Aquatic Warbler Conservation in Eastern Poland

It becomes a rule that we write about the final season of implementation of the "Aquatic Warbler and Biomass" as a very work consuming. This was true and is also what we expect for the future. In this edition, we describe our work, during Autumn 2011-Spring 2012, and we report news about Aquatic Warbler sites in Poland and abroad.

Similar to most nature conservation projects, we engage in activities to restore Aquatic Warbler habitat to its proper condition or to increase its area. To accomplish these goals, the removal of bushes and a first mowing were planned and executed, as announced in the previous newsletter. These methods are very important to ensure the use of habitats and financing for it in the future, which determines the existence of nesting Aquatic Warblers.

In this newsletter, two articles touch these issues. One discusses OTOP's efforts to create the best agri-environmental program for farmers and nature as well, which finances the maintenance systems of habitats used by the Aquatic Warbler and other animal and plant species. Moreover, we solicit the leasing of land belonging to the State, which can be then mowed by leaseholders, in accordance with the habitat requirements of Aquatic Warbler and other priority species that occur in these areas. We explain this in an article about State owned lands in the Lublin region.

At all actual and potential Aquatic Warbler habitats, population monitoring is performed; a description of which can be found in one of the articles. Additionally, we illustrate the development of Aquatic Warbler habitat in an article, which addresses the conditions of habitats in Chełm Marshes, the year after first mowing of sawsedge, and the situation in the Laskowiec-Zajki nature complex in the Biebrza National Park buffer zone. In this location, illegal ditches have been constructed. As a result, the water level has receded, so that the breeding sites of the Aquatic Warbler and other birds are threatened. Fortunately, we have a plan to avert this danger, as you will learn from reading the newsletter.

To make the newsletter more diversified, we included articles depicting the areas in which we operate, including foreign locations. We invite you to read about the process of creating OTOP reserves in the Biebrza National Park buffer zone in Biebrza Valley from land recovered from private owners. We invite you also to read the article about Aquatic Warbler habitats in Hortobágy National Park in Hungary.

Our activities are very diversified, which is what we try to show in our articles and we hope we have managed to do. At this point, it remains only to wish you to enjoy the reading!

Dariusz Gatkowski Aquatic Warbler Conservation Manager





The launch of the future agri-environmental scheme debate

Marek Jobda

Experiences collected during implementation of contains legislative frames for designation of AES experiences regarding implementation of AES. aquatic warbler LIFE project shows the importance of agri-environmental scheme (AES) for future maintenance of that species population Conservation of aquatic warbler habitats is possible only with specific management, supported by well-designed AES and Natura 2000 payments. Currently, the debate regarding future shape of payments beyond year 2013 is under way. OTOP and LIFE+ project partners are involved in that 2013 payments, which better fits to the nature process.



In October 2011 the Commission presented a legal proposal of regulation of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). The proposal

(Nowadays called the Agri-environment-climate) and Natura 2000 payment for 2014-2020.

enables to start the preparation of designation other mentioned documents, are available one of future payments in Poland. Also OTOP, on the the OTOP's website. basis of know-hows collected during projects realization, prepared the draft of the vision of beyond conservation needs. Basic OTOP experiences and resulted from them hints for preparation of the AES were collected in the brochure called "How to save meadows full of birds?".

Forestalling the public consultation of the payments beyond 2013, OTOP organized workshop for nature conservation NGOs and institutions. The workshop "Use of agri-environmental and Holidays are not only time of leisure but also Natura 2000 payment as a nature conservation measure" took place in Osieck near Warsaw on and Rural Development. The Ministry organized 22-23 May 2012. Participants including representatives of nature conservation authorities,

Despite different positions on the beginning of the workshop, the participants succeeded in preparation of common postulates regarding future Presentation of the legal proposal of Commission shape of AES. Common postulates, together with



time of hard work for Ministry of Agriculture meetings for discussion of the future payments. They have and ambitious goal to present the first conservation NGOs and scientists, exchanged draft of AES and Natura 2000 payments before the end of holidays, to secure enough time for the public consultation. Let's hope that the draft will take advantage of experiences of OTOP and other environmental organisations. Hopefully, the future payment will better fit to aquatic warbler and other threatened species conservation needs.



- 1. Agri-Environmental Programme Workshops in Osieck – D. Gatkowski
- 2. Marek presenting the new OTOP publication – B. Dabrowska
- 3. Visit on Całowanie Marshes- place where 'butterfly' project LIFE has been implemented - B. Dabrowska
- 4. "How to save meadows full of birds?" publication"

Purchase of high-nauture value land : The Key to the Successful **Environmental Protection**

Łukasz Mucha

Numerous bird species lose their habitats as a result of human activities, OTOP's land purchase began in 2006 with funds from the LIFE-Project, particularly from the transformation of habitat. The Biebrza River Valley has "Conserving of Aquatic Warbler in Poland and Germany." Of course, the initiabeen drastically impacted by the abandonment of traditional meadow use tion of the project was challenging, as the organisation and its motives met and mowing, which has led to encroachment by pioneer bushes and trees, with skepticism of farmers. In order to purchase land, it was necessary to including willow, birch and alder. As a result, this land will no longer be useful find an employee, who could connect with the farmers and understand the for certain bird species, which originally existed there. concepts of environment protection.

