand along the south bank.

C: The island in the Nature Reserve is a post-glacial riverine deposit from the Rhine, and consists partly of clay, partly of sand, sandy clay or sandy silt. There is a sandbank in front of the island to the North. The main part of the island is made from "meadow-ground". Those grounds are of average to great depth, rich in chalk and provide good habitat for vegetation. The recently formed deposits around the area of the empennages and breakwaters have rough-ground character. There are processes of change in the deposits and some erosion during high-water.

B & C: Climate: average of precipitation 550-600 mm/year, average

temperature in January 0°-1°C, July/August 18°-19°C. Extensive low-lying fog, rare number of freezing days during winter.

The lower lying areas of the island are flooded during high waters.

Water: Quality Class III (heavily polluted).

Ecological features:

A: The vegetation of the river meadows consists of three different zones: the wood-free meadow; the soft-wood meadow; and the hard-wood meadow. The wood-free areas tend to be very small. Soft-wood meadows appear in their most typical form, as silver-willow woods, on the islands and on the "Sporkenheimer Altrhein". The largest areas consist of hard-wood meadows, whose natural vegetation appears on the "Fulder Aue". Apart from a few poplar plantations, hard-wood meadows are usually used for agriculture, as grazing meadows, for crops or as orchards.

B: Valuable habitat for the extremely rare hard-wood meadow

vegetation, which only occurs in the low-lying floodplains of large rivers under certain conditions.

Species of the soft-wood meadows (*Salicetum albae*):

Salix alba
Populus nigra
Salix triandra
Salix viminalis
Salix purpurea

Species of the hard-wood meadows:

Ulmus minor
Quercus robur
Fraxinus excelsior
Acer campestre
Acer pseudoplatanus
Tilia cordata

The area is in the process of succession, which cannot be assigned to any phyto-sociological association. Regeneration towards hard-wood meadow wood. The ground harbours patchy areas with mud-plant vegetation (*Bidentalia*).

Fauna:

Unio pictorum
Ancylus fluviatilis
Sphaerium corneum
Anodonta anatina
Inachis io
Pararge aegeria
Plebejus argus
Bulimus tentaculatus
[*Bithynia tentaculatus*]

C: There are short-lived, yearly mud-meadows like *Juncus* spp. etc. (several plant names are given in German). The ecologically extremely valuable meadows along the bank characteristically support pretentious *Ranunculus* spp. *Butomus umbellatus* and *Angelica archangelica* are proof for the importance of the reedbeds. Along the banks, there are remainders of native hardwoods; the following tree species are representatives: *Quercus robur*, *Ulmus minor*, *Populus alba* (?). (two other species are mentioned in German). Along the western tip of the island, and partially along the southern shore, there is soft-wood vegetation.

Land tenure/ownership of

a) site:

A: The state has ownership of the areas of shallow water bodies, the river-bank, and the islands.

B: 5.41 ha in private ownership, ca. 23 ha in the ownership of the National Waterways Authority.

C: The island itself is of private ownership (54 ha). The Bundesland Hessen has ownership of the booms (= tail units?), sandbanks and stagnant waterbodies.

b) surrounding area:

A: various private owners.

B: National Waterways Authority.

C: no information supplied

Conservation measures taken:

- A: Nature Reserve since 1972; Ramsar site since 1976.
- B: With the decree of 20 November 1972 the site covering 28.75 ha was designated for Nature Conservation (see Annex I/2; Inhibitions Paragraph 3, Exceptions Paragraph 4; also Annex I/3, regulations on changes.)
The site is managed by a middle-term management plan, which is usually compiled for a period of 10 years.
At present there is no agricultural use made of the site.
Management by the responsible forestry authority.
- C: With the decree of 20 November 1972 the site was designated for Nature Conservation (see Annex II/2; Inhibitions Paragraph 3, Exceptions Paragraph 4; also Annex II/3, regulations on changes.)
The site is managed by a management plan, which is usually compiled for a period of 10 years.

Conservation measures proposed but not yet implemented:

- A: Management Plan in preparation
- B: not applicable
- C: 1) Extension of the prohibition of navigation within the Nature Reserve over the whole year;
2) Prohibition over the whole year to enter the area of the empennages, shores, and sandbanks;
3) Restoration measures on the Mariannenaue with the aim of restoring the woods;
4) Relocation of the fishing society, prohibition of fishing from the island.

