

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

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DD MM YY

Designation date Site Reference Number

1. Name and address of the compiler of this form:

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2. Date this sheet was completed

21. 10. 2003

3. Country:

Austria

4. Name of the Ramsar site:

MOORE AM NASSKÖHR

5. Map of site included:

Refer to Annex III of the Explanatory Note and Guidelines, for detailed guidance on provision of suitable maps.

a) hard copy (required for inclusion of site in the Ramsar List): *yes*

b) digital (electronic) format (optional): *yes*

6. Geographical coordinates (latitude/longitude):

15° 33' E, 47° 43' N

7. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Country: Austria, State: Styria, District: Mürzzuschlag (also nearest large town),

Commune: Neuberg an der Mürz, Location: Hinteralm/Nassköhr

8. Elevation: (average and/or max. & min.)

1210 - 1300 m

9. Area: (in hectares)

31,486 ha (mires), 211,133 ha (whole site)

10. Overview:

The Nassköhr is a Karst depression (Polje) in the Northern Limestone Alps with a natural brook that vanishes into a ponor. It contains the easternmost peatland concentration of the Northern Limestone Alps consisting of 5 bogs, 4 transitional mires and 12 fens with different hydrology. Due to the different bedrock, hydrology and mire types the diversity

of the mire vegetation is outstanding. Almost all plant communities appearing on Alpine mires are represented.

11. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

①	②	③	4	5	6	7	8
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12. Justification for the application of each Criterion listed in 11. above:

Criterion 1: *The Nassköhr is the biggest peatland concentration in the Eastern Limestone Alps. The mires show all typical features of mire types representative for the Limestone Alps. Except for one site which has been used for peat cutting all objects are near-natural or natural, only affected by some cattle grazing.*

Criterion 2: *The plant communities of the mires and marginal forests are endangered as are almost all wetland communities in Central Europe.*

Criterion 3: *The mires of Nassköhr represent almost all plant communities typical for the biogeographical region of the Northern Limestone Alps and therefore add an important part to the biodiversity of the region. Typical examples of plant species not occurring outside peatlands are *Carex pauciflora* (Few-flowered Sedge), *Drosera anglica* (Great Sundew), *D. intermedia* (Oblong-leaved Sundew) and *D. rotundifolia* (Round-leaved Sundew), *Menyanthes trifoliata* (Bogbean), *Swertia perennis* (Bog Swertia), and numerous moss species.*

13. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region: *Northern Alps - Northern Limestone Alps – Mariazeller Gebirgsumrahmung*

b) biogeographic regionalisation scheme (include reference citation): *Steiner, G.M. (1992): Österreichischer Moorschutzkatalog. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 1, 509 pp, Karte 1:500.000, styria medien service, Graz.*

14. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The Nassköhr Polje is the biggest Karst depression in the Northern Limestone Alps covering about 5 km². In the upper Tertiary it was formed as a valley. The prevailing bedrock is Cretaceous limestone (Hallstätter Kalk) covered with a layer of impermeable shale (Werfener Schiefer). This shale layer is responsible for both, the peatlands and the springs being the source of little streams all flowing into a beautiful meandering brook that vanishes into a big ponor (swallow hole), the Durchfall.

15. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The catchment area is the whole Schneeealm - Hinteralm region formed of different kinds of limestone (Hallstaetter Kalk, Gutensteiner Kalk, Dachsteinkalk, Reiflinger Kalk

Wettersteinkalk), dolomite (Hauptdolomit, Opponitzer Dolomit, Wettersteindolomit), marl (Gosauschichten, Muerztaler Mergel) and shale (Werfener Schiefer). The prevailing soil type is Rendzina, the general land use is either forestry or pasturing (cattle). The climate is the typical Central European mountain climate (1135 mm, 5,7° C in 800 m).

16. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Retention of precipitation especially after thunderstorms or heavy rainfall. Groundwater recharge and improvement in the limestone massif.

17. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal:

A	B	C	D	E	F	G	H	I	J	K	Zk(a)
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Inland:

L	<u>M</u>	N	O	P	Q	R	Sp	Ss	Tp	Ts	<u>U</u>	Va	Vt	W	Xf	Xp	<u>Y</u>	Zg	<u>Zk(b)</u>
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Human-made:

1	2	3	4	5	6	7	8	9	Zk(c)
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b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

Zk (b) Karst system

U Mires

M Brooks

Y Springs

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

Due to the geological conditions 21 mires (numbers and names see map "Nassköhr" and table 1) showing many different hydrological conditions have developed in the Nassköhr: A terrestrialisation mire (parts of 2), a flood plain mire (parts of 8), spring fens (14 - 17 and parts of 2, 3, 5, 6, 7, 8, 9, 10, 20), percolating mires (19 and parts of 2, 3, 4, 5), flush mires (13 and parts of 6, 7, 9, 10, 20), transitional mires (parts of 2, 4, 5) and raised bogs (1, 11, 12, 18, 21 and parts of 3, 4, 5).

Most of the mires are complexes of more than one hydrological type. This is caused by the fact that almost all of them are sloping mires and thus change their hydrology downslopes.

Usually they start with a spring fen and continue either as flush mire with surface water runoff or as percolating mire with water seepage beneath the surface through the peat. In the latter case the originally mesotrophic calcareous water loses its nutrients on the way

downslopes and thus enables *Sphagnum* growth and bog development. The different mire sites with their hydrological characteristics are listed in table 1.

Table 1: The mires of Nassköhr

<i>number</i>	<i>size ha</i>	<i>name</i>	<i>mire types</i>
1	8,786	Zerbenwiese Bog	bog
2	0,653	Zerbenloch	terrestrialisation mire, spring fen, percolating mire and transitional mire
3	2,228	Capellarowiese	spring fen, percolating mire, bog
4	4,936	Torfstichmoor	percolating mire, transitional mire, bog
5	1,594	Durchfallmoos	spring fen, percolating mire, transitional mire, bog
6	0,660	Zerbenwiese W	spring fen, flush mire
7	0,196	Torfstichmoor N Fen	spring fen, flush mire
8	1,694	Zerbenwiese NE	flood plain mire, spring fen, bog
9	1,165	Klobenwandmoos	spring fen, flush mire
10	0,591	Jagdhausbodenmoor	spring fen, flush mire
11	0,488	Moor am Draxlerkogel	bog
12	1,510	Kerpensteinermoos Bog	bog
13	0,370	Kerpensteinermoos S Fen	flush mire
14	0,787	Kerpensteinermoos	spring fen
15	0,427	Kerpensteinermoos N Fen	spring fen
16	0,011	Grünmaiß	spring fen
17	0,488	Haselbodenmoor Fen	spring fen
18	1,044	Haselbodenmoor	bog
19	0,393	Kleine Schnittlauchwiese	percolating mire
20	2,058	Große Schnittlauchwiese	spring fen, flush mire
21	1,407	Buchaiblmoos	bog
total	31,486		

Depending on bedrock and hydrology the vegetation of the mires is as diverse. The typical plant communities in the different mire types are:

terrestrialisation mires - *Caricetum limosae* (Bog Sedge Community) and *Caricetum rostratae* (Bottle Sedge Community)

flood plain mires - *Caricetum paniculatae* (Greater Tussock Sedge Community), *Angelico-Cirsietum palustris* (Wild Angelica-Marsh Thistle Community) and *Angelico-Cirsietum oleracei* (Wild Angelica-Cabbage Thistle Community)

spring fens - *Caricetum paniculatae*, *Angelico-Cirsietum palustris* and *Angelico-Cirsietum oleracei*

flush mires - *Caricetum paniculatae*, *Caricetum rostratae*, *Caricetum nigrae* (Common

Sedge Community) and *Caricetum davallianae* (*Davall Sedge Community*),
percolating mires - *Caricetum davallianae*, *Campylio-Caricetum dioicae* (*Campylium-Dioecious Sedge Community*) and *Menyantho-Sphagnetum teretis* (*Bogbean-Peatmoss Community*),

transitional mires - *Drepanoclado-Trichophoretum cespitosi* (*Drepanocladus-Deergrass Community*), *Caricetum limosae*, *Eriophoro vaginati-Trichophoretum cespitosi* (*Harestail Cotton-grass-Deergrass Community*) and *Sphagnetum magellanici* (*Magellan's Peatmoss Community*)

bogs - *Eriophoro vaginati-Trichophoretum cespitosi*, *Sphagnetum magellanici* and *Pino mugo-Sphagnetum magellanici* (*Mountain Pine-Magellan's Peatmoss Community*).