If we allow this land to be overgrown with bushes, we would soon no longer Now, after many years of working with local farmers through talks, negohear the voices of the Aquatic Warbler and many common bird species, such tiations, and information about current activities, the attitude of residents as Lapwing, Black-tailed Godwit, and Common Redshank. Also, one of the towards the organisation and the importance of environment protection rarest predatory birds, the Greater Spotted Eagle, would loose its feeding has improved. Local communities have noticed an increase in the number grounds. The management and conservation of overgrown habitat, where of tourists visiting the area, who have come to see the birds that are unique the meadows have retained their natural character is crucial for the survival to Biebrza National Park and Poland. With active participation in agricultural and environmental programs, communities are recognizing the importance of those species. of protecting this worthy ecosystem.

Active protection of marsh meadows and peat bogs is primarily achieved by mowing and bush removal (Fig. 1) with either professional tools or traditional Before the end of the LIFE-Project in 2011, OTOP's dedication to social and tractors. The effectiveness of these methods depends on two important environmental concerns resulted in the purchase of 330 ha of land, the conditions: they must be utilized on a large area and repeated over the longmajority of which (over 140 ha) has been acquired in 2008 (Fig. 2). Now, after term because one-time mowing is not enough. only a couple of years of observing and analyzing birds and their habitats, we can affirm that proper management of protected areas has been the most effective tool in preserving this unique environment, which will be used to promote the development of tourism, education, and scientific research.



Fig. 1 Locations of land purchased in the Biebrza River Valley.

In order to increase the potential for successful habitat restoration, OTOP began to purchase plots with the most valuable habitat in Biebrza National Park and to introduce effective management strategies there. This decision also resulted from farmers' lack of interest, for either economical or technical reasons, in mowing or using marshy meadows. In addition, three locations outside of Biebrza National Park were identified as important habitat, including Mścichy, Laskowiec-Zajki, and Szorce (Fig. 1).





Figure. 2 – An area of land acquisition in various localisations over the years.

LIFE+ conservation actions continued by local farmers

Jarosław Krogulec





Recurring management measures, which are necessary to maintain the habitat quality of most of today's remaining Aquatic Warbler habitats, are not foreseen in LIFE+ projects. This kind of management however can be carried with help of new Polish agri-environment programmes. Thanks to the achievements of the LIFE Project "Conserving Aquatic Warblers in Poland and Germany" (LIFE05 NAT/PL/000101), the new Polish agri-environment schemes foresee a so called nature package with specific focuses on habitat types used by the Aquatic Warbler (e.g. fen mires, Magnocaricion-areas) and on the areas of occurrence of the species itself (the "Aquatic Warbler package"). These new schemes are being implemented since 2009. Only currently used land gualifies for these schemes, while already degraded habitat (e.g. areas not mown for some time or overgrown by bushes) is excluded. Hence, the schemes are suitable to maintain existing habitats, but not to facilitate habitat restoration. The aim of our project is to maximise the uptake of this scheme within all project sites.

Our project works with the owners and users of all land qualifying for these schemes to facilitate agri-environment support for Aquatic Warbler friendly land use at their land. The project also aims to arrange continued sympathetic land use with the support of agri-environment schemes on all areas restored within this project.

agri-environment support for the areas under their own management (current habitat and areas to be restored within the project). In areas, where the land is state owned and located within a Natura 2000 site and/or nature reserve, the project staff work with the administrations to support them in

istrations - owners of fen mires with Aquatic Warblers. Poleski National Park administrating Bubnów Marsh AW site while Regional Directorate of Environmental Protection in Lublin (RDOŚ) and Chełm Foresty Management are owners of the largest part of land on Chełm Calcareous Marshes. To prepare a pilot project of state land leasing OTOP works with RDOS owner of whole Bagno Serebryskie Nature Reserve and an important part of Błota Serebryskie, Brzeźno and Roskosz Reserves. Legal documents were prepared by RDOŚ lawyers but descriptions of management types on particular fragments of fens with different habitats were supplied by OTOP. It based on Chełm Calcareous Marshes Natura 2000 Site Management Plan developed by OTOP in 2009.

In March 2012 RDOŚ Lublin issued call of tender to lease areas of plots with fen mires - in total 520 ha. There were six tender applicants AND THE WINNER IS: Eko-Różanka enterprise. This entity offered the higher price for all four sites in open tender meeting which took place on 4th of April in Lublin and won leasing of all RDOŚ plots. Now, according to the leasing agreement leaseholder should subcontract experts to prepare local management plans for all four sites. It should include inventory of habitats and species on the sites and description of management measures on all habitat types. It should be in compliance with Chełm Calcareous Marshes Natura 2000 Site Management Plan developed by OTOP in 2009. Besides of local management plans leaseholder willing to receive agri-environment payments must prepare agri-environmental plan and adequate habitat expertise. After this preparatory stage farmers can start real management - mowing the fen mires in proper time with adequate frequency.

