

HOW DO WE RAISE THE PROFILE OF PONDS?

MARK EVERARD*, BOB BLACKHAM, KAREN ROUEN,
WILL WATSON, ALISON ANGELL AND ANDREW HULL

*(Dr M. Everard, Director of Science, The Natural Step, 9 Imperial Square,
Cheltenham, Gloucester GL50 1QB; * Contact for correspondence;*

[E-mail: mark.everard@environment-agency.gov.uk];

R. Blackham, 59 Springfield Road, King's Heath, Birmingham B14 7DU

[E-mail: Baltil@compuserve.com];

*Dr K. Rouen, Environment Agency, Ghyll Mount, Gillan Way,
Penrith 40 Business Park, Penrith CA11 9BP*

[E-mail: karen.rouen@environment-agency.gov.uk];

*W. Watson, Aqua Biota Consultants UK, 25 Pitmaston Road,
St John's, Worcester WR2 4HY*

[Tel: 01905-425644; Fax: 01905 749269];

*A. Angell, British Trust for Conservation Volunteers Community Development
Officer, BTCV Conservation Centre, Micheldever Wood, Micheldever, Hants
S021 3BP*

[Tel: 01962-774714; Fax: 01962-774522;

E-mail: A.Angell@dial.pipex.com];

*Dr A. Hull, Eiverpool John Moores University, Project Manager: The Pond
Life Project, 15-21 Webster Street, Liverpool L3 2ET*

[Tel: 0151-231-4044; Fax: 0151-231-4359; E-mail: a.p.hull@livjm.ac.uk].

Introduction

This article arises from the 1998 Ponds Conference organised by Pond Action and held near Oxford in December 1998. A workshop entitled *How do we raise the profile of ponds?* was held on the first evening of the conference, taking the form of three syndicate groups each tackling one of the following three issues: (1) how to get volunteers and the community involved with ponds; (2) raising the profile of ponds within the government sector; (3) raising the profile of ponds with scientists.

The workshop sessions provided the opportunity of brainstorming with around 100 of the UK's leading pond experts and enthusiasts, and this inevitably generated a large number of ideas. Here, we do not seek to present a well-reasoned and comprehensively referenced argument, leading to firm and logically-derived conclusions. Rather, we seek to capture the diverse views and insights gleaned collectively from all participants in the workshop, ensuring that these ideas are not lost and that perhaps they might generate new approaches and new research related to ponds.

Our account starts with a few notes about what we know and what we don't

know about ponds, documents the collated ideas of each syndicate group, and ends with some concluding thoughts.

Why is there such a low awareness of ponds?

Ponds are relatively abundant and widely distributed across the UK. Smith & Lyle (1979) have counted still (standing) waterbodies in each hydrometric area of the UK. On the basis of their numbers, there are some 1700 fresh, still waterbodies with an area of 4 hectares or more in England and Wales, compared with the significantly larger numbers of 12,500 that are 2 hectares or more, and 50,000 of 1 hectare or more in area. In considering these numbers, Johnes et al. (1994) estimate that there are substantially more ponds of less than 1 hectare in area, scattered across England and Wales, although they have not quantified their statement. However, in Britain as a whole, 90% of fresh waterbodies are less than 1 hectare in area (DoE 1993). This proportion suggests that, from the numbers given by Smith & Lyle (1979), there are about 500,000 still, fresh waterbodies of all sizes in England and Wales.

Williams et al. (1998) conducted a repeat survey of the DoE (1993) study and provide more up-to-date figures showing that, in lowland Britain alone, there are 229,000 ponds; this number is 30 to 50% higher than earlier estimates because the new survey looked more carefully for ponds. The numbers given by DoE (1993) cover all of Britain (both upland and lowland) but overall they are likely to be underestimated by 30-50% because the surveyors were not focussed solely on ponds (so many were overlooked), they did not have a standard definition for "ponds", did not record temporary ponds properly, and did not make thorough searches in woodland, which has some of the highest densities of ponds. A revised estimate therefore suggests there may be 650,000 to 750,000 ponds in England and Wales, although Sansom (1993) puts the number lower at 400,000.