Current land use: principal human activities in a) site:

- A: forestry, agriculture, sport fishing, recreation, watersports (boating and surfing).
- B: Nature conservation (no agriculture, forestry or fishery)
- C: Agricultural use of the island for the production of maize, wine, fruit, and for cattle grazing. The wetland areas, the shores of the island and the waterbodies are not used, but are frequently disturbed by boating traffic, which is against the rules of the Nature Reserve.

b) surroundings/catchment:

- A: fruit and crop agriculture
- B: Use of the national waterway.
- C: The Rhine is used to a great extent as a national waterway by professional and recreational boating traffic.

Disturbances/threats, including changes in land use and major development projects

a) at the site:

- A: forestry, agriculture, tourism, pleasure boats, windsurfing, sport fishing, hunting.
- B: Danger from leisure activities (there is a camp site on the Rheinland-Pfalz side of the Rhine, opposite Rüdeshheimer Aue, from which the island is frequently visited.) Re-use of the site for agriculture or horticulture does not represent a real threat, nor does hunting or fishery. There is some maintenance work carried out by the waterways- and shipping-authorities.
- C: Unauthorised recreational use causes major disturbance in the Nature Reserve. This affects particularly the stagnant

waterbodies and the ecologically crucial transition zones between water and land, mainly due to landing sport boats. In the future, this should be prohibited by the new Nature Reserve Regulations; for the time being interim regulations by the Transport Ministry are in force.

b) in the surroundings/catchment:

A: forestry, agriculture, tourism, hunting.

B: Use of the national waterway.

C: no information supplied

Hydrological and physical values:

A: groundwater observation well.

B: The groundwater level correlates with the water level of the Rhine; the Rhine level was lowered, but the lower lying areas along the banks of the site are still flooded at high waters.

C: The Mariannenaue is nowadays practically "flood-free" due to corrective measures on the Rhine waterway, which lowered the waterlevel of the river. On the low-lying areas of the Nature Reserve, however, floods are still occurring regularly as a result of high waters in May/June caused by the alpine melting of snow, and by high waters through percipitation in November/December.

Social and cultural values:

A: forestry; sport fishing; hunting

B: Scientific importance: ornithological; natural/historical as a relict example of the near-extinct hard-wood meadows; cultural/historical as an image of a near-natural river bank.

C: not appliccable

Noteworthy fauna:

General: The principal value of the wetland area lies in its use as a wintering- and stop-over site. Increasingly, it has gained in importance during the breeding and rearing season, which is a result from intensified protection measures. There are ca. 80 different breeding bird species. Amongst these are *Columba oenas*, *Alcedo atis*, *Accipiter nisus* and *Milvus migrans*;

Count data for the whole area:

Aythya fuligula: 1825 on 16.02.91

Aythya ferina: 1445 on 17.01.90

Anas platyrhynchos: 1270 on 16.12.90

Bucephala clangula: 130 on 16.02.91

Mergus merganser: 65 on 16.02.91

B: There are 70 nests of *Ardea cinerea* on the Rüdeshheimer Aue, and *Phalacrocorax carbo* is alleged to be breeding there. Waterfowl counts for this species showed 748 birds on 17 November 1990 and 1007 birds on 16 March 1991.

C: *Tadorna tadorna* winters here regularly; this is unique in inland Germany.

Noteworthy flora:

A: Noteworthy plants:

Euphorbia palustris L.

Inula salicina L.

Senecio paludosus

Veronica Longifolia L.
Ulmus minor

B: *Ulmus minor*
Angelica archangelica
Butomus umbellatus
Thalictrum minus
Thalictrum flavum
Epipactis helleborine
Chaerophyllum bulbosum
Cucubalus baccifer
Aristolochia clematitidis

C: The agriculturally used areas on the island are of no particular botanical importance. The soft-wood vegetation on the fringes and in the East of the island are however of natural value. In the undergrowth, a mosaic of plant species pertaining to *Bidens* spp., sedge- and reed-families.

In some areas hard-wood vegetation is dominant. However, wood-free areas cover a major part of the Nature Reserve.