- Northern part of Błota Serebryskie Fen. This plot was mown last year within LIFE+ project to prepare the site for agro-environmental schemes. The breeding habitat of Aquatic Warbler and Great Snipe.
- 2. Southern part of Błota Serebryskie fen. This plot was not mown and require first time mowing by the farmer himself to prepare it to AES. The area is covered by very dense Cladium old biomass which hinders growth of new shoots. Last year's monitoring shown lack of AW singing males.

Restoring Habitats in Biebrza Valley

Piotr Marczakiewicz

the Polish Society for Protection of Birds (OTOP) is trying to restore Aquatic Warbler habitat through the removal of trees and shrubs. In this artiovergrowth, the methods of restoration, and the Biebrza National Park.



The main reason of the Aquatic Warbler and other bird species population deline (which occur within peatlands), is habitat loss. This was primarily caused by drainage and exploitation. Currently, all major Aquatic Warbler refuges are covered by legal protection, however, its habitat continues to decrease for a different reason

For many years, the majority of areas, containing Aquatic Warbler habitat within the species' current range, were utilized as agricultural meadows, which were mowed by hand once a year. Now, almost all of these places have been abandoned by farmers and have started to become overgrown with bushes, trees, and reeds. This process is speeding up in many places (and even starting up), due to factors such as reduced ground water level (usually caused by the nearby drainage works) and eutrophication (eg. caused by the admission of nutrients from neighboring agricultural areas, the air, and peat mineralization). This problem has also reached the largest Aquatic Warbler site in the European Union – Ławki Mires in the Biebrza Valley. Similarly, the population is becoming endangered by the overgrowth of focus of most bush removal works conducted bushes and trees, although this occurs irregu- in the Biebrza Valley through OTOP's project, larly. The most threatened areas are those close "Aquatic Warbler and Biomass." Since 2010, one of

Within the project "Aquatic Warbler and Biomass," southern part of the Ławki Mires, near the large protective measures on approximately 200 ha. alder forest. Thicker trees were chopped by hand, while the rest was cut by the ratrak (piste basher), using a After farmers ceased utilizing the meadows, the special header. Places where the restoration of cle, we will briefly describe the cause of habitat forest started to expand northward, gradually Aquatic Warbler habitat would take too much reducing the area of Aquatic Warbler habitat. A time, which were covered by larger, older, and project's activities within the Biebrza Valley in wide belt has formed between older forests and more compact areas of trees, were left untreated. open meadow areas, consisting of a mosaic of Also, some individual trees were left standing, and are now being used as nesting sites in the vicinity of an alder forest. With these protective measures, the forest boundary has become very diverse.



individual trees and groves, shrubs, and glades. Farther from the forest, the trees and bushes are younger and fewer. Such an buffer-zone is pre-



cious from a nature perspective, but it is problematic, since it spreads steadily to the north, encroaching upon valuable meadow ecosystems that provide habitat for the Aquatic Warbler.

Conservation activities are especially needed in such places. Therefore, these have been the to existing trees and forests, especially in the its project partners - FUT Zelent has implemented



Over the next few years, bush removal will be performed annually, due to the regrowth of trees and shrubs. Once the trees stop growing, the frequency of cutting will be reduced (For example, mowing every two or three years, or even less.) The number of cuts should be well-matched to the level of succession, which may remain guite high here. Within a few years, the moss-sedge vegetation, characteristic of the Aquatic Warbler's habitat, should also recover. The effects of these measures will be visible in a few years, but already in 2011, one singing male has been observed, which is a good sign for the future.



Photos:

- 1. Mścichy Reserve in winter
- 2. Effects of winter bush removal
- 3. Słupowa Droga: the overgrowing Aquatic Warbler
- 4. Black tern brood
- 5. In first year after bush removal a snipe has weaved a nest

Chełm Calcareous Marshes first year after mowing

Jarosław Krogulec

In Autumn 2011 for the first time ever *Cladium* mires of Chełm Marshes were mown on such a big scale. Cladium rushes remained not managed untill now, as there was no use found of such type of biomass. Stalks and leaves of Cladium mariscus are known from high contents of silica and had very sharp After mowing and collecting of Cladium biomass, early autumn in the same edges. English name of Cladium - Saw Sedge - in very good way expresses its year vegetation in some of places looks something artificial rice fields. properties. In effect it can't be used as a fodder for cows nor even for bedding – dry *Cladium* can injure domestic animals. In previous times there was one method of utilization of such biomass – it was used as a filling for packaging of glass bottles and jars produced by local glassworks in Wola Uhruska.

