

NEWSLETTER

Summer 2015

Welcome to the Summer 2015 edition of our newsletter. As usual there is much to share. Pre-order your copy of our Technical Handbook now (page 2). Find out what our FMP Ambassadors are getting up to on page 3. Are you involved in a floodplain meadow restoration project - and would you like us to come and see it? Turn to page 5 to find out more. There is an update on the review of the *Calthion* on page 6, and turtles and wood meadows from our Russian correspondent on page 8.



East Cottingwith in 2008, dominated by large sedges

Mike Dodd



The same view in 2015 at East Cottingwith with the meadows now dominated by buttercups and grasses.

Mike Dodd

2015 Survey

We have carried out our annual survey work largely in the dry this year. Large sedges are on the retreat and it is very valuable and interesting to note the visual changes of some sites as well as the botanical ones (see photos of East Cottingwith Ings adjacent).

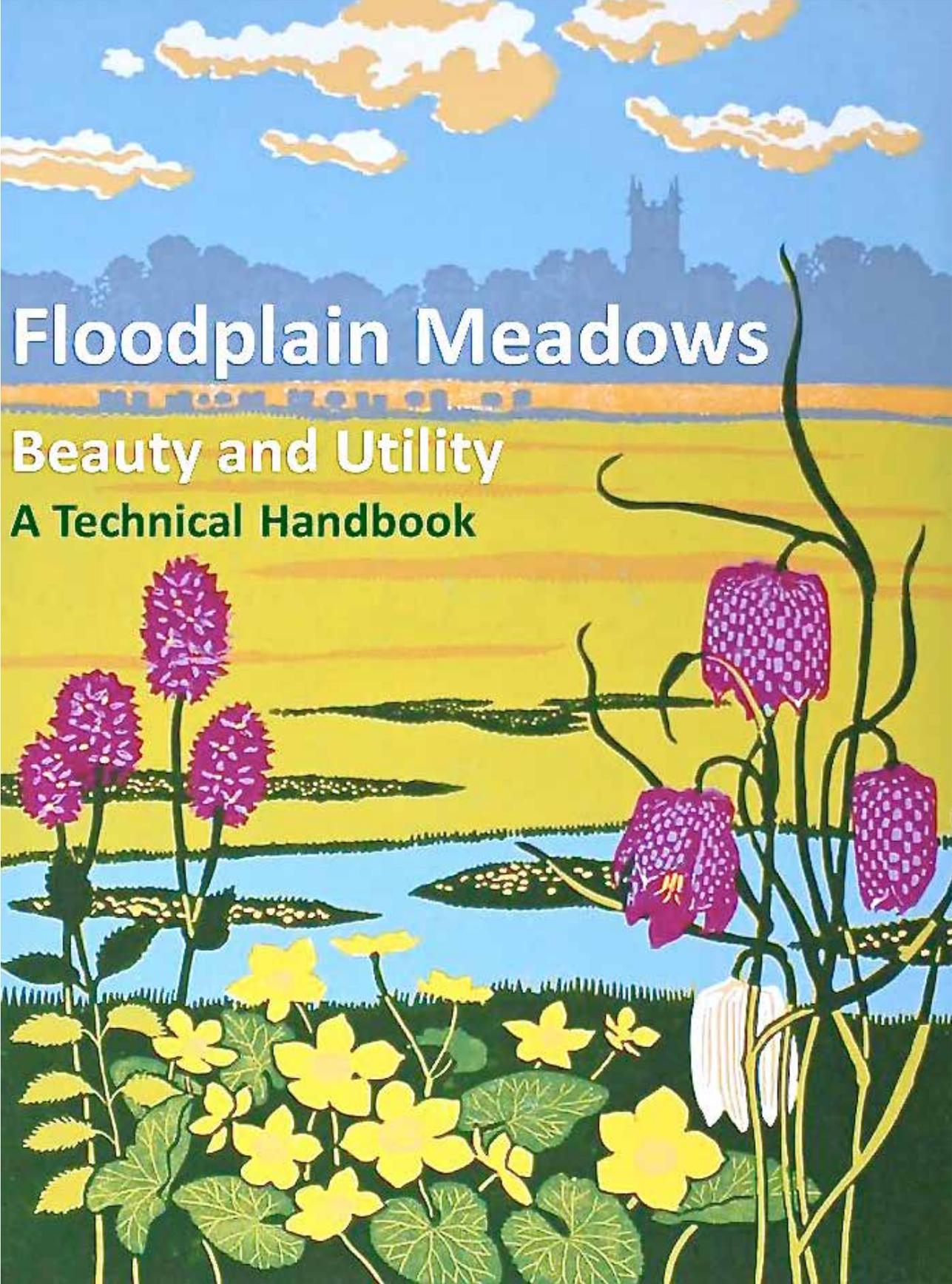
At the moment it is difficult to say whether this effect was caused by drier weather and in some cases ditch maintenance or some other factors affecting specifically the Slender Tufted Sedge *Carex acuta*. Signs of substantial damage to the leaves of this species were noted in all sites across the country, however the cause remains unclear.