Noteworthy plant species are:

Butomus umbellatus
Veronica peregrina
Veronica catanata
Veronica anagallis aquatica
Potentilla supina
Ranunculus sceleratus
Mimulus guttatus
Erysimum hieraciifolium
Chenopodium ficifolium
Alopecurus aequatis
Datura stramonium
Chaerophyllum bulbosom
Hyoscyamus niger
Thalictrum minus
Thalictrum flavum
Allium vineale
Amarantus
Iris pseudacorus

Current scientific research and facilities:

General: Coordinated programme by the Bundesländer Rheinland-Pfalz and Hessen for the yearly bird counts by the Ornithological Field Station and the voluntary Nature Conservation members in the whole of the Ramsar site.

A: Nature Conservation Centre in Bingen-Gaulsheim, belonging to the German Nature Conservation Trust.

Current conservation education:

A: Talks and events on Nature Conservation in the Nature Conservation Centre of the German Nature Conservation Trust.

B: none

C: not applicable

Current recreation and tourism:

A: sport fishing; sport boating and wind surfing in the shallow water areas; camp site in the immediate vicinity.

B: none

C: not applicable

Management authority:

A: District Government of Rheinhessen-Pfalz
(Senior Land Management Authority and Forestry Commission)
Friedrich-Ebert-Str. 14
6730 Neustadt a.d. Weinstrasse, Germany

B & C: Regierungspräsidium Darmstadt
- Obere Naturschutzbehörde -
Postfach 11 12 53, 6100 Darmstadt, Germany

Jurisdiction:

A: Ministry for Environment and
Ministry for Agriculture, Wine-growing, and Forestry
of Rheinland-Pfalz
6500 Mainz

B & C: Regierungspräsidium Darmstadt
- Obere Naturschutzbehörde -
Postfach 11 12 53, 6100 Darmstadt, Germany

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A: - Artenschutzprojekt Stromtalwiesen in Rheinland-Pfalz, 1987,
Institut für Vegetationskunde und Landschaftsökologie,
Röttenbach, i.A. LfUG, Oppenheim
(Species protection project in the river meadows in
Rheinland-Pfalz).

- Biotopsystem Nördliche Oberrheinniederung; Bestandsanalyse
und Entwicklungsvorschläge, Bonn, Karlsruhe, Oppenheim,
Wiesbaden 1988
(Biotope System of the Northern part of the Upper Rhine
Meadows; analysis of an inventory and development
proposals).

B & C: - Gebhardt, L., Berg-Schlosser, G. & Bauer, W. Gutachten
betr. Einrichtung von Naturschutzgebieten (für Wasservogel)
im Rheingau und in Rheinhessen Frankfurt, 1965.
(Assessment regarding the establishment of Nature
Conservation Areas for waterbirds in Rheingau and in
Rheinhessen Frankfurt).

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Hessen, a.a.D. (1978).
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Reserves in Hessen.)

- Hillesheim-Kimmel, U. Gutachten über geschützte und
schutzwürdige Gebiete im Regierungsbezirk Darmstadt.
Schriftenreihe Inst. Natursch. Darmstadt, Beiheft 23, 114-
117, Darmstadt 1972.
(Assessment on protected and protection-worthy areas in the
District of Darmstadt)

- Hillesheim-Kimmel, U. Botanische Gutachten über neuere
Naturschutzgebiete und schutzwürdige Gebiete im
Regierungsbezirk Darmstadt. Inst. Natursch. Darmstadt,
Beiheft 27, 27-131, Darmstadt 1977.
(Botanical assessment of newer Nature Reserves and
protection worthy areas in the District of Darmstadt)

- Biotopsysteme Nördlicher Oberrheinniederung,
Bestandsanalyse und Entwicklungsvorschläge. Bonn,
Karlsruhe, Oppenheim, Wiesbaden 1988.

(Biotope systems in the Upper Rhine floodplain; inventory analysis and development proposals.)

B: - Planning Committee for Free Spaces and Settlements: Landschaftsökologisches Entwicklungskonzept als Grundlage für den mittelfristigen Pflegeplan für das Naturschutzgebiet Rüdesheimer Aue. Wöllstadt, 1983.

(Landscape-ecological development concept as a basis for a middle-term management plan for the Nature Reserve Rüdesheimer Aue)

Reasons for inclusion:

General: 1a; 1c; 2a; 2b; 2c; 3b.

Map of site:

A: 6013 Bingen, 6014 Ingehlheim (1:25.000)

B: see Annex I/1

C: see Annex II/1