There is a net trend of sharply declining numbers of smaller still waters. Sansom (1993) notes that extant ponds are the remnants of a 65% loss over the last century, with a continuing loss of 1% per annum. Sansom estimates that this represents a continuing loss of ca. 3000 ponds but, from the revised numbers of Williams et al. (1998), given above, the loss might be as high as 7500 ponds annually.

At the local scale, smaller still waters are frequently important features of LNRs (Local Nature Reserves), and may also be important components of sites of heritage value (Everard 1999). One of the consequences of their relative abundance and widespread distribution is that ponds are likely to be relatively close to, and accessible by, the general public - certainly more so than their larger counterparts, lakes. Indeed, for many people, their direct early experiences of the freshwater environment will be through local ponds (Everard 1997a).

It is therefore perplexing that they should be such a poorly understood resource. Everard (1997a) attributes this, at least in part, to their inherent complexity, since they are relatively less buffered than larger waterbodies and hence tend to behave more chaotically. Also, a large number of smaller waterbodies are temporary, drying out on a seasonal basis or during extended dry periods. Although one of consequences of this chaotic behaviour is their extreme diversity (Pond Action 1993; Biggs et al. 1994) and the consequent likelihood that they will contain rare species (Collinson et al. 1995), there is little awareness of this fact amongst the general public. Indeed, the uninformed public is likely to be less aware of the existence of the pond, or else assume instead that it is in fact of little or no value or significance.

The term "ponds" also covers a diversity of small waterbodies that may have been formed by numerous processes - both natural and anthropogenic - and, contrary to previous perceptions, some may perhaps be very ancient (Williams et al. 1997). In any event, they are often best considered not as static habitats, but as dynamic features within living and evolving landscapes (Williams et al. 1997; Everard 1997b). Many arguments have been put forward for the need to conserve them. The listing/scheduling approach undertaken in many statutory instruments, such as the Biodiversity Action Plan (DoE 1994), tends to focus on rare species and habitat types, and seeks to protect remnant populations. However, in the long term this approach may be economically unsustainable, leading Everard (1997b) to argue in favour of protective strategies aimed at the processes that form and maintain them, and not merely the "preservation" of their present state in isolation from these processes.

Whatever the approach, and of course this is an area that requires considerable further research to underpin wise management decisions, the fact remains that awareness of ponds - their existence, importance, diversity, processes that form and maintain them, their many values (ecological, societal, etc.) - remains low across all sectors of society.

How to get volunteers and the community involved with ponds

It is quite clear that different people expect different things from ponds. Some want to see ducks. Others may want to see diverse pond-life and clear water, to which ducks (predominantly in rural areas) and Canada geese (largely in cities) may be an obstacle as well as adversely affecting the ecology of surrounding land. These are genuine conflicts. However, overlooking the full range of legitimate interests and concerns will inevitably "switch off the community, upon whom the continued existence and well-being of the ponds ultimately depends.

Management

Management needs to be applied at a community level, involving local people

and interest groups. After all it is their pond, and they also form perhaps the most important constituency in arguing for its continued protection or restoration. For this reason, the ideal pond management plan simply may be one that fits on a single sheet of A4 paper, reflecting the different aspirations of those interested in a particular pond. Ideally, the plan should be produced cheaply and attractively in a form that can be readily understood and disseminated. Critically, the management plan should emphasise the importance of the pond to the local community, and also expressly involve children and local schools.