With this vigorous species in decline, overall diversity of the vegetation is likely to increase. Ragged Robin, all species of buttercups and snakeshead fritillary all had a spectacular displays on the meadows this year.



a million voices for nature





Floodplain Meadows

Beauty and Utility A Technical Handbook

'Floodplain Meadows, Beauty and Utility: a technical handbook' is due to be published in the Autumn. It has chapters on wildlife, history, soils, nutrients, water, plant communities, management, restoration and assessment and monitoring. It has case studies, pictures of real monitored examples, loads of really nice photos and simple tips on all things related to floodplain meadows. It has an entire chapter on the newly recognised sub-communities for MG4 and MG8 as well as some subsidiary communities found in floodplain meadows. With a Foreword by John Rodwell and a front cover by Robert Gillmor, it is a must-have book for anyone working with floodplain meadows. It will be distributed to our partner organisations and will be available for download as a pdf via our website. To request a hard copy, please get in touch.

Floodplain Meadows Partnership Ambassadors

Our final phase of the Esmee Fairbairn Foundation funded project includes the provision of vocational training to 'FMP Ambassadors', the first phase of which started this April. The training was advertised in last winters' newsletter.

The 17 Ambassadors are now undertaking monthly tasks on a chosen site until December 2017. The training started off with a two-day residential to introduce the ambassadors to the plant communities, the soil-water relationships and the research that will help them understand their site in more detail. They are then given a monthly activity to collect information from their site, and will finish with a final residential course during which they will analyse the data they have collected and consider recommendations for site management. Once they have completed the course, they will then start to plan how they can raise the profile of floodplain meadows locally, and share what they have learnt with others.

For our first phase we had many more applicants than anticipated and only a limited number of spaces. We will be running the course again starting in April 2016, so if you applied previously and were not successful, or would like to be considered for the coming course, keep an eye out on our website and make sure you are on this email distribution list. We will be advertising the course towards the end of this year.

Our current phase of Ambassadors covers the counties of Oxfordshire, Cambridgeshire, Wiltshire, Staffordshire, Nottinghamshire, Kent, Devon, Somerset, Glamorgan, London, Co. Galway (Ireland), Sussex, Worcestershire and Leicestershire and Rutland. For the next phase, we will be looking to prioritise counties where we don't currently have representation.

Learning the differences between MG4 and MG8 at
North Meadow, Wiltshire



New research on plant communities of fluctuating hydrology

We have a **new PhD opportunity** funded by the Eranda Foundation looking at how a plant community structures itself on soil with fluctuating hydrology. This project aims to build on our knowledge of plant communities in floodplains to see how related communities come together around seasonal pools, where the soil varies between very wet and very dry within the same year. The communities growing here are often of great conservation importance (e.g. the turloughs of Ireland.) and this PhD is a collaborative project with the Centre for Ecology and Hydrology (Wallingford) and the National University of Ireland in Galway. It will look at a range of sites across UK and Ireland and would provide insight into how these systems function and how they can be conserved and managed. It will also tell us something more fundamental about how vegetation responds to fluctuating soil-water regime knowledge that could be applied across all wetland types. We are looking for someone who could start imminently. **This is a fantastic opportunity to work on some of the most species rich sites in Ireland and the UK working with experts in Ecohydrology.**

FMP re-visit site after 18 years absence

This year, we visited a site we used to call Blackthorn Meadows in Oxfordshire. This site was studied in great detail 18 years ago as part of the original research to understand the relationship between plant communities and hydrology. Since then the site and the surrounding meadows have been purchased by BBOWT and are now being managed as part of a wider project alongside floodplain meadow restoration in the area and is now known as Meadow Farm. Happily the field previously studied still looks really species rich, and in fact the surrounding fields look more species rich than when previously visited, so it is great news that BBOWT have taken them on. Meadow Farm is also the study site for our Oxfordshire FMP Ambassador Debbie Lewis (BBOWT).