In effect Cladium rushes has grown not managed for years. Saw Sedge produce a big amount of biomass forming thick litter layer after several years. In first years, when litter layer is relatively thin, it serves as an important structure for locating nest of Aquatic Warbler and other wetland passerines. However thick, compacted layers of dry biomass can hinder growth of young *Cladium* and limit development of vegetation cover. The areas which remains dry or only a little bit wet can be covered by large patches of dead biomass limiting growth of young vegetation. Such places are not used by wetland passerines – it is very difficult to build nest there. So within Aquatic Warbler monitoring in last year we found very low density of this species there or very often lack of singing males on such localities. Such situation we can observe for several years on Błota Serebryskie-Wschód fen mire, where on southern side covered by old, thick compacted rushes there were no record of Aquatic Warbler for many years. Singing males however were recorded on the northern part with young patches of *Cladium* and within a plot mown by have also one additional effect – increase wild fire hazard. Accumulation of old biomass is a source of perfect fuel – in dry weather one match can be enough to ignite tens of hectares of fen mire. Chełm Marshes has been often burnt in previous decades. It happened often in early spring weekends and holidays - on Easter or 1st May. Also in this year at 2nd May unknown perpetrator set fire in rushes of "Bagno Serebryskie" nature reserve and 200 ha were burnt in effect. A fire on mire in early May means for sure a destruction of some number of early breeding birds and big amount of arthropods. But it means also that mowing of *Cladium* rushes in proper time of the year has an



additional value: acts also as anti-fire protection measure. Removing surplus of dry biomass we limit potential of spreading fire over fen mire.

As the year 2011 was very wet, since early spring, through whole summer up till late August there was a high level of water on Chełm Marshes. In deepest part of Roskosz Mire water reached 50-60 cm affecting nest site availability for Aquatic Warbler. Deep water also hinders mowing of the marshes. In some cases ratrak (piste basher) worked with completely submerged caterpillars. In effect the mowing level was relatively high. In most places it was 20-30 cm, but in deepest part it reached even 40 cm. Additionally in flooded places only the biomass of this year vegetation was collected. Mower did not managed to collect previous year biomass. In effect on all deep places large patches of water submerged biomass remained. So like in natural situation without of mowing - it require 1 to 3 years for decomposition and hinder of development of young shoots of *Cladium*. But high level of cutting has also a positive effect. In spring, next year after mowing, after arrival of Aquatic Warbler, when still new vegetation is not developed, old stems and leaves of reeds and sedges serves as good habitat for nest location.

Mowing by high water level and generally on very wet meadows has an additional effect. In places of regular maneuvers of ratrak with mower, then ratrak with baler and then with trailer deep traces of machines remained. In autumn it is an artificial, technical element in the fen landscape. Therefore private owner within agri-environmental scheme. Areas of thick layer of litter we should work hard to find solutions how to avoid such effects in next years of mowing. We are aware that mowing with heavy machines on large areas (but only such equipment we can use for conservation activities on such places) will leave traces in natural landscape of fens. We are looking for methods to limit such effects. One of ideas is to build fascine access road on Biebrza Marshes.

> All such damaged places and traces of heavy machines will overgrow in next spring with new vegetation. And for many species of birds such temporary patches are perfect places for foraging and breeding. Already in Autumn 2011 in Błota Serebryskie, in the places of frequent ratrak maneuvers, it was possible to watch feeding flocks of snipes, greenshanks and other species of waders. In spring 2012 on freshly mowed areas first lapwings, Black-tailed Godwits and Common Redshanks appeared – after many years of absence. Mown Cladium rushes resemble in some (structural) extent burnt areas, which often used to be breeding habitats of waders in 1980s. So Lapwings returned on mown part of Brzeźno Marsh. In spring 2012 there was 5 breeding pairs and additionally two pairs of Redshank. On mown part of Błota Serebryskie 6 pairs of Lapwings, 2 pairs of Redshank and 1 pair of Black-tailed Godwit were recorded. Waders quickly react on mowing - it is known effect observed on Biebrza Marshes. In some other way Aquatic Warbler reacts in similar way as on freshly burned areas the positive response on mown areas can be found on the second year after mowing. In the first year, when vegetation is still not fully regenerated, it breeds in lower numbers and in second year reaches high density of population. In this year Aquatic Warbler

monitoring in June showed low population on mown areas. In such areas on Brzeźno and Roskosz Mires only few singing males were recorded. But quite different effect has been observed in northern part of Błota Serebryskie Wschód. This area in Autumn last year was only a little bit wet. In effect the mown vegetation regenerated much faster in the next year and guicker has been also the Aquatic Warbler response. This year 13 singing males has been recorded. It was still lower than in the last year (22 males) but as a result of first year after mowing seems good and promising!

Photos

- 1. Early Spring (April 2012) on Błota Serebryskie Mire. Traces of ratrak maneuvers are still not overgrown with fresh vegetation. - J. Krogulec
- 2. Błota Serebryskie Mires. Ratrak caterpillar trails overgrowing by sedgerushes – J. Kroaulec









- 3. Old, compacted biomass in southern part of Błota Serebryskie Mire J. Krogulec
- 4. Vegetation on last mown last year part of Błota Serebryskie J. Krogulec

Map:

Protective measures area (first mowing) on Błota Serebryskie peatland. On this area OTOP has mown the biggest area of old reed – 117 ha on Lublin RDEP parcel.