The margins of the bogs and transitional mires are covered by the Bazzanio-Piceetum (Bazzania-Spruce Community), the natural forest type of these sites in Central Europe. The surrounding area is covered by Spruce (Picea abies) forests with some Beech (Fagus sylvatica), Sycamore (Acer pseudoplatanus) and Larch (Larix decidua) or pastures dominated by Mat Grass (Nardus stricta). The vegetation along the streams and the brook is the same as in the flood plain mire combined with some stands of Grey Alder (Alnus incana) and Willows (Salix appendiculata, S. cinerea and S. aurita). Outside the Polje the natural vegetation is either a mixed Beech-Spruce forest in lower parts or Alpine meadows at the plateaus of the surrounding mountains.

The mires of the Nassköhr are all near-natural except for one bog, the Torfstichmoor, which has been used as a peat cut in the 19th century, the other sites are more or less affected by cattle grazing respectively trampling. In a joint project of the land owners, the Austrian Federal Forests (ÖBf-AG), the Institute of Ecology and Conservation Biology of the Vienna University (IECB) and the WWF-Austria initiated a management plan financed by the ÖBf-AG in order to improve the conditions for the peatlands. This is an outstanding example of private nature conservation activities in Austria. In spring 2002 the ÖBf-AG built dams into all drainage channels and in autumn - after long-lasting negotiations with the farmers - they started to build a fence to keep the cattle out from most of the mires.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. **Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.**

See table 2 in the supplementary information - noteworthy are all species listed in the Red Data Book.

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. **Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.**

See tables 3 and 4 in the supplementary information - noteworthy species are indicated with s or ss.

21. Social and cultural values:

e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

The Nassköhr was only used for forestry, grazing and hunting except for one site which was a peat cut to deliver fuel for the iron production in the neighbouring "Iron Ore Region". After 1860 the peat cutting ceased, because the transport was very complicated and became too expensive. Nevertheless, the use of peat from very remote sites is an important fact to understand the intensity of timber use during the 18th and 19th century. Almost all forests, except for the hunting areas of the royal family of Habsburg, have been overused during this period and could only recover due to a very strict forestry law implaced since the end of the 19th century. The use of the site as pasture is a very old right of the farmers of the valley and therefore they are reluctant to give up these rights. The only possibilities are either to buy these rights (almost impossible) or to offer them alternative areas (ongoing at the moment).

22. Land tenure/ownership:

(a) within the Ramsar site: *Austrian Federal Forestry (ÖBf AG)*

(b) in the surrounding area: *Austrian Federal Forestry (ÖBf AG)*

23. Current land (including water) use:

(a) within the Ramsar site:

Certified forestry (Pan European Forest Certification PEFC 2001/02) outside the mires, hunting and pasturing

(b) in the surroundings/catchment:

Certified forestry (Pan European Forest Certification PEFC 2001/02), hunting and pasturing

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

(a) within the Ramsar site:

*An old peat cut and the grazing due to trampling. The peat cut affects the hydrology of the "Torfstichmoor" by lowering the water table initiating erosion channels upslopes the corners of the peat cut. Grazing as such is less dangerous for the mires as is trampling by cattle. This results in a heavy disturbance of the vegetation cover: The peat moss disappears and leaves bare peat patches, *Trichophorum cespitosum* becomes the dominant species and the tussock growth form of the deergrass in combination with bare peat enforces surface erosion.*

(b) in the surrounding area:

None

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The whole site has been a nature reserve since the 4th October 1971. Due to the disturbances mentioned in point 18 a project was started in 2002 by the land owners, the Austrian Federal Forests (ÖBf AG), in co-operation with the WWF- Austria and the Institute of Ecology and Conservation Biology (IECB) of the Vienna University in order to rehabilitate the peat cut and to exclude cattle from the peatlands by fencing it out. The ÖBf AG pays for all actions and guarantees that there will be no peat extraction in future,

no drainage of the mires, no building of forestry roads affecting them, sustainable forest management in the marginal forests and, if possible, to keep the mires free of grazing and trampling. Certified forestry (Pan European Forest Certification PEFC 2001/02), hunting and pasturing in the area outside the mires will continue without any restrictions.

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.
At present other conservation measures are not necessary.