Fritillary counts 2015

Snakeshead fritillary populations benefitted from a calm year in 2014 with a splendid display in 2015, particularly at North Meadow where we had a great count day. Figures at Lugg Meadows and Clattinger were also stable, although with the drier preceding period, Clattinger flowers appeared smaller. We continue to count at all three sites and our bumblebee surveyors are feeling increasingly confident. Please join us if you can.

Fritillaries have also been recorded at the long term restoration site Somerford Mead, in Oxfordshire which is great news and demonstrates that restoration projects can work for this species where the conditions are suitable.

From floody hell to natural heaven!

The Environment Agency has just approved a new position statement which sets out their role in natural flood management and how they will seek to work more with natural processes to slow, store and filter floodwater. Natural flood management measures within catchments may be used in conjunction with more traditional engineering techniques to help increase resilience to climatic extremes (storm events and drought). Such measures include restoring or creating functioning habitats such as upland peat moorlands and wet woodlands to store and filter floodwater; installing or retaining large woody material in rivers to hold water back; re-meandering rivers and restoring species-rich floodplain meadows to reduce downstream floods, store sediment and process nutrients, whilst supporting sustainable agriculture and pollinating insects. Environmental, social and other benefits can be provided simultaneously, including reduced soil erosion/siltation; restored soils that can capture and store carbon; improved water quality; enhanced recreation opportunities and biodiversity.

Floodplain Meadows Restoration Project: are you involved in a floodplain meadow restoration project and do you need funds to help progress it?

The second major strand of our project over the next 3 years is the Floodplain Meadows Restoration Project. This has been very kindly funded by the John Ellerman Foundation as an addition to our existing project, running from August 2015 to July 2018. The objectives for this work are to map and visit as many floodplain meadow restoration sites as we can, talking to site managers, and collecting soils and botanical information so we can see how restoration is progressing across the UK, and to provide a base map against which to determine success in the future. This grant also includes a **small capital fund** which can be used to help restoration projects that have come up against lack of funding.

So, if you have been or currently are involved in a floodplain meadow restoration project, please please get in touch if you have not done so recently, so we can add it to the list. It would be great to visit your site and learn about what you did and are doing to improve the diversity there.

We recently ran a workshop in Oxfordshire where we invited people involved in restoration projects to come and share their work with others through a series of brief presentations. We believe this to be a very useful way for us of learning about what is going on locally, and for local people to share what they are doing with others. It would be useful to consider this format in other counties where there is restoration activity, so if you think this could work in your county, please get in touch and we can help organise such an event.

Fields surrounding Ducklington Mead in Oxfordshire were entered into an HLS agreement in 2012 to spread green hay from Ducklington Mead SSSI across adjacent fields. There has been good establishment of species here.



Calthion review/workshop

As an update to the last article on this subject, in March this year we ran a workshop for interested individuals and organisations presenting the findings of our review of the *Calthion*. We did this as there is no formal mechanism for making changes to the current National Vegetation Classification, and to gauge level of agreement between practitioners about what our review showed. There was good support for the findings, which seemed to fit with what people working with these communities could see on the ground.

There is obviously some concern about changing established NVC communities, and well known names, and how this new information is publicised and used. However, the NVC was not intended as a static document and where much more detailed information is available, it does not make sense to ignore what it is saying. We were advised to be bold and not worry about adding new communities and names. So, we will be publishing the newly agreed communities in our soon-to-be-published Technical Handbook, in a Natural England Research Report and in a formal paper, hopefully all by the end of this year. If anyone would like further information in advance of this, please get in touch. A summary of the proposed changes is shown in the table below:

Plant community	Description	Notes
MG4 Burnet floodplain meadow <i>Sanguisorba officinalis</i> - <i>Alopecurus pratensis</i>	Classic, species-rich vegetation on drier soils of intermediate fertility	Expanded from existing NVC community. Four sub-communities
MG6 Ryegrass-crested dog's-tail meadow <i>Lolium perenne</i> - <i>Cynosurus cristatus</i>	This is a widely occurring community, but a species rich variant occurs on damp soils of moderately high fertility	A new sub-community added to the existing MG6 of the NVC (MG6d meadowsweet sub-community)
MG8 Kingcup-carnation sedge meadow <i>Cynosurus cristatus</i> - <i>Carex panicea</i> - <i>Caltha palustris</i>	Species rich community on low fertility sites where water table is constantly close to the surface	Expanded MG8 with 4 new sub communities, one of which is close to the original MG8 community of the NVC
MG13 Foxtail plash <i>Agrostis stolonifera</i> - <i>Alopecurus geniculatus</i>	Area of prolonged spring flooding and poor drainage	No change
MG14 Sedge lawn <i>Carex nigra</i> - <i>Agrostis stolonifera</i> - <i>Senecio aquaticus</i>	Occurs throughout floodplains, typically rich in marsh-marigold (kingcup) and small sedge species.	An expanded version of the Cx-Ag community originally described by Cox and Leach (1995). Now with 2 sub-communities
MG15 Cuckooflower grassland. <i>Alopecurus pratensis</i> - <i>Poa trivialis</i> - <i>Cardamine pratensis</i>	Species-poor community of damp, sites with good restoration potential.	New community with two sub - communities

Distribution of all known sites for the Burnet sub-community (MG8a) of Kingcup-carnation sedge meadow in England and Wales.



Burnet sub-community (MG8a) of Kingcup-carnation sedge meadow at Motte Meadows, Staffordshire

Typical sub-community (MG8b) of Kingcup-carnation sedge meadow at Baswick, Staffordshire (photo: Hilary Wallace)



Hilary Wallace



Distribution of all known sites for the Burnet sub-community (MG8b) of Kingcup-carnation sedge meadow in England and Wales.

From our own ‘Russian’ correspondent

As reported in our last newsletter, we were successful in a NERC bid to develop a network of floodplain meadow researchers and managers in Russia and with ourselves. To this end, Irina Tatarenko has spent some weeks in Russia this year, meeting people and finding out more about their sites and data.

One of the sites she visited was the Khopersky Nature Reserve (Zapovednik) which was founded 80 years ago to conserve well preserved floodplain ecosystems. The River Khoper has been actively meandering across the plain forming new river beds and leaving behind more than 300 lakes and countless numbers of small ponds. Vegetation

succession starts on the new sand deposits and goes through alternating forestation and deforestation stages. A variety of floodplain forests include extensive willow groves, alder swamps, mixed broad-leaved forests with oak, elm, ash, lime and white poplar trees. Oaks and limes dominate in most woods having very tall (up to 40 metre) trees with very straight trunks.

Floodplain meadows are found here in clearings in woods at certain stages of vegetation succession.