Legend

71 record parcel border

ladium mariscus reed range

The ownership structure of land

Mikołaj Pruszyński

natural habitats, species of plants and animals and their habitats, to monitor the state of the tion needs.

Narew National Park, of the PLH 200002 and PLB being impossible to reach them. 200001 Natura 2000 areas, resulted that for the successful implementation of the recommendations regarding to the maintenance of any species solved legal status of the parcels. Most of the in a given area (in our case - the Aquatic Warbler) parcels are not used for several years, and the roughly should be made the following tasks:

- identify the site of its occurrence;
- identify the threats to the species, primarily in its buffer zone;
- indication of the area, to define the conduca satisfactory condition;

cessful implementation of the protective meas- transaction ures for Aquatic Warbler (assuming that these guidelines have been successfully completed) is to acquire the appropriate funds.

As experience shows, it's not always like that.

While working on previous species and habitats conservation projects, carried out by the Narew National Park, assuming among others: the purchase of land to the State in order to be able to carry on their conservation measures, serious difficulties were encountered in buying it. The structure of land ownership in the Narew National Park is quite specific – the State land represents only about 20% of the Park. The rest of the land is private property, which consists of about 20 thousand plots belonging to about which can impede to carrying out this conserva-8 thousand owners

As practice has shown, even having funds to purchase land from private owners, is very difficult to lar those concerning to: active protection of find people who want to sell their land to the Park.

This happens due to some reasons

objects under protection, and monitoring the Firstly, the social situation in the previous years objectives, to increase knowledge about the resulted in a fairly large labor migration of the objects under protection and their conserva- population living in the neighboring areas - owners of the parcels located within the Park. Even having information about the location of potential While working on the Management Plan of the owners, most of them live outside the country,

> The above topic is as well a result of the unreowner cannot locate it on the ground. In addition, because of historical-cultural reasons locals are reluctant to sell land acquired by inheritance.

Secondly, the estimated (about 3000 PLN per hecthe context of its habitat within the Park and tare, including notary costs) price of uncultivated land in the Park is so low that, given the small size of the average plot (100 to 300 square meters), the potential plot sellers are not interested in selltion of the conservation measures designed ing them - the procedure itself involves a meetto maintain the population of the species in ing with an employee of the Park and a visit to the notary and, in effect, gives a profit of several hundred Polish złoty. Most of the people give up It may seem that the basic condition for the suc- because of the small gain associated with the



The surface of areas for active protection for the Aquatic Warbler consist of tens / hundreds of parcels owned by many private owners. It's a very difficult task, which demands long-term exertions, tion measures.

Water Management: for people and nature - Zajki Case

Berenika Dabrowska

Public consultations, conducted by OTOP with landowners from Zajki and which asserted an imminent threat of environmental damage. The next Laskowiec villages in Biebrza Valley, were completed with great success. month, RDEP was trying to find the individuals responsible for the illegal Discussions focused on the cleaning and dredging of ditches, which condrainage work. In the proceedings OTOP appeared as a witness, presentsequently dry the land. As a result of these negotiations, a compromise has inq evidence of the work's completion and supplied information about the been reached on an action plan, which will maintain a higher water level in impending damages to nature. this area throughout the entire bird breeding season (from April to the end of July) and a lower level from August to October, when the mowing is car- In December 2011, RDEP decided to halt the operation of the drainage sysried out. tem, but did not order actions, which are crucial to restoring the Laskowiec-

The immediate purpose for convening this meeting was to address habitat drying caused by a dredged main ditch and tributaries, which were made by unknown individuals without formal permission, during the Autumn of 2010 and 2011. Since that time, the water level has become significantly lower and the spring flooding season in the area has been shortened, so that it now ends in May. This has exacerbated the deteriorating conditions for breeding wetland birds. In order to satisfy all users of the meadows, near the villages of Laskowiec and Zajki, an efficient drainage system must be created with a valve system that uses purified water drainage channels. This construction will allow regulation of water outflow, as well as the detention of water during the breeding season and drainage during haymaking.



For all farmers from the Zajki nature complex, an additional benefit of the efficient drainage system is their ability to maintain agri-environmental subsidies. Currently, farmers are receiving subsidy payments, but in the future, 1. Main drainage ditch after cleaning - Zajki Reserve – J. Krogulec they could lose these if suitable habitat is lacking and the numbers of birds 2. The culvert on the main drainage ditch after cleaning - Zajki Reserve – J. Krogulec in the meadows decline, as a result of dehumidification. Therefore, maintenance of an adequate water level will provide the possibility of the continuing usage of subsidies. At a meeting with farmers and representatives from Page 8 the Polish Society for the Protection of Birds, OTOP agreed to prepare a water management plan draft for the Laskowiec-Zajki nature complex, including Photos 1. The expansion of willows in the former Aquatic Warbler area near the village the proposed location of the valve system to regulate the water level, which of Baciuty will be reviewed by the landowners. Work on this project is still in progress 2. The location of the Aquatic Warbler Acrocephalus paludicola around Wolka and should be completed by the end of 2012.

