QR codes from *ornitho.de*

... know what flies here!

In many places, observation towers and huts invite you to observe nature without disturbance. But not only experienced experts use such facilities. Nature lovers with little knowledge are usually offered information about nature "right under their noses" on information boards whose contents are unchanged. Current observations are - if at all - often only offered in the form of printed observation lists in showcases, the updating of which usually involves more effort. Wouldn't it be great to provide visitors with daily updated observations without the need for maintenance? The QR codes of *ornitho.de* offer exactly this service!

How does it work?

Since its launch in autumn 2011, more than 23,000 registered persons have collected over 30 million bird observations from all over Germany via the internet portal www.ornitho.de (as of the beginning of 2018). With direct access to this rich dataset, the DDA has created the prerequisites for obtaining fast and up-to-date information on birdlife in the region.

Fig.1: Example of the use of *ornitho QR codes* in the Schleswig-Holstein Wadden Sea National Park.

place to get information. The only thing needed is a QR code presented in a prominent place (Fig. 1).

Nowadays, almost everyone has a mobile phone or tablet with them. Most of these devices have a built-in camera and software that makes it child's play to scan the contents of the QR codes (cf. fig. 2). One more click is all it takes: And *ornitho.*

Fig. 2: Scanning an *ornitho QR code*.

Fig. 3: Representation after retrieving a *ornitho QR codes*.

Fig. 4: Example of the display of advertisements when retrieving an *ornitho QR code*.

Fig. 6: Example of a *ornitho QR codes*. T r y it out directly with your smartphone!

The last observations reported from this area, including those entered only a few moments ago, are displayed (Fig. 3).

The *ornitho QR codes can be* integrated into new information boards or added to existing boards. They can also be installed on their own on posts or directly on observation facilities. Incidentally, QR codes are not very susceptible to vandalism: since the data in the QR code is protected by an error-correcting code, a loss of up to 30% of the code is tolerated, i.e. it can still be read even if it is either scanned from an unfavourable angle or has been damaged.
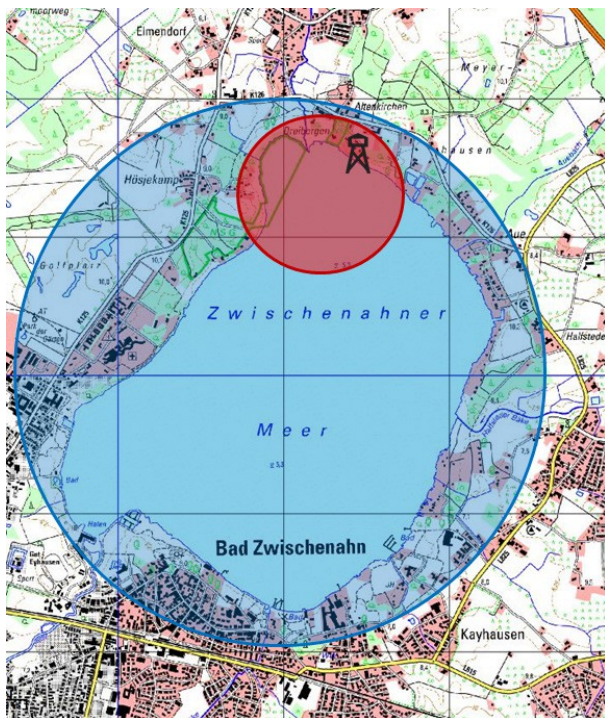

Fig. 5: Example for the possible selection of centre point and radius. For an observation tower in the north of the area, for example, either a QR code with retrieval of only the observations from the northern part of the watershed (red radius) or alternatively all observations from the area (blue radius) could be created. It is also conceivable to place several QR codes at one location to retrieve different information.

What exactly is being depicted?

