

RECREATION POTENTIAL OF AREAS OCCUPIED BY THE BIEDRUSKO MILITARY TRAINING GROUND

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Abstract. The military training ground in Biedrusko is located in the immediate vicinity of Poznań. The area of 6 thousand hectares, of considerable natural and cultural value, is extremely attractive for all kinds of sports, recreation and tourism activities. The general trend to exclude smaller military training grounds from military use suggests that it is advisable to determine the recreation potential of the Biedrusko military training ground. In the future it may facilitate development of detailed plans for the adaptation of the area and protection of its present-day value.

Key words: Biedrusko military training ground, military areas, displaced villages, recreation, special and qualified tourism

INTRODUCTION

The Biedrusko military training ground borders the northern limits of the city of Poznań. This area is characterized by landscape unique on a national scale, of exceptional natural and cultural value, which is connected with its rich history. Initially the area of the present-day military training ground belonged to the Cistercian nuns from Owińska, next a vast proportion was part of the extensive dominium of the Prussian family of the von Treskovs and from the early 20th century it has been constantly used as a military training ground. After the area was taken over by the military, the local population was displaced and the buildings of the villages and settlements were demolished. A varied military use of the military training ground in a portion of the area has caused strong renaturation processes influencing high natural value of the area. Despite the 110 years of military use relicts of agricultural and settlement cultural landscape are still visible, mainly in the form of the road network and characteristic systems of synanthropic vegetation. Richness of natural and cultural value suggests that it is advisable to undertake a comprehensive study on the potential use of this area as the recreation and tourism base for the developing Poznań agglomeration. It is

particularly important in view of the contemporary trends to change the type of use for military areas. Studies on the tourism development should be at the same time supplemented with a protection plan for the existing value, in order to minimize negative consequences of tourism pressure and counteract uncontrolled urbanization processes.

INTRODUCTORY INFORMATION

Natural value

Exclusion of the military training ground from intensive agricultural use resulted in the formation in the analyzed area of plant communities of high natural value, constituting shelter for many species of animals. An interesting landscape was created, dominated by natural elements of secondary origin, characterized by exceptional scenic value. Both its natural and scenic value have been acknowledged, in 1995 resulting in the establishment in the military training ground of the Biedrusko Protected Landscape Area and Special Protection Area Natura 2000. [Chruszczewski 2010]. The Biedrusko Special Protection Area Natura 2000, with the military training ground as its part, is characterized by richness and variety of different types of habitats, including the 18 types of habitats protected by the Habitat Directive [Int. 1]. The military training ground is a site for studies on flora and fauna, conducted by researchers from Poznań universities, e.g. the Poznań University of Life Sciences and the Adam Mickiewicz University [Walczak 2002, Konwerski and Sienkiewicz 2005, Borysiak and J. Brzeg A. 1994]. In the military training ground, among other things, such valuable habitats were found as a natural eutrophic lake, inland dunes with open swards with *Corynephorus* and *Agrostis*, varied wet moor grass meadows, inland acid oak forest, *Galio-Carpinetum* and *Tilio-Carpinetum* communities, oak-elm-ash and willow-poplar riparian forests, and thermophilic oak forests [Materiały Łopuchówko 2007]. The richness of habitats results in the occurrence of numerous protected and rare species of flora and fauna. In the Biedrusko military training ground there are 30 species of plants threatened in the Wielkopolska region, including 9 critically endangered nationwide [Int. 1]. Numerous habitats were found of rare animal species such as insects: the large cooper, *Osmoderma eremita*, marsh fritillary and the great capricorn beetle; amphibians such as the European fire-bellied toad and the great crested newt; birds such as the Eurasian bittern, turtle dove, hoopoe, western marsh harrier, crane, black woodpecker, red-backed shrike and the white-tailed eagle, as well as mammals: beavers and otters [Borysiak and Wylegała 2008]. All the above mentioned natural resources constitute an interesting source of observations for nature lovers (particularly bird watchers) and nature photographers. The natural value suggests the need to introduce an extensive program of nature education. This task is partly fulfilled by the Forest Education Centre in Łysy Młyn.

In the described area we may also find a diverse water system composed of a network of ditches, natural watercourses, lakes and water bodies of different sizes (Lake Glinnowieckie, Lake Czaica Duża, the Łysy Młyn reservoir), small water bodies in drainless hollows and old oxbow lakes located along the banks of the Warta [Borysiak and Wylęgała 2008]. The rich water system provides exceptional value from the point of view of land use for tourism and recreation. Even today anglers use the shores of Lake Glinnowieckie.

