

October 2005

Annual Report 2005
on the protected landscape area and nature reserve
"Wollmatinger Ried - Untersee - Gnadensee" (Germany)

Period under review:	October 1 2004 to September 30 2005
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I. GENERAL INFORMATION

1. Natural heritage – conservation status

1.1 Environment

The average temperature during the year under review was 10.0 °C, making it 0.8 °C above the long-term mean. Particularly warm months were October 2004 and April, May, June and September 2005. Only February 2005 was colder by 1.7 °C than the reference value at -0.4 °C.

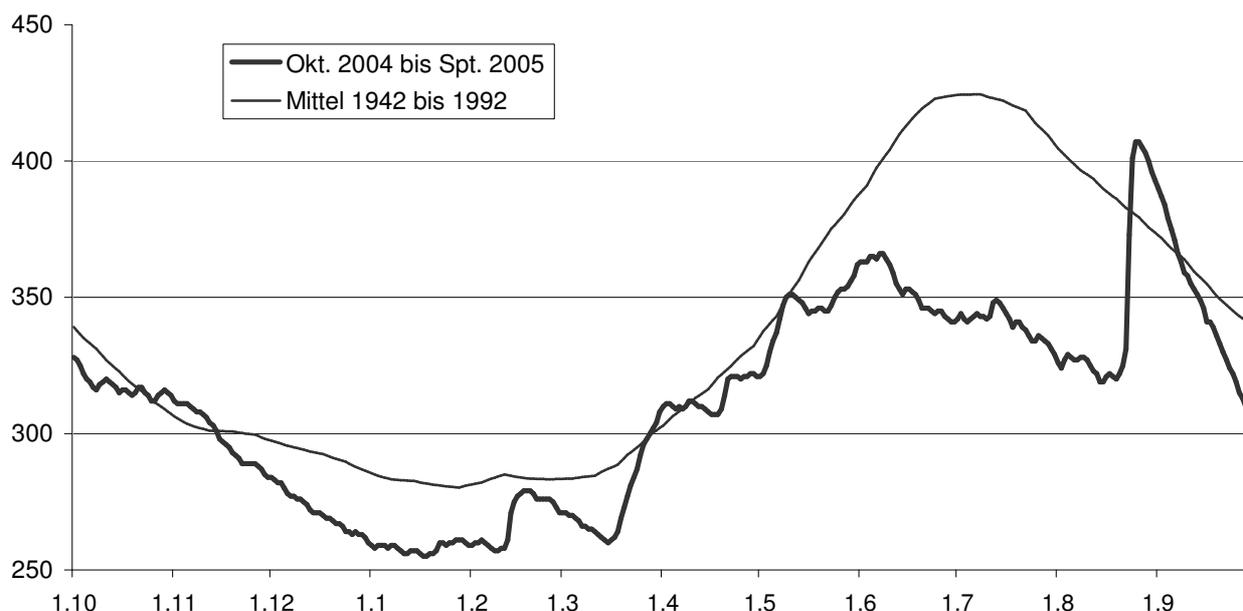


Fig. 1: Lake Constance water level (Konstanz harbour water mark) from October 1, 2004 to September 30, 2005 (thick line) and mean values from 1943 to 1992 (thin line)

As in the two previous years, the year under review was substantially drier than the long-term mean of 849 mm, with an annual rainfall totalling 763 mm. The months November 2004 and January, June and July 2005 were particularly dry, while October 2004 and April 2005 had an unusually high rainfall. The level of water in Lake Constance lay generally only slightly below that of the long-term mean during October 2004 to April 2005 (cf. Fig. 1). Instead of the normal rise by the end of June, the level dropped due to the protected dry period over the entire catchment area after reaching a relative high of 366 cm on June 7, 2005. to 319 cm on August 14, 2005. Strong rainfall in the Alp region brought about a rapid rise in the water level to this year's high of 407 cm on August 25, 2005. The water level then dropped quickly down to 307 cm by September 30, 2005.