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.: *Permanent water level recorders, vegetation monitoring plots*

28. Current conservation education:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.: *An information booklet about the mire rehabilitation project is in print.*

29. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity. *Hiking (no information about frequency available)*

30. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

*Office of the Styrian Government, Fachabteilung 13C-Naturschutz,
Landesnaturschutzbehörde*

31. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

*DI Anton Högl
Österreichische Bundesforste AG (ÖBf AG)
Forstbetrieb Neuberg
Hauptstraße 13
A-8692 Neuberg/Mürz*

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Karrer, G. (1973): Beschreibung des Naturschutzgebietes Naßköhr und der angrenzenden Hinteralpe. Manuskript (Polykopie) zur Umweltschutz-Wanderausstellung „Selbst Handeln“ des ÖNB und des BmfGU, 61 pp.

Niklfeld, H. (1999): Rote Listen gefährdeter Pflanzen Österreichs. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 10: 292 pp., styria medien service, Graz.

Reimoser, L. (2003): Vegetationsökologische Grundlagen zur Ausweisung des Moorkomplexes Nassköhr in der Steiermark als Ramsar-Schutzgebiet. MSc. thesis, University of Vienna, 182 pp., 20 tables, 2 maps, Vienna.

Steiner, G.M. (1992): Österreichischer Moorschutzkatalog. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 1, 509 pp, Karte 1:500.000, styria medien service, Graz.

Supplementary Information on the Mires of Nassköhr

Table 2: Plant species list of the Nassköhr mires

Vascular and spore plants				
<i>Aconitum napellus</i>	3	<i>Agrostis canina</i>		<i>Agrostis capillaris</i>
<i>Agrostis stolonifera</i>		<i>Alchemilla vulgaris</i> agg.		<i>Allium schoenoprasum</i>
<i>Andromeda polifolia</i>	3	<i>Angelica sylvestris</i>		<i>Anthriscus nitida</i>
<i>Anthoxanthum odoratum</i>		<i>Astrantia major</i>		<i>Briza media</i>
<i>Calycocorsus stipitatus</i>		<i>Caltha palustris</i>		<i>Calluna vulgaris</i>
<i>Campanula scheuchzeri</i>		<i>Cardamine amara</i>		<i>Cardamine pratensis</i>
<i>Cardamine dentata</i>	3	<i>Carex canescens</i>		<i>Carex capillaris</i>
<i>Carex davalliana</i>		<i>Carex dioica</i>	3	<i>Carex echinata</i>
<i>Carex ferruginea</i>		<i>Carex flacca</i>		<i>Carex flava</i>
<i>Carex hostiana</i>	3	<i>Carex lasiocarpa</i>	2	<i>Carex lepidocarpa</i>
<i>Carex limosa</i>	3	<i>Carex nigra</i>		<i>Carex pallescens</i>
<i>Carex panicea</i>		<i>Carex paniculata</i>		<i>Carex pauciflora</i>
<i>Carex pilulifera</i>		<i>Carex pulicaris</i>	2	<i>Carex punctata</i>
<i>Carex rostrata</i>		<i>Carex vesicaria</i>	3	<i>Chaerophyllum hirsutum</i>
<i>Chrysosplenium alternifolium</i>		<i>Cirsium oleraceum</i>		<i>Cirsium palustre</i>
<i>Crepis paludosa</i>		<i>Dactylorhiza incarnata</i>	2	<i>Dactylorhiza maculata</i>
<i>Dactylorhiza majalis</i>		<i>Dactylorhiza traunsteineri</i>	2	<i>Deschampsia cespitosa</i>
<i>Dianthus superbus</i>	2	<i>Drosera x_obovata</i>	2	<i>Drosera rotundifolia</i>
<i>Empetrum nigrum</i>		<i>Epilobium palustre</i>		<i>Epipactis palustris</i>
<i>Equisetum fluviatile</i>		<i>Equisetum palustre</i>		<i>Equisetum sylvaticum</i>
<i>Eriophorum angustifolium</i>		<i>Eriophorum latifolium</i>		<i>Eriophorum vaginatum</i>
<i>Euphrasia officinalis)</i>		<i>Festuca pratensis</i>		<i>Festuca pulchella</i>
<i>Festuca rubra</i>		<i>Filipendula ulmaria</i>		<i>Galium mollugo</i>
<i>Galium palustre</i>		<i>Galium uliginosum</i>		<i>Gentiana pannonica</i>
<i>Geum montanum</i>		<i>Glechoma hederacea</i>		<i>Hieracium pilosum</i>
<i>Homogyne alpina</i>		<i>Hypericum maculatum</i>		<i>Juncus alpinoarticulatus</i>
<i>Juncus articulatus</i>		<i>Juncus effusus</i>		<i>Juncus filiformis</i>
<i>Knautia maxima</i>		<i>Lathyrus pratensis</i>		<i>Leontodon hispidus</i>
<i>Linum catharticum</i>		<i>Lotus pedunculatus</i>		<i>Luzula alpinopilosa</i>
<i>Luzula campestris</i>		<i>Luzula multiflora</i>		<i>Luzula sylvatica</i>
<i>Lychnis flos-cuculi</i>		<i>Lycopodium annotinum</i>		<i>Lycopodiella inundata</i>
<i>Lysimachia nemorum</i>		<i>Melampyrum pratense</i>		<i>Mentha longifolia</i>