History of the Biedrusko military training ground

The settlement network of the area of Biedrusko comprised mostly villages and settlements originating from the Middle Ages [Pilarczyk and Rewers 1991]. Some settlements known from archive sources and cartographic materials disappeared by the end of the 19th century: Drogocin, Karczewko, Lubicz and Trzeciska [Pilarczyk 2001a and b]. For obvious reasons it would be difficult to search for their traces in landscape, but finding sites of former locations of villages would be an attraction for history lovers. An even greater attraction would be provided by a trail through villages and settlements, which existed up to the moment of the establishment of the military training ground. For the military needs 7 villages were displaced and demolished: Chojnica, Glinienka, Glinno, Knyszyn, Łagiewniki, Trzuskotowo and Tworkowo as well as small settlements: Czerwona Niwa, Janowo and Okolewo. In those places we may frequently observe remnants of the former spatial system (Trzuskotowo), heaps of debris and relicts of building development (Chojnica, Knyszyn, Trzuskotowo, Tworkowo), fragments of avenue plantings and old trees accompanying former homesteads (Chojnica, Łagiewniki, Glinno, Trzuskotowo). Moreover, among the historical monuments of the Suchy Las commune, which may attract common interest of tourists not being fans of special and qualified tourism, several objects are found in the military training ground: in Chojnica the church from the years 1531–1546, a bell tower from 1846, a cemetery and a chapel in the nearby forest; in Glinno a monument of the composer Wojciech Bogusławski, an early medieval fortification established and functioning between the 5th and 8th centuries, a tomb from the mid-19th century, in Łagiewniki a monument commemorating its inhabitants, Nazi victims from the period of WWII [Pilarczyk 2000]. Traces found in landscape, in which preservation and visualization may be promoted by controlled tourism, are evidence of the very long, rich history of the Biedrusko area. Chojnica and Glinno starting from the early Middle Ages were locations of small fortified towns [Chruszczewski 2010]. In the 14th century Trzuskotowo and Łagiewniki were founded on the German charter. One of the above mentioned villages, Trzuskotowo, up to the end of the 19th century preserved the oval shaped arrangement, typical of medieval villages founded on the German charter and visible on archival maps.



Fig. 1. Archival photographs: A – a view of Trzuskotowo, village demolished in the early 20th century; B – the Bogusławski manor house in Glinno, photograph from the 1950's; C – Harvest festival in Glinno in 1945, village displaced and demolished two years later (archive of the Wojciech Bogusławski Primary School in Suchy Las)

Ryc. 1. Fotografie archiwalne: A – widok Trzuskotowa, miasteczka zniszczonego na początku XX wieku; B – dwór Bogusławskich w Glinnie, zdjęcie z lat 80.; C – Dożynki w Glinnie w 1945 r., miejscowość zniszczona dwa lata później (archiwum Wojciecha Bogusławskiego, Szkoła Podstawowa w Suchym Lesie)

The area presently occupied by the military training ground, to a large part belonged to the estate of the Cistercian nuns from the nearby Owińska. After the secularization of the order in 1797 the nunnery estate was sold to the German family of von Treskow [Chruszczewski 2010], who in these lands established a vast dominion, buying also the secular property from Polish gentry, such as e.g. Glinno [Styszyński 2000]. In 1901 Arthur von Treskow sold Knyszyn, Tworkowo and Trzuskotowo to the Prussian military, while in 1904 he sold Biedrusko [Inglot 2006]. The inhabitants of the first three villages were displaced and the buildings were demolished. In Biedrusko after the removal of some buildings a military camp was founded. The former palace of the von Treskow family and some of the manor farm buildings were left, adapted for the needs of the military [Inglot 2002]. The military training ground was expanded in 1943 to include the villages of Chojnica, Łagiewniki, Glinno and Glinienko [Chruszczewski 2010]. Chojnica even earlier was partly located within the limits of the military training ground. The boundary of the military grounds ran across the village, cutting off its northern part for military use [WIG 1925]. However, initially buildings existing in the village were not demolished. After the end of WWII it was decided to include further areas to the military grounds. In 1947 inhabitants of Chojnica, Glinno, Glinienko, Łagiewniki and Okolewo were forced to leave their farms, which buildings were demolished [Chruszczewski 2010].