Education

It is important to emphasise that communities also should be educated about other, wider values of ponds. Given adequate resources, informal input to local interest groups can help them not only to further their interests, but also to learn about the life within and heritage value of ponds. In the long term, this can prove very helpful in furthering awareness of the pond and its diverse values to the community. It is often essential gently to introduce expert views on appropriate forms of management, in order to avoid long-term problems such as those which stem from the introduction of bulrushes to small ponds, or other potentially inappropriate introductions such as ducks, large fish and exotic plants. However, it will ultimately prove counter-productive if people are merely *told* what must be done, and how it should be done, because it is the community's pond and, in the long term, its continued existence depends upon the support of that community. The emphasis must be on *helping them to value their pond*, and not *telling them what to value*. A concise and attractive A5 guide to ponds would be extremely helpful as an educational tool, as would financial support for further awareness-raising, and for tools and equipment to support the efforts of volunteers. It is also clear that communities need a reliable and responsive source of advice and help, empowering them and informing their decisions. More pond wardens would in most cases be extremely helpful.

Raising the profile of local ponds

From a management perspective, ponds need to be visible to get the local community involved. This will inevitably bring about further conflicts; for example, those that might stem from the potential for more litter or disturbance. But the mere acknowledgement that the pond exists and is part of the local environment and heritage will yield positive benefits in terms of profile-raising and support. One of the mechanisms for raising the profile of the pond locally is by communicating the results of pond surveys to interest groups, and also seeking to inform and involve the pond owner and other local groups. WATCH projects, and other vehicles for raising awareness about the life in ponds, add

depth and breadth to this support; people are unlikely to understand the need to preserve a plant or beetle if they cannot see it.

Community development workers in the environmental sector are constantly battling against the need to produce hard physical changes, whereas in the case of ponds (as also perhaps other habitat types) the "soft" outcome of awareness-raising might be more important, if more complex and difficult to measure. Local Agenda 21 highlights the importance of community involvement, and encourages the bottom-up method of government. For this reason, local practical conservation groups are a very effective way of protecting and managing areas. These groups often have a wide base of skills and have a real sense of ownership. This not only means that work is carried out with enthusiasm and sensitivity, but it usually means that damage and vandalism is greatly reduced, especially if the potential "vandal" groups are targeted in volunteer recruitment. The empowerment of individuals through volunteering opportunities and training is more likely to have more far-reaching effects than the mere physical outcomes alone. Whilst community development is an expensive form of working, and measurement of success is difficult, it contributes directly to the *process* of community involvement - including not only awareness, but also participation, broadening the skills-base of individuals - which is critical to making projects sustainable.

The basis of this approach is that the process of setting up the group, training, and the development of individuals, is as important (or in some cases more important) than the physical outcomes of practical work. Empowering individuals not only enables them to work more effectively, but also has a ripple effect, which can touch many other people. To put it into perspective, if 1000 volunteers plant one tree in their lives and do nothing more, that equates to around 400 hours of environmental improvement. However, if one person feels able to carry out practical work, and then wishes to become involved in planning and decision-making throughout their active adult life (about 40 years), this could be equivalent to approximately 1500 hours. So if the 1000 tree planters are better informed and trained, the potential of this approach is enormous.

"The Pond Life Project"

Significant elements of the above have already been addressed as part of a four-year "demonstration model" by the Pond Life Project, which has met a number of objectives, including the following: (1) drafting the *Ponds for Life* manual (discussed later); (2) establishment of over 250 pond wardens across North-West England; (3) involving the local community and raising awareness amongst all interest groups in target areas; (4) implementing an education programme through pond warden workshops; (5) holding a series of annual pond warden conferences ("The Big Splash!").

However, the views expressed by the workshop group demonstrate significant support for the extension of this initiative, both in terms of time-scale and geographical extent across the UK. Wider communication of its successes, to pond enthusiasts, scientists and the wider public, would further persuade more decision-makers about the benefits of the work itself and the benefits of the ponds.

Understanding the community

If we are to succeed, pond "specialists" must learn that the world is not equally populated by like-minded specialists, but by all manner of people with a range of interests and legitimate concerns. Equally, they must expect to encounter myopia and prejudices about ponds being merely "bogs", "mosquito-ridden pools" etc., as outlined by Purseglove (1989). Akin to the sustainability agenda, the key for success is to link these diverse expectations with the largely subliminal "quality of life" values that ponds impart to local people. It is as much about social engineering as it is practical pond management. The task is as much for pond managers to understand the needs and wishes of local people, and how these might be harnessed and broadened, as it is to further their own specialist understandings about and interest in the ponds themselves!