In addition to public consultations, administrative proceedings have been held, regarding this matter. In May 2011 OTOP submitted a report to the Regional Directorate for Environmental at Protection in Białystok (RDEP),

the Aquatic Warbler habitat in proper condition is the preparation of the management recommendations for the Natura 2000 management plans. The recommendations will be inserted to the planning documents, which will specify the best way of management for these areas. Within "Aquatic Warbler and Biomass" project OTOP is working out on recommendations to the planning documents for the Narew Valley (PLB 200001, PLH 200002), Ciesacin Mire, part of Natura 2000 Polesie (060019), Uściwierskie Lakes (060013), Bubnów Marshes (PLB 060001 and PLH 060013) areas and Husynne Meadows complex, which is part of Middle Bug Valley (PLH 060032) and Polesie's Bug Valley (PLH 060032).

One of the activities which may allow to keep

One of the sites of Aquatic Warbler occurrence, where recommendations to the Conservation Plan were created is Narew National Park and Natura 2000 areas: PLB 200001 and PLH 200002.



Under the current law, when a Management Plan is created for any protected natural area its performer shall specify:

- the identified existing and potential threats to the preservation of the natural habitats conservation status, to the species of plants and animals and their habitats which are under protection,
- the objectives of the conservation,
- the determination of the protective measures indicating the entities responsible for their performance and the areas where they pretend to be implemented, including in particu-



Zajski area, to be initiated. OTOP has appealed the decision, referring to paragraph No. 37, which states that if an action has been undertaken without permission and may have significant, adverse effects on Natura 2000 areas or any protected areas' objects, then RDEP should not only order it to cease, but should also take appropriate actions to restore the area to its previous state. At the moment, we are waiting for the decision of the General Directorate for Enviromental at Protection

The Laskowiec-Zajki nature complex is a meadow created by the drainage of peatlands, which extended over an area of about 750 ha between the villages Laskowiec and Zajki in the south-eastern Biebrza National Park buffer zone, including the Natura 2000 areas, "Biebrza Valley" and "Biebrza Refuge". This area was drained in the late 1970s, yet the conditions remained favorable for the population growth of many bird species, such as Aquatic Warbler, White-winged Tern (in some years, Poland's largest nesting colony), Greater Spotted Eagle, Black-tailed Godwit, Common Redshank, Common Snipe, Lapwing, Jack Snipe, Great Snipe, Spotted Crake, and Garganey Duck.

- Waniewskiei

Map

3. The structure of the land ownership in the area of the potential habitats of the Aquatic Warbler Acrocephalus paludicola near Baciut. Yellow - State owned land

Aquatic Warbler count 2011

Magdalena Zadrąg

Aquatic Warbler sites in Poland. On most of the sites the full count has been conducted, according to the methodology used for several years, singing males are counted and their location is mapped by group of people walking across the site in regular intervals from each other. Thanks to those counts it was possible to assess the numbers of Aquatic Warbler in 2011 on its site covered by LIFE and LIFE+ projects. During the first count 1863-1864 singing males has been observed, during the second count - 2044-2048. In 2011 OTOP didn't conduct studies in the whole Biebrza National Park, but only on Bagno Ławki, what's more no counts has been conducted on sites outside projects localizations. The data from outside the localizations of the projects are derived by volunteers only. Full count of Aquatic Warbler in whole Poland, covering also potential and historical sites of the species, is planned for 2012.

Although the data on Aquatic Warbler numbers aren't full it is possible to compare changes of its numbers in specific localizations, especially on those sites, where the birds were counted on whole site area. In 2011 in Western Pomerania 49-53 singing males has been counted during the second count. Comparing the number to data from previous years, we can see a stabilization of the trend of this population (Fig. 1).



Aquatic Warbler singing males number in Western Pomerania in subsequent years

On the other hand in OTOP's reserve Mscichy in Biebrza NP Buffer Zone numbers of Aquatic Warblers has increased significantly during last few years from 15 in 1990. to 126 in 2011 (Fig. 2). Nevertheless without analyses of Aquatic Warbler numbers in whole Biebrza Valley it is impossible to state,



In 2011 OTOP has implemented Aquatic Warbler count in the most of known whether the change results from overall increase of Aquatic Warblers population or rather from its movements within the site