MATERIALS AND METHODS

In order to evaluate the recreation potential of the Biedrusko military training ground field studies were conducted as well as a review of archival and source materials concerning the described area. In-situ studies aimed at the verification of collected literature data, identification of tourism and recreation value and next establishment of zones and trails focused on different themes.

The route of the cultural trail over the non-existent villages was established on the basis of an analysis of cartographic materials covering different time intervals [Mestischblatte 1898, 1911, 1944; WIG 1925, 1928]. Individual villages were localized on maps and next remnants of characteristic elements of former settlements were traced on site (e.g. the manor house, park, manor farm, peasant village, road network, avenues, synanthropic vegetation). Due to the considerable degree of landscape transformation it was necessary to use GIS tools and a GPS device in order to ensure precise execution of the analyses. Next the attractiveness and legibility of displaced settlement systems were evaluated and a theme cycling trail was proposed, equipped with an information system. The military trail was established including the existing military objects, particularly those created at the beginnings of the operation of the military training ground. Apart from in-situ analyses available studies were also used [Ingłot 2006].

A significant element of in-situ studies comprised an analysis of scenic associations, of which the most attractive points and series were incorporated in the theme trails. Additionally tourist traffic was observed in the weekend trail leading from Złotkowo to Biedrusko. Different types of undertaken activity were valuable indications for the extension of their potential in the entire military training ground. To provide a comprehensive picture of the recreation potential of the study area tourism and recreation management in the environs of the military training ground was investigated and next the proposed network was adapted to the existing infrastructure. The authors with a group of students took an experimental cycling trip over the route of the proposed cultural trail.

RESULTS

In the Biedrusko military training ground a richness of value and landscape elements was found, providing a huge potential for tourism. Based on the collected data from chamber studies and site investigations the routes of two tourist trails were established. Against the framework of the military objects located in the area, i.e. observation towers, shelters and training facilities, a trail is proposed to cover a length of 19.7 km. It was found that due to the over 100-year operation of the military training ground some military objects have lost their practical role, gaining in turn some cultural and historical importance, which may be used in tourism on the trail.

Sites of the displaced villages were localized in the military training ground, both those non-existent since the early 20th century, and those eliminated after WWII. The state of preservation was assessed for the elements of agricultural and settlement landscape as a factor potentially suitable for the development of special and qualified tourism in the military training ground. Numerous avenues as well as other forms of green compositions have been preserved. Relicts of building development in the form of debris heaps need to be made more legible

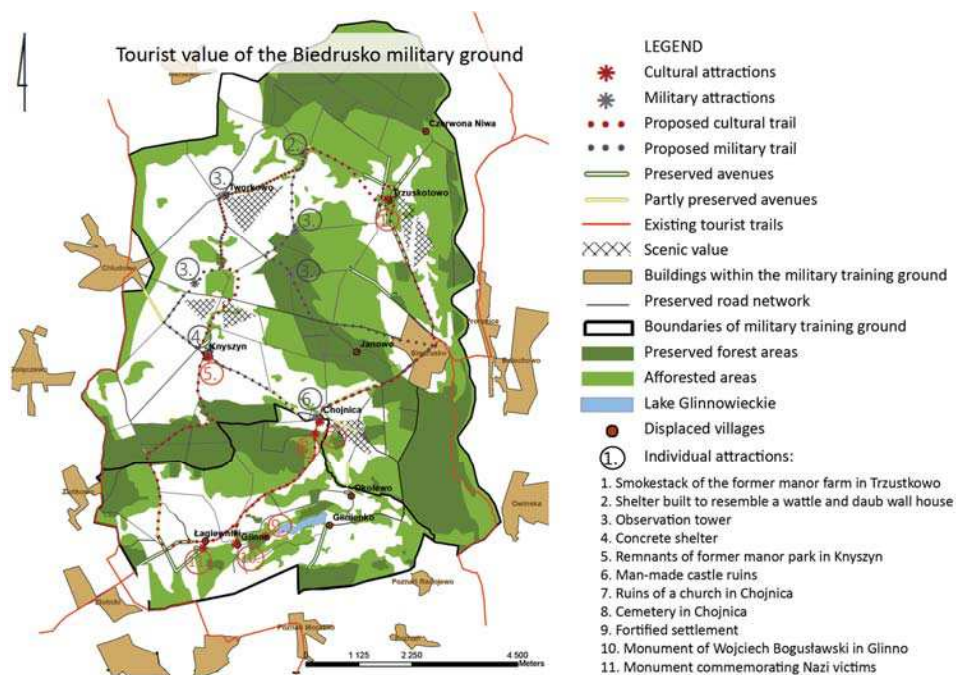


Fig. 2. Tourist value of the Biedrusko military training ground (a study by A. Gałęcka based on maps 1–3)

Ryc. 2. Wartości turystyczne terenów wojskowych (studium A. Gałęcka na podstawie map 1–3)

for the planned cultural trail along the non-existing village. The planned trail is 26.8 km and covers the most important villages of a given settlement system, i.e. Trzuskotowo, Tworkowo, Knyszyn, Łagiewniki, Glinno and Chojnica.