The Ponds Conservation Trust

The Ponds Conservation Trust will be aiming to promote many of the ideas contained above.

Raising the profile of ponds within the government sector

The syndicate group that addressed the subject of raising awareness in the government sector identified two main strands to the issue of how to raise the profile of ponds. These are the ways in which we can work better together and with non-statutory bodies and local communities, and the use of legislation, policies and other mechanisms to promote pond conservation.

Working better together and with non-statutory bodies and local communities

A successful model for the approach of working together with NGOs (non-governmental organisations, also commonly referred to as the "voluntary sector") and local communities has been developed by the Pond Life Project in North-West England. This approach requires the setting up of County Pond Networks, with an associated network of Pond Wardens. In order to maximise the potential for success, it is important that a wide range of organisations become involved in the County Pond Network, and that a Pond Community Officer (PCO) is appointed to "own" the agenda. Although the PCO post is likely to cost in the region of £20,000, experience in the North West suggests

that this can be raised without detriment to other environmental schemes, although the vision of the role of the PCO will have to be innovative to attract "buy in" by partner organisations. Clearly, it will be easier to attract funding in counties that have a significant interest in ponds. To minimise overheads and add to local successes, any new pond network should build on existing networks, for example the Rural Action Network. There also may be potential to build upon the Local Government Management Board and the Local Government Officer Group networks.

Local and non-statutory support networks also offer a powerful lobby group with central government and agencies (for example, the Ministry of Agriculture, Food and Fisheries (MAFF), Farming and Rural Conservation Agency (FRCA), Environment Agency and the Scottish Environment Protection Agency (SEPA)) to emphasise the importance of ponds and explore how to maximise funding for ponds from agri-environment schemes. This may be of particular importance in the early days of the establishment of the FRCA, who set the objectives for Countryside Stewardship, amongst other agri-environment schemes. It is important to ensure a clever political "packaging" of ponds, within a broader span of other habitat priorities such as field margins and hedgerows.

These local networks will also have an important role in disseminating awareness of ponds throughout the community. *"Ponds for Life: A Manual for Pond Conservation"* is due for publication in September 1999, by the British Trust for Conservation Volunteers (BTCV, in press), to coincide with their Pond Action Fortnight. It is anticipated that this state-of-the-art manual will be helpful in disseminating awareness to local networks and other target audiences. It will comprise a user-friendly best-practice manual, in loose-leaf format, to which will be added new units and an annual update. This manual will not only fill a vital information gap, but also will be relevant to all statutory groups as well as other sections of the community such as schools, development planners, landscape architects and agricultural interests. Within these broad social sectors, planning authorities are a critical audience with whom it is important to raise awareness of ponds, including the protected species they might contain. One of the sections of the *Ponds for Life* manual - *"Ponds, planning and the development process"* - seeks to do just this.

When working to influence the general public, it is important not merely to emphasise the biodiversity resource that ponds offer, but also the fact that ponds are special because of their wildlife, cultural, economic, educational and aesthetic values, as it is through all of these diverse aspects that people relate to them. When working within a particular locality (town/city, county or region), it is also important to emphasise the local importance of ponds in that area within a national context, and the important part that they may play in the "local distinctiveness" of the locality. Even in areas where ponds are common, we should not be complacent. We need to encourage people to "celebrate the

commonness" of these ponds as a key part of the local landscape, as well as the fact that they provide habitats for plants and animals that may well not be common at all.