STATES AND A STATE OF A

| Site | First count | Second count |
|--------------------------|-------------|--------------|
| Western Pomerania | 35 | 49-53 |
| Karsiborska Kepa | 2 | 3-4 |
| Zajęcze Legi | 0 | 0 |
| Rozwarowo | 22 | 32-35 |
| Woliński PN | 2 | 5 |
| Miedwie | 0 | 0 |
| Krajnik | 3 | 2 |
| Lower Peene Valley | 0 | 0 |
| Ujscie Warty NP | 6 | 7 |
| Notec Valley | 3-4 | 0 |
| Ner Valley | 0 | 0 |
| Biebrza Valley | 1585 | 1648 |
| Biebrza NP (Bagno Lawki) | 1498 | |
| Szorce | 10 | 21 |
| Mscichy | 73 | 126 |
| Zajki | 4 | 3 |
| Narew PN | 20 | 20 |
| Lublin region | 220 | 327 |
| Polesie NP | 132 | 231 |
| Ciesacin | 0 | 0 |
| Bug Valley | 0 | 0 |
| Chelm Calcareous Marshes | 88 | 96 |
| SUMMARY | 1863-1864 | 2044-2048 |

Table 1 – Aquatic Warbler singing males in Poland in 2011

Apart from that additionally in Biebrza Valley and Chelm Calcareous Marshes counts on randomly chosen transects has been conducted. Simultaneously implemented full counts and counts basing on samples helps to assess the effectiveness of this new method. During next few years we will use those two methods simultaneously to check the accuracy and applicability of the transect method.

Aquatic Warbler counts wouldn't be possible without help of dozens of volunteers, whom we would like to thank for participation in our research.

Photo 1 – Volunteers on Ławki Szorce Reserve during Aquatic Warbler counting – L. Lachmann



Zsolt Végvári

Although the breeding of the Aquatic Warbler in Hungary was first recorded In Hungary the Aquatic Warbler breeds exclusively in Hortobágy. However, in 1971 in Hortobágy, there are indications of unconfirmed breeding records the existence of small populations cannot be excluded. Distribution on the from the first half of the 20th century or data relating to egg collections lost Hortobágy is shown on Fig. 1. The population is concentrated in the southduring the Second World War (Szabó 1974). Breeding biology, inter- and ern, strictly protected part of the Hortobágy National Park. intraspecific behaviour, population trends and conservation management of the Aquatic Warbler has been thoroughly studied (Szabó 1974, Leisler 1988, The population trend (number of singing males) of the Aquatic Warbler Kovács 1994) in Hortobágy. Although monitoring of the species has been is shown on Fig. 2. The first breeding site of the Aquatic Warbler with the continuing since 1959 which included all possible areas (Szabó 1974, Kovács highest population densities (see Fig. 1.) is located in an alkaline marsh sys-1994, Kovács & Végvári 2004), no other breeding area was found in Hungary tem regularly used as an emergency reservoir in case of great floods of the (Kovács 1998, Kovács & Végvári 2004). To identify habitat preferences and River Tisza. The first significant increase in the number of singing males was population densities, a field study was conducted in the southern part of the observed in 1977 after a high flood in early spring. This year was followed by Hortobágy in 1996 and 1997. a series of rainy years until 1982 and the population increased steadily with medium-sized fluctuations. In the following seven dry years - until 1989 -The Aquatic Warbler has been systematically searched for since 1959 in the population increased slowly exhibiting major fluctuations. During an suitable habitats by a limited number of observers (Szabó 1974, Kovács unusually drought between 1990 and 1994 - with the exception of 1991 - the 1994, Kovács & Végvári 2004) until the early 80s. Following the increase population increased strongly with no indications of decrease. This trend of the number of Hungarian birdwatchers, surveys covered increasingly continued until 1997 both in dry (1995) or highly wet (1996-1997) years. larger areas with the participation of specially trained people. As a result, Declining trends before 2002 were found only locally, e.g. in the easternmost new breeding sites were found. Further, species-specific surveys have been population found and monitored since 1993, where the habitat burned carried out by the staff of the Hortobágy National Park Directorate with the down in summer of the same year. The first significant population decrease participation of volunteers forming part of annual monitoring programmes. was observed in 2002, leading to the halving of the population due to a fire-As the population occupies wet grassland patches of limited size (max: 100 dominated drought. After that the population has shown signs of recover ha), estimates carried out by counting singing males (Schulze-Hagen 1989, until 2004: the speed of increase was similar to that observed between 1992-Leisler 1988, Wawrzyniak-Sohns 1977) are considered complete. 1994: the number of singing males in 2004 was already more than that in 1996. Until 2005 the number of singing males were stable or locally increasing especially in areas flooded artificially after snowmelt (Kovács 1994, Kovács & Végvári 2004). Population increased very quickly in areas where hay-cutting was prohibited (Kovács 1994, Kovács & Végvári 2004).



Distribution of the Aquatic Warbler in the Hortobágy National Park, Hungary



As shown by Fig 2, After this period, the Hortobágy population started to decline rapidly with major fluctuations parallel to the Lithuanian and Pomeranian satellite populations. The first year without breeding record was 2011 with optimal habitat structure in the core area. In 2012 no territorial males were observed in the area.