1.2. Flora and vegetation

The population development of rare plant species on the red list

Despite the on-going dry conditions for the third year in succession, the flower development of most defining species of the Wollmatinger Ried reserve has been surprisingly positive:

Most types of moor grass meadows (*Molinion*) demonstrated a high bloom density: The **Siberian iris** (*Iris sibirica*) for instance exhibited its highest ever recorded bloom density with 1,100 specimens on both sample areas monitored since 1998. With 1,508 inflorescences (04=1.673), the **marsh gladioli** (*Gladiolus palustris*) demonstrated a slight reduction in stocks for the first time since the floods of 1999. The **marsh gentian** (*Gentiana pneumonanthe*), monitored on only selected sample areas, demonstrated an average result with 2,358 (04=3,334) inflorescences. There was an above average population of the *Thalictrum simplex ssp. galioides* with 5,097 (04=3,941). The **mouse garlic** (*Allium angulosum*) reached the highest ever recorded bloom density with of 61,000 (04=28,244). The *allium suaveolens* achieved its best result since 1999 on the three regularly monitored sample areas with 462 (04=420) inflorescences – although this result still remains below 50% of the highest value before the flood.

Most alkaline fen species (*Caricion davallianae*) sustained a slight drop in population, although the stocks of the most important species remain above average. With 39,200 specimens, the **bird's eye primula** (*Primula farinosa*) lay substantially below its maximum value (03=58,021). Stocks of **summer ladies tresses** (*Spiranthes aestivalis*), and the **bladder gentian** (*Gentiana utriculosa*) were below their long-term mean value with just 150 and 1,540 specimens respectively. After the disappearance of the **lax-flowered marsh orchid** (*Orchis palustris*) in the previous year, during the year under review two specimens appeared again in one of the previous locations. Two new growth sites were also found with a total of 11 specimens.

The species common to the mesobromion grasslands developed positively in line with expectation. The **burn-tip orchid** (*Orchis ustulata*) and **globe daisy** (*Globularia punctata*) substantially exceeded their previous maximum values with 1,605 specimens (95=969) and 133 specimens (04=85) respectively. A specimen of the **late spider orchid** (*Ophrys holoserica*) was verified for the very first time. For the first time since the flood of 1999, the **green-winged orchid** (*Orchis morio*) recovered its previous stock size with 57 blooms (since 00=1-6). With 13 blooms, the **bug orchid** (*Orchis coriophora*) achieved its best flowering result of the past nine years (95=22, 96-04=0-8).

Low water mapping

As a result of the extremely low summer water levels from 2003 to 2005, the mudflat areas located to the lake side of the reed beds which are normally free of vegetation saw a colonization by semi-aquatic and terrestrial vascular plants. By order of the Freiburg Government Headquarters in the late winter of 2004, and also in the late winter of 2004 by order of the University of Hohenheim, the succession activity was recorded. The average width of the new strip of vegetation is 10 metres, and the total newly populated area is 9.6 hectares. 70 varieties were recorded. The majority of these are reed types and marsh plants which normally populate special locations with little competition. Particularly interesting to future development will be the extent to which the **willow plants** (*Salix spec.*) which have become established over the past three years become a permanent feature and may possibly grow to form a new lowland forest belt between the reed beds and the shallow water zone.

Beach meadow by Irene Strang

The Bibershof beach meadows are in good condition. The populations of **shore weed** (*Littorella uniflora*) and **creeping spearwort** (*Ranunculus reptans*) have grown in size over the previous year. A few specimens of the **Lake Constance forget-me-not** (*Myosotis rehsteineri*) have repopulated the area, while regrettably the last remaining **Rhenanian hair-grass** plant (*Deschampsia rhenana*) disappeared. Because of the drought years, competitive species such as sedge and reed canary grass have succeeded in multiplying. As a result, at the beginning of April 2005, the beach meadow areas and the adjacent vegetation were mown and cleared. In the middle of August, additional pruning was carried out, primarily to force back the reeds encroaching at the edges. The vigorous spread of young willows was successfully slowed down by mowing and weeding.

Occurrence of neophytes

Due to the ongoing drought conditions, stocks of **Canada golden rod** (*Solidago canadensis*) and **late golden rod** (*Solidago gigantea*) expanded vigorously once again. Many of the known occurrences increased, and several new occurrences were discovered also in central litter meadow areas. Thanks to intensive control measures, occurrences of the **red touch-me-not** (*Impatiens glandulifera*) increased only marginally. Occurrences of the **Jerusalem artichoke** (*Helianthus tuberosus*) to the west of the Reichenauer beach fell slightly.