Using legislation, policies and other mechanisms

The most obvious method of using legislation to protect individual ponds is through the range of statutory and non-statutory designations - Special Areas for Conservation under the EU Habitats and Species Directive; Sites of Special Scientific Interest, under the Wildlife and Countryside Act (1949 and 1981); Local Nature Reserves (non-statutory); Tier II sites such as Sites of Importance for Nature Conservation - although making a robust case for designation and achieving the necessary level of support may be very difficult. There are weaknesses in many of the pieces of legislation. For example, the UK Biodiversity Action Plan (DoE 1994) does not appear to be very "pond friendly", since it contains very few species that are characteristic of ponds, and no pond habitats are included in the national priority list (although action for ponds may feature at a local Biodiversity Action Plan level, as indeed it does in the county of Cheshire). This status may well reflect the current low profile of ponds, and one of the priority areas for pond specialists and enthusiasts is to seek ways of positively influencing the legislation.

However, it was also the view of the workshop group, informed by delegates' discussions with the Country Landowners' Association and other such interest groups, that Pond Protection Orders and similar instruments might potentially do more Harm than good. The reasoning behind this is that landowners might feel that their best option is to infill their ponds before the legislation reaches the statute book, or they may deny "pond enthusiasts" access to their land. Furthermore, the wildlife value of ponds is likely to be high where the surrounding land has been sympathetically managed (Pond Action 1993). Hence the designation of a pond in isolation, without also raising awareness of the need to manage surrounding land sympathetically, may not result in any gain to wildlife. Invoking designations may be complicated further by the fact that something like 65% of ponds contain at least one notable invertebrate species. Therefore, in the experience of the workshop group, the decision about where to start/stop designating sites would be largely arbitrary. Equally, the consequent capacity to argue against appeals on the designation of specific sites will be problematic.

For this reason, voluntary agreements were perceived to be a more pragmatic approach to this problem. To most farmers, at least in pastoral areas, there appears at present to be little desire to infill their ponds. A relatively small amount of effort, when compared to the overhead that would be required for preparing a cumbersome statutory designation, spent on contacting farmers and explaining to them in simple terms why the ponds on their land are important, is

likely to be fruitful. This approach has the capacity for being less confrontational, and also involving the rest of the community. And by helping the landowners to value their ponds, rather than enforcing someone else's values upon them, one also encourages them to become protective and keen to help in their management and enhancement.

SEPA and the Environment Agency are already becoming increasingly focussed on standing waters, and this presents an opportunity to assess whether pond policy needs to be strengthened within statutory environmental and conservation agencies. In any event, there is a need to encourage the adoption of a "no-net-loss" policy nationally, as would be consistent with the requirements on national signatories of the Ramsar Convention. It would be helpful to roll this "no-net-loss" policy downwards to county level. One such regional example already exists. The signatories of the Pond Life Project "*Regional Pond Strategy*" (available on request from the Pond Life Project: key contact Andrew Hull) includes most local authorities, conservation organisations and regulatory agencies, and includes a statement on the adoption of a "no-net-loss" policy. Both Cheshire and Lancashire County Councils will have it formally written into their revised structure plans. Many of the region's district councils have also done the same. It would be helpful if this policy were to be spread nation-wide.

There is at least the optimistic notion that, through the promotion of sustainable urban drainage systems, there exists at least some momentum at national policy level for the creation of new ponds, whilst at the same time addressing problems related to pollution and floodwater detention. Pond enthusiasts should also be innovative in seeking funding for pond creation, as a component of initiatives such as the development of amenity areas, mitigation for urban redevelopment, and inclusion as a feature of permanent setaside.

Raising the profile of ponds with scientists

Amongst the scientific community, as well as the wider public, ponds generally have a lower profile than many other habitats. At least in part, there may be an economic reason for this. Larger waterbodies, such as big lakes, attract large numbers of visitors reflecting a diversity of user groups. The recreational activities that are undertaken on and around lakes equate to tangible economic values, which can be evaluated and factored into cost-benefit and other decision-support mechanisms. This in turn attracts financial resources and the demand for scientific research.