<i>Menyanthes trifoliata</i>		<i>Molinia caerulea</i>		<i>Myosotis palustris</i> agg.	
<i>Nardus stricta</i>		<i>Parnassia palustris</i>		<i>Persicaria bistorta</i>	
<i>Phleum pratense</i>		<i>Phragmites australis</i>		<i>Picea abies</i>	
<i>Phyteuma orbiculare</i>		<i>Pinguicula alpina</i>		<i>Pinus mugo</i>	
<i>Poa pratensis</i>		<i>Potentilla erecta</i>		<i>Prunella vulgaris</i>	
<i>Primula elatior</i>		<i>Ranunculus aconitifolius</i>		<i>Ranunculus acris</i>	
<i>Ranunculus platanifolius</i>		<i>Ranunculus reptans</i>		<i>Rhinanthus minor</i>	
<i>Rumex acetosa</i>		<i>Rumex acetosella</i>		<i>Salix repens</i> ssp. <i>repens</i>	3
<i>Salix repens</i> ssp. <i>rosmarinifolia</i>	3	<i>Scheuchzeria palustris</i>	2	<i>Scirpus sylvaticus</i>	
<i>Senecio cordatus</i>		<i>Senecio subalpinus</i>		<i>Soldanella alpina</i>	
<i>Sorbus aucuparia</i>		<i>Swertia perennis</i>		<i>Tofieldia calyculata</i>	
<i>Trichophorum alpinum</i>		<i>Trichophorum cespitosum</i>		<i>Trifolium pratense</i>	
<i>Trifolium repens</i>		<i>Trollius europaeus</i>		<i>Urtica dioica</i>	
<i>Vaccinium microcarpum</i>	2	<i>Vaccinium myrtillus</i>		<i>Vaccinium oxycoccus</i>	
<i>Vaccinium uliginosum</i>		<i>Vaccinium vitis-idaea</i>		<i>Valeriana dioica</i>	
<i>Valeriana officinalis</i> agg.		<i>Veratrum album</i>		<i>Veronica beccabunga</i>	
<i>Viola biflora</i>		<i>Viola palustris</i>			

Mosses and Liverworts

<i>Atrichum undulatum</i>		<i>Aulacomnium palustre</i>		<i>Barbilophozia lycopodioides</i>	
<i>Bazzania trilobata</i>		<i>Brachythecium rivulare</i>		<i>Bryum pseudotriquetrum</i>	3
<i>Bryum schleicheri</i>		<i>Calliargon cordifolium</i>	3	<i>Calliargon giganteum</i>	3
<i>Calliargon stramineum</i>		<i>Calliargonella cuspidata</i>		<i>Calypogeia azurea</i>	
<i>Calypogeia muelleriana</i>		<i>Campylium polygamum</i>	2	<i>Campylium stellatum</i>	
<i>Cephalozia connivens</i>		<i>Chiloscyphus polyanthos</i>		<i>Cinclidium stygium</i>	2
<i>Cladopodiella fluitans</i>		<i>Climacium dendroides</i>		<i>Conocephalum conicum</i>	
<i>Cratoneuron decipiens</i>		<i>Cratoneuron filicinum</i>		<i>Ctenidium molluscum</i>	
<i>Dicranella heteromalla</i>		<i>Dicranodontium denudatum</i>	3	<i>Dicranum bonjeanii</i>	3
<i>Dicranum fuscescens</i>		<i>Dicranum polysetum</i>		<i>Dicranum scoparium</i>	
<i>Dicranum undulatum</i>		<i>Drepanocladus exannulatus</i>		<i>Drepanocladus fluitans</i>	3
<i>Drepanocladus revolvens</i>	3	<i>Drepanocladus</i> sp		<i>Drepanocladus vernicosus</i>	2
<i>Eurhynchium striatum</i>		<i>Fissidens adianthoides</i>		<i>Fissidens osmundioides</i>	
<i>Gymnocolea inflata</i>		<i>Homalothecium nitens</i>	3	<i>Hylocomium splendens</i>	
<i>Hypnum lindbergii</i>		<i>Lophocolea bidentata</i>		<i>Lophozia ventricosa</i>	
<i>Lophozia wenzelii</i>		<i>Mnium hornum</i>		<i>Mnium marginatum</i>	
<i>Mnium spinosum</i>		<i>Mylia anomala</i>		<i>Odontoschisma denudatum</i>	