1.3 Fauna

Birds (Aves)

Once again the nature reserve with the adjacent shallow water zone was shown to hold a leading position as a European inland migration stopover in autumn and a winter shelter for water fowl. Overall populations fluctuated over the monthly counts from September to February between 33,000 and 55,000 individuals. The following species were particularly prevalent: 4,900 **gadwalls** (*Anas strepera*) in November, 6,800 **green-winged teals** (*Anas crecca*) in December, 1,300 **pintail ducks** (*Anas acuta*) in December, 5,100 **red-crested pochards** (*Netta rufina*) in December and 21,000 **common pochards** (*Aythya ferina*) in November. It must be urgently emphasized that the unusual attraction of the nature reserve can only be secured in the long term if the adjacent flat water areas also retain adequate conservation status as a water fowl habitat.

Regrettably, breeding activity among the water fowl was substantially impaired for the third year in sequence by the low water level of the lake. There were large numbers of pairs seeking to breed which were unable to settle in their breeding grounds in the reed zone. The negative impact of this development went as far as a total failure to breed on the part of the **black necked grebes** (*Podiceps nigricollis*). The **red-crested pochard** (*Netta rufina*) also demonstrated minimal breeding success with just 6 families (17 young), as did the **great crested grebe** (*Podiceps cristatus*) with 21 families (44 young). A count of the bird territories in the reed zone indicated a population of **great reed warbler** (*Acrocephalus arundinaceus*) in only 14 territories. Only one territory appeared to be populated by the **little bittern** (*Ixobrychus minutus*). By contrast, birds breeding in the silt areas which are less dependent upon the water level were represented in satisfactory numbers. These included the **Savi's warbler** (*Locustella luscinioides*) with 29 territories, the **grasshopper warbler** (*Locustella naevia*) with 23 territories and the **bearded tit** (*Panurus biarmicus*) with 11 territories. At least 4 breeding territories were recorded for the **stonechat** (*Saxicola torquata*). The breeding colony of the **common tern** (*Sterna hirundo*) was initially well frequented with at least 25 breeding pairs, but for reasons unknown to us was abandoned from mid June.

Dragonflies (Odonata) by Achim Lehmann

Odonata mapping provided evidence of 30 different dragonfly species. Particularly noticeable was the high number of **common blue damselfly** (*Enallagma cyathigerum*) individuals recorded in the litter meadows. The occurrence of the **Siberian winter damselfly** (*Sympecma paedisca* (RL-BW 1; FFH IV)) was confirmed in several investigation areas, whereby colonies of this species only ever occurred with very small numbers of individuals. The most frequently recorded species in the wetland areas were the **azure damselfly** (*Coenagrion puella*), the **four-spotted chaser** (*Libellula quadrimaculata*)

and the **brilliant emerald** (*Somatochlora flavomaculata* (RL-BW 3)). Both in wetland areas and on the litter meadows, five types of **dragonflies** (*Sympetrum sanguineum*, *Sympetrum vulgatum*, *Sympetrum striolatum*, *Sympetrum fonscolombii* (RL-BW 1), *Sympetrum flaveolum* (RL-BW 1)) were recorded. At the meadow pond, alongside a generally high species diversity, the widespread occurrence of the **southern emerald damselfly** (*Lestes barbarus* (RL-BW 1)) was particularly noticeable. Another special occurrence was that a **slender club-tailed dragonfly** (*Gomphus simillimus* (RL-BW gR)) was recorded for the first time for over 20 years.

Butterflies (*Lepidoptera*) by Oliver Konopik

The **scarce large blue** (*Maculinea teleius*) prevalent on in partial areas prior to the flood of 1999 was no longer in evidence during the subsequent years. However, during the year under review a small, apparently expansive population was recorded in the Frohnried area. A sighting of the **dusky large blue** (*M. nausithous*) was also verified in 2005 in Frohnried. Unlike its sister species, however, the *M. nausithous* was not restricted to the most Northerly parts of the nature reserve, but occurred as far south as the Reichenau Dam. The site of the former main populations of both species in the “Langen Zügen” areas still remain deserted. An investigation of host ants revealed these to be present also only in the areas populated by the *Maculinea*, while no trace of the host ants can be found in the “Langen Zügen” area.