As has been outlined above, the potential for ponds to contain rare species, and their wider (if often subliminal) contributions to local "quality of life", mean that they can also be very important habitats. With this in mind, it is surprising that they have been so overlooked, and the time to reverse this perception is long overdue. Just as limnology is the study of physical

characteristics of lakes and other waterbodies, we need to similarly raise the profile of ponds in an all-embracing manner to give them a more prestigious image for scientists. In other words, we may need a specific "...ology" for ponds. (A provisional term advanced subsequent to the workshop was "stagnology", based on the Latin term for still waterbodies, although perhaps a more dynamic term would be more helpful!)

Ponds are very important microcosms, containing a variety of niches in a small area. Numerous species of plants and animals are characteristic of ponds, and occupy a range of microhabitats. Pond-clusters and pond-scapes are just as important as the "bigger" habitats, and constitute important components of living and dynamic landscapes. Ponds are also an excellent and stimulating habitat for educational field study, particularly for school children. We also need to consider their historic, cultural and archaeological significance.

There are two other areas of pond study which need further promotion. Firstly, they are good indicators of environmental changes because the water quality can vary rapidly and the supporting biota responds quickly to environmental pressures. There are many examples of "indicator species" which are sensitive to fluctuations in water quality. This in itself should be a further reason for studying pond ecology: to find out ways in which we can limit or control water-pollution incidents. The second area of pond study requiring promotion relates to their potential use at the local scale, to assess the relationships between climate (rainfall patterns), hydrology and soil science.

In the light of surprising new knowledge emerging about ponds - for example that they may be ancient (Williams et al. 1997) or that they are excellent habitats in which to study chaotic systems (Everard 1997a; Jeffries 1998) - there must be a new incentive to study ponds. The need to relate research more closely to the local habitats that contribute to social and ecological sustainability at a regional scale is also an important driver for further study of the widely distributed pond habitat-type. Add to this the trend towards declining research budgets, and the consequent appeal of studies on local habitats that will not drain much of the available funding on travel and subsistence, and the weight of factors in favour of the further study of ponds becomes overwhelming. We are perhaps about to see the renaissance of the pond in the eyes of the scientific community, and a return to an era when the plants and animals of the local pools and wider countryside seem to have been the preoccupation of every rural pastor and amateur naturalist.

Conclusions

It is clear that, as scientists, our understanding of ponds is not great. However, we have made some progress in understanding the rare species that are likely to occur in them. Despite this growing pool of knowledge, we would be mistaken to try to supplant the diverse values that people place upon their ponds with our

relatively narrow focus on ecological diversity.

Their diverse societal values - heritage, education, amenity and recreation - are all equally valid in the relationship of society with its aquatic ecosystems. Indeed, the continued protection of ecosystems depends as much on increasing our understanding of how they work as it does on raising the awareness of these values and securing them in formal policies. As sustainable development strategies continue to evolve in both local and central government, research into the relationship of society with its local environment becomes more pressing.

The involvement of all sectors of the community is a key to the protection of ponds when one considers the weaknesses of statutory instruments for their protection. Any changes in the policy environment that are more "pond friendly" will only come about on the back of widespread "bottom-up" support for such changes, with clearly defined objectives. The transition in the UK towards increasingly regional government may provide an opportunity for mobilising this community-level support in favour of ponds and other widespread ecosystems. Without a local level of support, and despite any "top-down" instruments to the contrary, it is likely that we will continue to witness the continual incremental loss of ponds because their loss will not be perceived as important at the local scale. This will become apparent only when viewed cumulatively at greater temporal and spatial scales.

In conclusion, a great deal more scientific research is required to understand the nature, diversity, distribution, formative processes and wise management options for ponds. However, perhaps of equal or even greater importance is the need for scientists and pond managers to understand the broader values that people across society hold about ponds. It is only by helping people to become aware of their ponds, by helping them to value their ponds (and not by telling them what to value), and by gentle education about the pond environment, that true collective ownership of ponds will be achieved. And it is only through this level of informed and engaged awareness that effective conservation measures are likely to be taken at the local scale. This process will be enhanced by the utilisation of existing networks to spread the awareness further, and to communicate it upwards in order to inform government - in agricultural, industrial, development planning and other policy areas - of the importance of ponds.

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