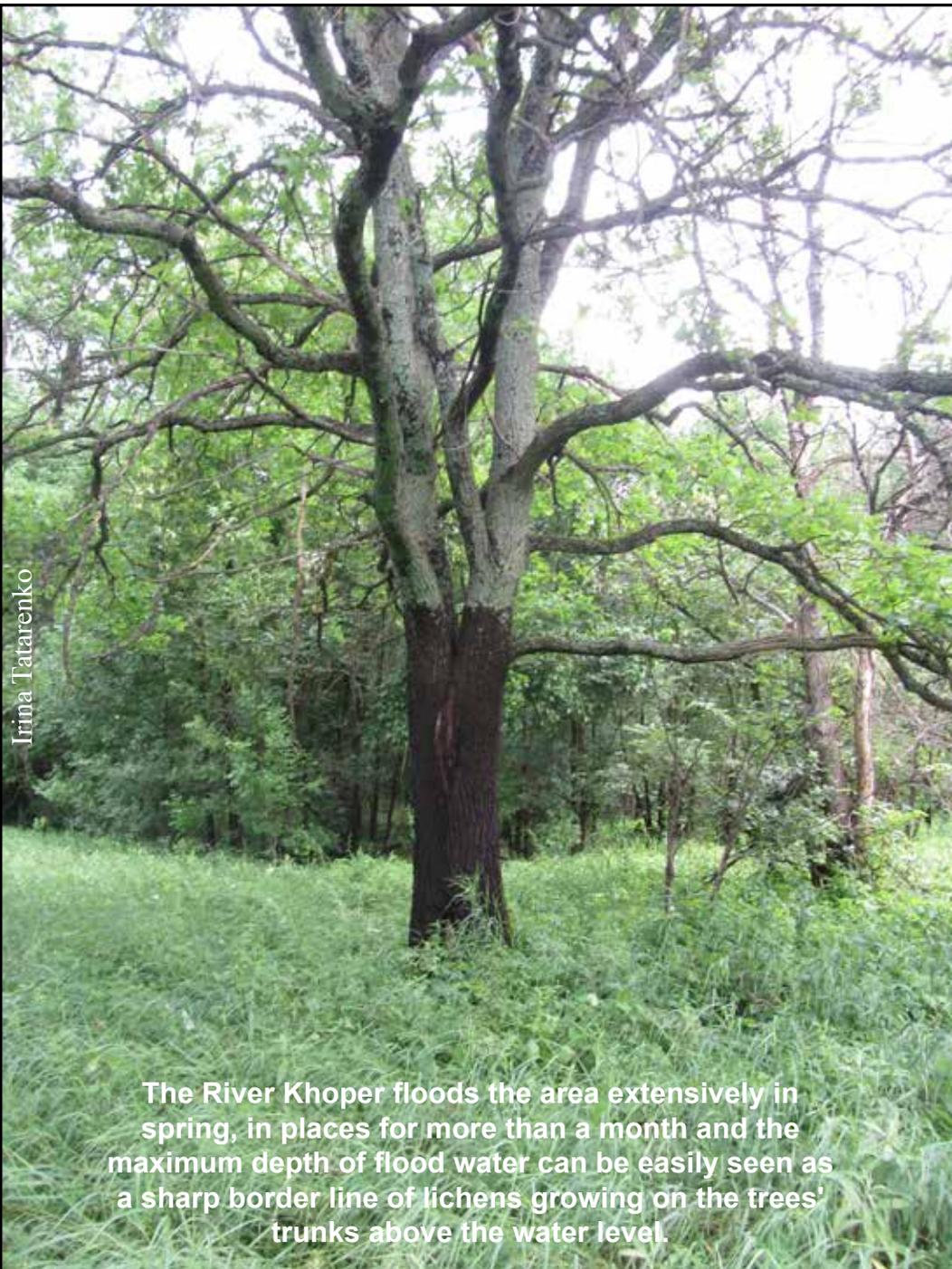
Irina Tatarenko

European pond turtle



Irina Tatarenko

Sanguisorba officinalis in Russian meadows



Irina Tatarenko

The River Khoper floods the area extensively in spring, in places for more than a month and the maximum depth of flood water can be easily seen as a sharp border line of lichens growing on the trees' trunks above the water level.

Most of them have been used as hay meadows by local people for hundreds of years and may show us what early floodplain meadows looked like in the UK before more widescale deforestation took place.

Permanent monitoring observation plots were established on several meadows with a variety of flood regimes in 1978. The main objectives of this research trial were to measure the effect of the flood durations on vegetation dynamics as well as the effect of the hay cuts in comparison with control non-cut plots in the same habitats.

With declining numbers of domestic animals, many hay meadows have been abandoned over the last 10 years and the difference between the cut and non-cut plots has almost disappeared. Remarkably, typical meadow vegetation, including of the *Sanguisorba officinalis* - *Alopecurus pratensis* type,

has remained for more than 10 years after the hay cut stopped, but species diversity has dropped significantly. The resulting thick litter now provides a shelter for such animals as the common European adder, the European pond turtle (see photo), and a whole range of invertebrates (Krasnitskii and Dyrenkov, 1982) insuring biodiversity in the ecosystem remains high.

Forest vegetation is taking over the non-cut meadow plots in drier places, however the long-flooded sites, both originally cut and non-cut along the river banks have remained as meadows with typical meadow vegetation for more than 30 years (Neskryabina, 2012), as tree seedlings don't survive long in these floods.

Krasnitsky, A.N., Dyrenkov, S.A. Comparative estimate of the meadow and steppe ecosystems formed under hay-cut and non-cut management in nature reserves. Bull. MOIP, Otd. Biol. 1982. N 4. P. 102-110

Neskryabina, E.S. Long-term dynamics of non-cut floodplain meadows in Khopersky Nature Reserve. In: Proceedings of Khopersky Nature Reserve. Voronezh State University. 2012. Issue VII. P. 122-132.