* Bird observations in a radius of 1-5 km around a point that can be defined per QR code (independent of the location!)
* Bird observations from this area in the last 1-15 days
* A total of up to 200 observation reports (from which you can choose to display only rare species, the less frequent ones or all species)
* Display of an advertisement of a nationwide partner of the DDA during the call and before the presentation of the observations (see Fig. 4).
* Logos of *ornitho.de*, the DDA and the respective ornithological association with corresponding link (see Fig. 3).
* Optional:
  Logo of own institution/organisation with link

What has to be delivered in case of interest?

1. Name of the site (displayed at the top of the page ("Insel Neuwerk" in Fig. 3) and should identify the space from which observations are presented as clearly as possible; length of up to 25 characters ideal, max. 45).
2. Geographical coordinates of the centre point for the radius query (does not have to be identical with the location!; see fig. 5)
3. Desired radius of the radius query (1-5 km)
4. Desired time span (observations of the last 1-15 days)

This information can be changed later and adapted to the observation activity, for example.

We will be happy to advise you on how to adapt to the conditions on site. For this purpose, it is helpful if you provide us with a map showing the planned locations.

What is delivered?

You will receive individual QR codes, fitted into the corporate design of *ornitho.de* (cf. Fig. 6) as a printable PDF. The design, creation, installation and maintenance of signs, information boards, stickers etc. is carried out on site by yourself. However, we will be happy to advise you or to find a manufacturer for the signs.

Terms of use

- Each stationary QR code may only be used once. This means that the same QR code may not be printed 3 times and placed in three locations (e.g. outside and inside an observation hut). This has a very practical background: **only then is it possible to check the intensity of use of individual locations.**
- Advertisements from a nationwide partner of the DDA are displayed, which makes it possible for this service to be offered so inexpensively (see Fig. 4).
- Multiple use of a QR code (e.g. in flyers) must be agreed separately.
- The terms of use will be set out in a contractual agreement between you and us.

Additional hints

- The use of QR codes only works with mobile network coverage. A low bandwidth is sufficient, however, as the data transfer has been minimised.

What does a QR code cost?

The consultation and provision of the QR codes incurs costs and *ornitho.de* must be operated so that observations can also be displayed via the QR codes. Therefore, the QR codes cannot be provided free of charge. The following table shows the costs incurred. It distinguishes between costs for partners of *ornitho.de* (e.g. member associations of the DDA that support *ornitho.de*) and costs for partners of *ornitho.de* (e.g. member associations of the DDA that support *ornitho.de*),
e.g. in quality assurance via regional co-ordina- tions.
tors) and third parties. There are **no current or subsequent costs.**

For each QR code, a one-time adjustment of the parame- ters (name of the location, centre coordinates, radi- us, time span) is possible free of charge.

Tab. 1: Cost structure differentiated according to prices for partners of *ornitho.de* (left column) and third parties. The prices do not include the statutory value-added tax (currently 19 %).

(as of 12.04.2018)	1 to 10 codes		11 to 50 codes		51 to 100 codes[2]		Explanations
	Partner	Other	Partner	Other	Partner	Other	
Flat rate for advice and handling[1]	60 €	120 €	125 €	250 €	250 €	500 €	Prices for purchase of >100 codes according to individual agreement.
Creation and provision of each QR code	15 €	25 €	12 €	20 €	10 €	20 €	
Report on the use of individual QR codes for quality assurance and market research	30 € flat rate + 3 € per code						You will receive a tabular overview showing the exact number of calls per QR code (see "QR codes"). Fig. 7).

[1] The flat rates refer to the total number of QR codes per partner.
　Example: 10 QR codes are initially requested. For a partner of ornitho.de, a flat rate of 60 € + 10*15€ = 210 € is then incurred.
　Later, another 5 QR codes are requested (now 15 in total). For these, only 65 € (125-60 €) flat rate + 5*12 € = 125 € are then incurred.
　If a further 5 are requested (now 20 in total), the flat rate is not applicable, as this has already been paid via the first two orders, and there is only a charge of 5*12 € = 60 €.
[2] If you intend to apply more than 100 QR codes, we will be happy to make you an offer.