<i>Paludella squarrosa</i>	2	<i>Paraleucobryum longifolium</i>	<i>Pellia endiviifolia</i>	
<i>Philonotis fontana</i>		<i>Plagiochila sp.</i>	<i>Plagiomnium affine</i>	
<i>Plagiomnium elatum</i>	3	<i>Plagiomnium undulatum</i>	<i>Plagiothecium succulentum</i>	3
<i>Pleurozium schreberi</i>		<i>Pohlia nutans</i>	<i>Polytrichum commune</i>	
<i>Polytrichum formosum</i>		<i>Polytrichum longisetum</i>	<i>Polytrichum strictum</i>	
<i>Ptilium crista-castrensis</i>		<i>Rhizomnium pseudopunctatum</i>	3 <i>Rhizomnium punctatum</i>	
<i>Rhytidiadelphus loreus</i>		<i>Rhytidiadelphus squarrosus</i>	<i>Riccardia pinquis</i>	
<i>Scapania irrigua</i>		<i>Scapania nemorea</i>	<i>Scleropodium purum</i>	
<i>Scorpidium scorpioides</i>	2	<i>Sphagnum angustifolium</i>	<i>Sphagnum brevifolium</i>	4
<i>Sphagnum capillifolium</i>		<i>Sphagnum contortum</i>	2 <i>Sphagnum cuspidatum</i>	3
<i>Sphagnum fallax</i>	3	<i>Sphagnum fuscum</i>	3 <i>Sphagnum girgensohnii</i>	
<i>Sphagnum inundatum</i>		<i>Sphagnum magellanicum</i>	<i>Sphagnum majus</i>	3
<i>Sphagnum palustre</i>		<i>Sphagnum papillosum</i>	3 <i>Sphagnum russowii</i>	
<i>Sphagnum squarrosus</i>		<i>Sphagnum subnitens</i>	2 <i>Sphagnum subsecundum</i>	3
<i>Sphagnum teres</i>	3	<i>Sphagnum warnstorffii</i>	3 <i>Splachnum ampullaceum</i>	2
<i>Thuidium delicatulum</i>		<i>Thuidium philibertii</i>	<i>Tortella tortuosa</i>	

The number after the name gives the degree of endangerment from the Red Data Book (Niklfeld 1999):
1 = endangered to become extinct, 2 = highly endangered, 3 = endangered, 4 = potentially endangered

Table 3: Birds observed at Nassköhr by Schiefsteiner (in Karrer 1973)

	Ciconiiformes	
Black Stork	<i>Ciconia nigra</i>	s/rB
	Anseriformes	
Mallard	<i>Anas platyrhynchos</i>	B
Goosander	<i>Mergus merganser</i>	D/W
	Falconiformes	
Goshawk	<i>Accipiter gentilis</i>	B
Sparrowhawk	<i>Accipiter nisus</i>	B
Golden Eagle	<i>Aquila chrysaetos</i>	s/rB
Buzzard	<i>Buteo buteo</i>	B
Peregrine	<i>Falco peregrinus</i>	s/IB
Kestrel	<i>Falco tinnunculus</i>	B
	Galliformes	
Hazel Grouse	<i>Bonasa bonasia</i>	rB
Ptarmigan	<i>Lagopus mutus</i>	rB
Black Grouse	<i>Lyrurus tetrix</i>	rB
Capercaillie	<i>Tetrao urogallus</i>	rB
	Charadriiformes	