The **alcon blue** (*M. alcon*) uses exclusively the **marsh gentian** (*Gentiana pneumonanthe*) to lay its eggs in the Wollmatinger Ried area. This makes this population one of the few occurrences of this blue species on the marsh gentian in Baden-Württemberg. This mini-population, which was only discovered a few years ago, was confirmed this year both by the discovery both of eggs clutches and of a moth.

2. Cultural heritage and socioeconomic context

No changes

3. Education and scientific interest

3.1 Visitors – Information policy

3.1.2 Frequentation of visitors and behaviour

During the period under review, 149 guided tours took place in the reservation, attended by 1,998 participants. With a total of 5 instructive boat trips, a large number of passengers also received instruction in the natural history of the area. 8 solar boat trips allowed 123 visitors to appreciate the beauty of the area and need for its protection. The NABU visitor's centre was pleased to welcome 1,512 guests.

On land, unauthorized trespassers were only discovered very seldom in the prohibited area. After a brief explanation, in most cases they left the area without delay. Due to the repeated low water levels, disturbances caused by water sports enthusiasts illegally entering the low water area were kept very much in check.

3.1.3 Special visits

On July 18, 2005, Baden-Württemberg's new Minister for Rural Areas with responsibility for nature conservation, Peter Hauk, visited the NABU Nature Conservation Centre Wollmatinger Ried to find about the work being performed here.

3.2 Scientific research

3.2.1 Current and completed research

Plant counts were performed by employees of the NABU Centre Wollmatinger Ried (cf. 1.2).

M. Dienst, E. Klein and Dr. W. Ostendorp recorded the succession status on the dried reed beds as a result of the on-going drought (cf. 1.2).

A survey of avifauna was performed by employees of the NABU Centre Wollmatinger Ried and the Lake Constance Ornithological Bird Group, which involved regular counts of waterfowl populations and mapping of breeding birds (cf. 1.3).

Entomological studies were performed by M. Herrmann (aculeates), O. Konopik (butterflies), A. Lehmann (dragonflies) and H. Martz (ants).

3.2.2 Scientific publications

- HERRMANN, MIKE (2004): „Bemerkenswerte Pflanzenbelege im Leiner-Herbar des Bodensee-Naturmuseum Konstanz“ (*Remarkable plant specimens in the Leiner-Herbar of the Lake Constance Natural History Museum*), Ber. Bot. Arbeitsgem. Südwestdeutschland, Beiheft 1, 185-191.
- HUMMEL, STEFFEN (2005): „Das Brandknabenkraut (Orchis ustulata L. 17539 – Die Orchidee des Jahres 2005 in Baden-Württemberg“ (*The Burnt orchid (Orchis ustulata L. 17539 – Orchid of the year 2005 in Baden-Württemberg*), Journal Europäischer Orchideen 37 (1) 47-88
- SCHUSTER, SIEGFRIED (2004) „Die Einnischung einer neuen Vogelart am Bodensee: die Weisskopfmöwe *Larus cachinnans*“ (*Settlement of a new bird species on Lake Constance: the Caspian gull Larus cachinnans*), Der Ornithologische Beobachter 101, 115-124.
- WOITHON, ANNETTE, K. SCHMIEDER (2004): „Bruthabitatmodellierung für den Drosselrohrsänger (*Acrocephalus arundinaceus* L.) als Bestandteil eines integrativen Managementsystems für Seeufer“ (*Breeding habitat modelling for the Great reed warbler (Acrocephalus arundinaceus L.) as part of an integrative management system for lake shores*), Limnologica 34, 132-139.

4. Site description, legal status

No change during the period under review

5. Site management

5.1 Improvements made

5.1.1 Ecological action

The landscape maintenance measures as outlined in the maintenance plan were continued as in past years.

5.1.2. Species protection

Over a small area, soil sods and individual plant seeds were taken from different moor grass meadows and bog rush beds, which will be used to establish permanent cultures including a small viewing basin in the Botanic Garden of the University of Konstanz. In particular, this measure is intended to secure the autochthon gene material of the **bug orchid** (*Orchis coriophora*), **marsh gladioli** (*Orchis palustris*), **globe daisy** (*Globularia punctata*) and **bladder gentian** (*Gentiana utriculosa*).