Both trails were plotted onto a map (Fig. 2).

DISCUSSION

The military training ground is an attractive area for tourism and recreation for inhabitants of the nearby city of Poznań and the Suchy Las commune, developing in terms of the housing building structure. This particularly refers to the southern part of the described area, less intensively used by the military. The military training ground is not officially available for inhabitants of the neighbouring villages and towns. It is only possible to cycle or walk over a hard-surfaced road linking Biedrusko with Złotniki in the periods of time, when the military training ground is not used by the military. This road especially on weekends attracts numerous sports fans, who use its smooth, hard-surfaced pavement with only slight vehicle traffic. There are cyclists, roller-skaters and joggers. This road constitutes a fragment of the cycling ring around Poznań.

Despite the fact that the military practice constitutes a threat mainly caused by unexploded shells, the southern part of the military training ground is a place of many types of sports and recreation activity. Most of these activities are connected with the illegal entry to the military training ground and as such are threatened with a fine and consequences of a potential accident in case of contact with the dangerous remnants of military practice. However, this area is so attractive that many people take such a risk.

The most popular form of activity in the military training ground is cycling on mountain bikes, attractive thanks to the numerous differences in elevation in the described area as well the presence of dirt roads of diverse routes. The military training ground is available legally for cyclists only on Saturdays and Sundays and public holidays from 8 a.m. to 10 p.m. on condition that there is no military practice in progress in the military training ground. Movement is only possible over the previously mentioned Złotniki – Biedrusko road with the possible stops at such historical monuments as the plaque commemorating Wojciech Bogusławski in Glinno, the monument of Nazi victims in Łagiewniki, ruins of the church in Chojnica and the cemetery in Chojnica [Int. 2]. Apart from the Cycling Ring around Poznań the Cycling Trail to the Gogulec reserve and the western section of the Nadwarciański Cycling Trail run over the outskirts of the military training ground. Apart from the official cycling trails on internet websites on cycling tourism we may find descriptions of many trails established individually and travelled by fans of this type of tourism. The military training ground could also be an attractive area for trekking or Nordic Walking; however, no trails have been prepared in the area.

Despite its limited availability the military training ground is also a location used by drivers of off-road vehicles, quads and horse riders. Unfortunately, not all visitors to the military training ground do it legally. The military training ground is a perfect location for paintball events. Official competitions have been organized in the area [Internet 3], while some of the contents are the result of trips which are not officially arranged with the command of the military training ground.

In the military training ground the hunting ground district (no. 186) has the Military Hunting Club “Sokół” [Int. 4], while two other hunting clubs are also active (“Orzeł” and “Drop”) along with the “Delfin” club of the Polish Angling Association. Both the hunting clubs and the angling club operate in cooperation with the command of the military training ground [Int. 5].

When investigating the recreation potential of the military training ground in Biedrusko we need to look into this problem in a broader context. The military training ground is of interest for the military sector of cultural tourism and is also fascinating for those interested in derelict sites of human activity and for nature lovers as well. Military tourism is currently dynamically developing in Poland thanks to the fortresses, forts and other fortified locations. On the tourism map of Poland outstanding landmarks include the Międzyrzecz Fortified Region

(Międzyrzecki Rejon Umocniony – MRU), the Wolf's Lair (Wolffschantze – Wilczy Szaniec), the Kłodzko Fortress, city fortifications (Warszawa, Kraków, Toruń, Wrocław and Poznań). We also need to mention here the Borne Sulimow military training ground, recently restored to civilian use. These objects are focal points for history lovers and survival fans, who form groups, associations and societies. In Poznań such examples include the Poznań Society of Friends of Fortifications and the Reduta Associations of Military History Lovers. The Biedrusko military training ground is intensively used, although many of the military objects established at the beginning of the operation of the military training ground, due to the passing time and the obsolescence of technical solutions no longer serve military functions. At the same time these objects (observation towers, shelters) have historical and architectural value [Inglot 2006].