Woodcock	<i>Scolopax rusticola</i>	IB
Green Sandpiper	<i>Tringa ochropus</i>	ss/aB
Lapwing	<i>Vanellus vanellus</i>	rB
	Cuculiformes	
Cuckoo	<i>Cuculus canorus</i>	B
	Strigiformes	
Tengmalm's Owl	<i>Aegolius funereus</i>	rB
Eagle Owl	<i>Bubo bubo</i>	rB
Pygmy Owl	<i>Glaucidium passerinum</i>	rB
Tawny Owl	<i>Strix aluco</i>	B
	Apodiformes	
Swift	<i>Apus apus</i>	B
	Piciformes	
Black Woodpecker	<i>Dryocopus martius</i>	B
Grey-headed Woodpecker	<i>Picus canus</i>	B
	Passeriformes	
Long-tailed Tit	<i>Aegithalos caudatus</i>	B
Water Pipit	<i>Anthus spinoletta</i>	rB
Linnet	<i>Carduelis cannabina</i>	rB
Redpoll	<i>Carduelis flammea</i>	rB
Siskin	<i>Carduelis spinus</i>	rB
Treecreeper	<i>Certhia familiaris</i>	B
Chaffinch	<i>Fringilla coelebs</i>	B
Brambling	<i>Fringilla montifringilla</i>	aB D/W
Swallow	<i>Hirundo rustica</i>	B
Common Crossbill	<i>Loxia curvirostra</i>	rB
Snow Finch	<i>Montifringilla nivalis</i>	rB
White Wagtail	<i>Motacilla alba</i>	B
Grey Wagtail	<i>Motacilla cinerea</i>	B
Nutcracker	<i>Nucifraga caryocatactes</i>	rB
Wheatear	<i>Oenanthe oenanthe</i>	rB
Coal Tit	<i>Parus ater</i>	B
Crested Tit	<i>Parus cristatus</i>	B
Willow Tit	<i>Parus montanus</i>	B
Black Redstart	<i>Phoenicurus ochruros</i>	B
Chiffchaff	<i>Phylloscopus collybita</i>	B
Alpine Accentor	<i>Prunella collaris</i>	rB
Hedge Sparrow (Dunnock)	<i>Prunella modularis</i>	B
Alpine Chough	<i>Pyrrhonorax graculus</i>	rB
Bullfinch	<i>Pyrrhula pyrrhula</i>	B
Goldcrest	<i>Regulus regulus</i>	B

Garden Warbler	<i>Sylvia borin</i>	B
Wallcreeper	<i>Trichodroma muraria</i>	rB
Wren	<i>Troglodytes troglodytes</i>	B
Ring Ouzel	<i>Turdus torquatus</i>	rB
Mistle Thrush	<i>Turdus viscivorus</i>	B

B breeding bird

rB regional breeding bird

lB local breeding bird

aB exceptional breeding bird

s rare - total population in Austria about or less than 100 breeding pairs (non monogamic species: about 200 individuals)

ss very rare - total population in Austria about or less than 10 breeding pairs

D bird of passage

W winter guest

Table 4: Mammals, Amphibians and Reptiles observed at the Nassköhr after Karrer (1973)

Mammals			
Red Deer	<i>Cervus elaphus</i>	Mole	<i>Talpa europaea</i>
Roe Deer	<i>Capreolus capreolus</i>	Small Horseshoe Bat	<i>Rhinolophus hipposideros</i>
Chamois	<i>Rupicapra rupicapra</i>	Amphibians	
Fox	<i>Vulpes vulpes</i>	Common Frog	<i>Rana temporaria</i>
Stoat	<i>Mustela erminea</i>	Moor Frog	<i>Rana arvalis</i>
Marmot	<i>Marmota marmota</i>	Common Tree Frog	<i>Hyla arborea</i>
Hare	<i>Lepus europaeus</i>	Common Toad	<i>Bufo bufo</i>
Blue Hare	<i>Lepus timidus</i>	Alpine Newt	<i>Triturus alpestris</i>
Rabbit	<i>Oryctolagus cuniculus</i>	Warty Newt	<i>Triturus carnifex</i>
Red Squirrel	<i>Sciurus vulgaris</i>	Alpine Salamander	<i>Salamandra atra</i>
Common Vole	<i>Microtus arvalis</i>	Reptiles	
House Mouse	<i>Mus musculus</i>	Common Lizard	<i>Lacerta vivipara</i>
Wood Mouse	<i>Apodemus sylvaticus</i>	Blind Worm	<i>Anguis fragilis</i>
Yellow-necked Mouse	<i>Apodemus flavicollis</i>	Grass Snake	<i>Natrix natrix</i>
White-toothed Srew	<i>Crocidura leucodon</i>	Adder	<i>Vipera berus</i>