As reported in previous studies (Kovács & Végvári 2004), one of the largest flooding was observed in 1999 in the Hortobágy, when the core area of the breeding population of the Aquatic Warbler was included in an 8,000 ha large area flooded by the River Tisza. However, the population did not decrease, but dispersed in areas considered suboptimal, such as homogeneous stands of the rush Juncus conglomeratus. Although another high flood was recorded in the following year (2000), the size of the flooded area was far smaller than in the previous one. As a result, the local population of the Aquatic Warbler has started to reoccupy a number of its former breeding habitat types, in spite that formerly wet Alopecuretum grasslands were covered by mixed stands of reed-mace (Typha angustifolia and Bolboschoenus maritimus). In the next year (2001) formerly wet Alopecuretum and Beckmannietum grasslands were partly occupied by large stands of sedges (consisting mostly of Carex melanostachya), where the Aquatic Warbler has started to breed in unusually large densities, i.e. in its most typical habitat types in the core area

of the European population. Besides, it was not found in the suboptimal breeding habitats where it bred in 2000.

During the extreme drought periods in the spring and summer seasons of 2002 the population of the Aquatic Warbler decreased nearly to 50% on average (40-65% in the core area), possibly due to low grass height and density. As another effect of drought, huge and dry biomass accumulated during the previous wet years caught fire in the core area and more than 30% of the breeding area burned down, fortunately after the breeding season. In contrast to a hypothesis based on previous experiences stating



Figure 2 – Aquatic Warbler singing male numbers in subsequent years

that the Aquatic Warblers does not breed in habitats burned down last year, the species occupied these habitats flooded artificially by the National Park Directorate. The population increase continued in the same year, in spite being a dryer year than on average. In the especially wet year of 2004 the habitat type distribution was nearly the same as before, and the population increase of the Aquatic Warbler population has continued.

Distribution Although there is no evidence of any breeding record of the Aquatic Warbler outside of Hortobágy, the former existence of satellite populations indicate that the species can be easily overlooked especially in areas lacking trained people. Populations of Hortobágy concentrate in the vicinity of the first breeding site with some satellite populations in the eastern part of the Hortobágy. According to aerial photos, vegetation of wet grasslands and marshes was very short in the middle of the century probably due to the higher levels of grazing intensity in Hortobágy, while it is undergrazed on a regional scale (Molnár 1997). Although changes in habitat structure was not studied in the area, it could be a significant factor driving population dynamics.

Water level does not seem to play an important role in the habitat preferences of the species, since breeding was frequently found in dry grassland vegetation (Kovács 1994, Kovács & Végvári 2004). Besides, Aquatic Warbler has shown marked population increase in exceptionally dry years (1992-1994).

To maintain optimal water levels during the whole of the first breeding of the Aquatic Warbler (which is beneficial for other species of conservation concern), the most important breeding sites are flooded artificially. The improvement of habitat quality suitable for Aquatic Warblers by prohibiting hay-cutting led to rapid population increases (Kovács 1994, Kovács & Végvári 2004). As a result of an effective regulation, hay-cutting is postponed until July in Aquatic Warbler habitats.

Since in some cases fire caused damage to important breeding sites, fire control plays an important role in the management activities of the National Park.

Reconstruction projects of the Hortobágy National Park focus on wetlands, with a special respect to Aquatic Warbler, which is a strictly protected species in Hungary which bred only in the core zone of the National Park.

References:

Kovács, G. 1982: A csíkosfejű nádiposzáta (Acrocephalus paludicola) terjeszkedése a Hortobágyon. Mad.Táj. 1982.-4.: 277-280

Kovács, G. 1991: A csíkosfejű nádiposzáta Magyarországon. Unpublished. pp. 1-7

Kovács, G. 1994: Population increase and expansion of the Aquatic Warbler

(Acrocephalus paludicola) on the Hortobágy between 1977 and 1994. Aquila, 1994. 101.:(133-143)

Dr. Kovács G. & Végvári Zs.(2004): Csíkosfejű nádiposzáta. In: Ecsedi Z. (szerk.): A Hortobágy Madárvilága. Hortobágy Természetvédelmi Egyesület, Winter Fair, Balmazújváros-Szeged. 2004.

Leisler, B 1988: Intra- und interspezifische Agression bei Schilf und Seggenrohrsänger: Ein Fall akustischer Verwechselnung? Vogelwarte, 34:281-290.

Molnár, A 1997: A Hortobágyi Nemzeti Park kezelési terve. 1997.

Szabó L.V. 1974: A csíkosfejű nádiposzáta (Acrocephalus paludicola) fészkelése a Hortobágyon. Aquila, 78-79. 133-141.

Szabó L.V. 1975: Das brüten des Seggenrohrsängers (Acrocephalus paludicola) in der Hortobágy. Aquila, 80-81.45-53.

Wawrzyniak,H.- Sohns,G. 1977: Der Seggenrohrsänger. Neue Brehm Bücherei. Nr.504. Wittenberg-Lutherstadt. 1-100 pp.