5.1.4 Field equipment

Thanks to funding from the cities of Kreuzlingen and Konstanz, we were able to renovate the floating conservation and observation station “Netta”, which is used for monitoring the nature reserve boundaries on the water side, as a nature conservation information station for water sports enthusiasts and for ornithological surveys.

5.2 Site management

5.2.4 Infringement of regulations and damage: Legal action

Disturbances due to air traffic once again caused consternation among the bird population. In the spring of 2005 alone, a total of five serious disturbances were logged. Due to the continued unsatisfactory legal provision in place, only it was only possible to prosecute one of these cases.

For over a year already, a hunting dog has been causing a severe disturbance in the southern part of the nature reserve. Although the owner has since been ascertained by NABU and the data handed over to the police, to date it has not been possible to secure the dog.

II. INFLUENCE OF THE AWARD OF THE EUROPEAN DIPLOMA OF PROTECTED AREAS

In the dispute surrounding the new routing of the B 33 and additions to the network, the displacement of the illegal car park near Hegne, but also in obtaining funding to implement various nature conservation projects, the European Diploma has proved a highly valuable arguing point in defending the interests of nature conservation.

III. PROGRESS IN COMPLIANCE WITH EUROPEAN COUNCIL RECOMMENDATIONS

Towards implementation of the study zone proposed by the European Council in the flow area of the "Schläuche", the NABU Institute of Landscape Ecology and Nature Conservation (ILN) is currently working on a project proposal for submission to the State of Baden-Württemberg.

Monitoring measures will be restricted to the studies carried out by NABU. A new aspect will be the recording of succession stages on the dried-out reed beds initiated by NABU and requested by the State of Baden-Württemberg in 2004 (cf. 1.2).

The plans submitted on December 14, 2004 within the framework of the road planning procedure relating to the new B 33 involve cutting into the existing conservation area from the start of the Kindlebild junction in the East as far as the B 33 bridge over the railway line. This is in contradiction to the previous statements of the Baden-Württemberg road building authorities and contravenes the recommendations of the European Council. The Higher Nature Conservation Agency in the Government Headquarters of Freiburg and the NABU have filed a decisive objection to this proposal. Plans to build a westerly tangent road still involve making serious inroads into the buffer zones of the nature reserve, some of which are registered as FFH areas.

As a result of sustained endeavours by the Higher Nature Conservation Agency to influence the responsible Air Traffic Control Authorities, the Wollmatinger Ried is currently being entered in the official aviation map and the Constance Airport map. It has not yet been possible to achieve the technically necessary inclusion of the nature reserve in the official ICAO aviation map, as a new edition of the map effective on a nationwide basis is currently in the consultation stage.

In its meeting of September 27, 2004, the Allensbach District Council agreed a compromise as regards the unauthorized car park positioned within the Wollmatinger Ried Nature Reserve near the bathing and camp site facility of Hegne. According to this compromise, by the end of 2006 0.7 hectares of land formerly used for parking will be renaturalized, while 0.08 hectares may continue to be used permanently on an authorized basis, as this residual parking area is directly adjacent to the campsite and is thus vital to its continued survival.

In addition, a narrow parking strip will be available to camp site users on the west side of the access road outside of the Wollmatinger Ried. Any additional necessary car parking spaces must be created to the north of the railway line. This solution finally provides a solution to this long-standing conflict which is acceptable from the nature conservation standpoint.

The future of the Wollmatinger Ried Nature Conservation Centre in terms of its current site remains unclear, as the rental agreement for the premises currently used is due to expire, and no new premises have yet been found.

The Freiburg Government Headquarters have commissioned NABU to elaborate a system of informative signage for the Nature Reserve which is due to be completed by the end of 2006.

To date, no action has been taken to extend the nature reserve as far as the national border. It would be expedient to carry out this expansion on the water boundary at the same time or at least within the same framework as the Nature Reserve expansion planned to take place with the construction of the new B 33 to the west of the sewage works. The areas on the water side are part of the FFH territory 8220301 and of the EU bird sanctuary 8220401.