Derelict areas gain in rank in social awareness, being partly the object of fascination with discovery, interesting witnesses of former times, as well as the sites marked with human destiny. Very well-known examples include the so-called *ghost towns*, around which a tourism movement has developed in the United States. In Poland we may mention Chocień, a displaced village in the Bieszczady Mountains, which may become a tourism attraction thanks to the efforts to protect and make legible its existing traces (Regionalny Ośrodek Badań i Dokumentacji Zabytków w Rzeszowie 2003). It is difficult to compare cases of analyzed villages to typical *ghost towns*. Traces on site may be identified only by researchers. Such a situation promotes the use of a specific visual information system in the form of different types of phantoms, symbols activating the imagination of the observer and bringing about reflections.



Fig. 3. Phantoms of buildings in the non-existing village of Arbuzovo (Russia, area of Sankt-Petersburg, source: Internet 10)

Ryc. 3. Fantomy budynków w miejscu nieistniejącej wioski Arbuzowo (Rosja, rejon Petersburga, źródło: Internet 10)

The military areas gain in importance due to their natural value, for which reason they may potentially become attractive for nature observers, a lack of agricultural use, performed traditional forest management operations as well as – paradoxically – shell craters and tank tracks offer potential for the development of biological diversity in adjacent areas [Int. 6–9]. On the other hand, we need to focus on the high sensitivity of areas of natural value to the pressure of tourism, thus tourist trails need to be established with particular care.

CONCLUSIONS

Due to the vicinity of Poznań it is difficult to limit the illegal penetration of the military training ground. A good alternative seems to be offered by a part of the area made available for different types of tourism and recreation, at clearly specified principles guaranteeing safety to its users, realization of military objectives and protection of existing resources.

The existence of 6-thousand hectare not covered by urbanization pressure in the immediate vicinity of Poznań offers an exceptional possibility to meet tourism and recreation needs of inhabitants of a big city. The area of the military training ground may contribute to the elevation of excessive tourism pressure on the Wielkopolski National Park, the Rogaliński Landscape Park and the Zielonka forest. The Biedrusko military training ground has a chance to supplement the tourism and recreation offer of the Poznań agglomeration.



Fig. 4. Cyclists in the military training ground – proposed cultural trail over non-existent villages
(photo A. Gałęcka)

Ryc. 4. Rowerzyści na obszarze poligonu – propozycja szlaku kulturowego przez nieistniejące wioski
(fot. A. Gałęcka)

The diversity of landscape value in the present-day Biedrusko military training ground makes it possible to develop special tourism in the future (natural and military trails, relicts of cultural landscape) as well as qualified tourism (foot paths, bicycle paths and survival paths) in the discussed area. Many activities being a burden for the environment (quad rides, paintball events) could be conducted in the military training ground based on the routes of the existing tank routes and training fields in this way at the same time constituting little threat for the existing natural value. Undoubtedly a tourist attraction could also be connected with tracing the remnants of the past preserved in the landscape in the form of relicts of the former settlement system.

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Maps

1. Contemporary topographic maps at 1: 10 000 (sheets: N-33-130-B-b-3, N-33-130-B-b-4, N-33-130-B-c-2, N-33-130-B-c-4, N-33-130-B-d-1, N-33-130-B-d-2, N-33-130-B-d-3, N-33-130-B-d-4, N-33-130-D-b-1, N-33-130-D-a-2) Main Office of Geodesy and Cartography, Urząd Marszałkowski Woj. Wielkopolskiego, a cartographic study 2001, according to conventional signs 1999; printed 2001 WPGK „Geomat” Sp. z o. o., Poznań
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POTENCJAŁ REKREACYJNY TERENU POLIGONU W BIEDRUSKU

Streszczenie. Poligon w Biedrusku znajduje się w bezpośrednim sąsiedztwie Poznania. Obszar liczy 6 tys. ha o znaczącej wartości przyrodniczej i kulturowej, przez co jest szczególnie atrakcyjny dla uprawiania sportu, rekreacji i turystyki. Ogólny trend zmniejszania powierzchni użytkowanych do ćwiczeń przez wojsko sprawia, że zasadne jest określenie potencjału rekreacyjnego poligonu w Biedrusku. W przyszłości może to ułatwić stworzenie dokładnego projektu adaptacji obszaru i ochrony jego obecnych wartości.

Słowa kluczowe: Poligon Biedrusko, tereny wojskowe, translokowane miejscowości, rekreacja, turystyka wyspecjalizowana