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175^e anniversaire du Jardin botanique de Genève
Colloque international sur le thème
Nature et Jardins botaniques au XXI^e siècle
Genève — 2-4 juin 1993

ATELIER 1

Rapporteur: P. S. WYSE JACKSON

The new Europe of botanical gardens:
what is their future?

*La nouvelle Europe des
jardins botaniques:
quel est leur avenir?*

Organisation de l'atelier 1:

Peter S. WYSE JACKSON

Botanic Gardens Conservation International, Descanso House, 199 Kew Road
Richmond, Surrey TW9 3BW, U.K.

RÉSUMÉ

WYSE JACKSON, P. S. (1993). La nouvelle Europe des jardins botaniques: quel est leur avenir? Comptes-rendus du colloque "Nature et Jardins botaniques au XXI^e siècle", Genève, 2-4 juin 1993. *Boissiera* 47: 179-187.

Des représentants du BGCI et de l'IABG ont exposé les différentes possibilités de collaboration entre Jardins botaniques à l'échelon européen, en mettant l'accent sur les relations Est-Ouest. Cet atelier était organisé par P. S. WYSE JACKSON (Directeur du BGCI).

Cet atelier était ouvert à tous les congressistes. Langues officielles: anglais et français. Pas de traduction simultanée.

ABSTRACT

WYSE JACKSON, P. S. (1993). The new Europe of botanical gardens: what is their future? Comptes-rendus du colloque "Nature et Jardins botaniques au XXI^e siècle", Genève, 2-4 juin 1993. *Boissiera* 47: 179-187.

Representatives of BGCI and IABG presented the different possibilities of collaboration between botanical gardens at the European level, by emphasizing east-west relations. This workshop was organised by P. S. WYSE JACKSON (Director of BGCI)

This workshop was open to all delegates. Official languages: English and French. No simultaneous translation.

The aim of this workshop was to identify and highlight the most important activities of European botanic gardens and to discuss how their roles can be enhanced. Some aspects of the present state of development and activities of national botanic garden networks throughout Europe was reviewed. The individual applications of botanic gardens and their future priorities for development, research, biodiversity conservation and environmental education were considered, as well as the use and value of international links between individual botanic gardens. Special focus was given during the discussions to the particular needs of botanic gardens and their networks in Eastern Europe.

A set of background notes was prepared before the workshop which contained topics and points to be considered in the discussion, in the form of questions.

At the beginning of the workshop several participants were invited to provide a brief introduction to the situation of botanic gardens in their country and to provide a short analysis of the state of development of their national botanic garden network.

After that, the participants were divided into groups to consider the questions given below. Towards the end of the workshop, the participants once again met as a single group to share their conclusions and to highlight the major points covered by each group.

The major discussion points and conclusions reached are outlined below.

What are the current strength and weaknesses of European botanic gardens?

Strengths

- * Botanic gardens are experts in the cultivation of plants.
- * They are very diverse and have a wide range of activities, facilities and collections.

- * Most are open to the public and, to a great extent, have public accountability.
- * They have a long historic tradition, with a great deal of accumulated experience and collective will to work together co-operatively.
- * They have a long tradition of involvement in scientific research or have access to excellent scientific support from a considerable diversity of institutions, especially universities.
- * Some have very well considered programmes and policies, including well defined plant collections and conservation policies.
- * Many are situated in urban locations and therefore have good public access.
- * Most enjoy good and efficient means of communications between them nationally and internationally.
- * They have good opportunities available to them to:
 - build a new model for European botanic gardens.
 - adopt new skills to develop new initiatives.

Weaknesses

- * The old collections they maintain may hinder the adoption of innovative roles and the creation of new collections for up-to-date purposes and priorities.
- * Many face major changes in their local and national political and governing structures and funding sources. This can lead to the decay of their infrastructures and reduction of funding.
- * They have a poorly developed capacity for self-promotion so that often their skills and expertise are overlooked by scientific and conservation authorities and by funding agencies nationally and internationally. This often leads to poor or inadequate financial support for their institutions or programmes.
- * Some countries have poorly developed botanic gardens or garden networks and lack the well developed conservation ethos present amongst botanic gardens in other countries.
- * There is an uneven geographical spread of botanic gardens in Europe.
- * Many are hindered in development by rigidly holding to traditional practices and priorities or dwelling on past glories.
- * Most grow unmanageable numbers of collections.
- * There is often too little attempt made to integrate the conservation activities they undertake with plant conservation efforts made for plants or habitats in the wild and most have not yet created adequate co-operative projects in *ex situ* plant conservation with other botanic gardens.
- * Too often the research and educational roles and structures within a botanic garden are isolated from the living collections and their management.
- * They generally have a poor public image and a poorly understood role in botanical research and conservation.

BIODIVERSITY CONSERVATION AND RESEARCH**Are a sufficient number of individual botanic gardens in Europe developing/maintaining programmes for the conservation of the rare and endangered flora of their regions?**

The workshop participants generally considered that enough botanic gardens exist in Europe to undertake the *ex situ* support required to conserve plant species but that an insufficient number of gardens in Europe are presently contributing effectively to plant conservation. It was also recognized that, on a European-wide scale, their facilities and philosophies need up-dating.

The participants recognized that for many botanic gardens their governmental mandate or affiliation does not always encourage the development of conservation programmes.

If not, how can individual botanic gardens be encouraged/persuaded and assisted to play a greater role in this regard?

The participants noted that many botanic gardens inactive in conservation need much encouragement and support to ensure that they begin to contribute to plant conservation. It was felt that Botanic Gardens Conservation International (BGCI), as well as national botanic garden networks, need to convince other gardens to develop a conservation mission statement as a first step.

It was recognized that the proposed in-country studies and National Biodiversity Strategies that will be prepared following the adoption of the Biodiversity Convention are one of the most important opportunities for botanic gardens.

They suggested that an overall strategy and priorities for botanic garden involvement in plant species conservation in Europe could be based on Appendix 1 of the Bern Convention.

It was also suggested that botanic gardens would benefit from collaborating with existing multi-disciplinary projects, rather than necessarily developing new projects.

The need for the development or strengthening of networks was stressed to help share out the tasks to avoid duplication and to ensure coverage.

This can be encouraged by:

- a) having regular meetings of the national networks,
- b) having training sessions. Botanic gardens need to develop new conservation training courses.

Are botanic gardens in Europe co-operating with land managing agencies and other conservation bodies for the conservation, restoration or reintroduction of endangered plant species and plant communities? And if not, how may more individual botanic gardens be encouraged/persuaded and assisted to play a greater role in this regard?

It was believed that botanic gardens were either insufficiently or not at all dealing with land management agencies, and only sporadically collaborating with conservation NGOs.

It was generally accepted that collaboration was just starting in many countries and should be intensified. Contact with both the Ministries of Agriculture or Environment, as well as with

conservation NGOs needs to be increased since botanic gardens have unique skills and expertise suitable for many conservation projects and can play important roles in a range of important collaborative projects.

The need for the development of new research priorities and programmes in botanic gardens was highlighted so that their skills and expertise in conservation can be enhanced. It was suggested that those with university/herbarium links should concentrate on tropical taxonomy or biodiversity studies. They and other smaller gardens could also develop programmes related to horticultural techniques (such as seed germination trials). Conservation and reintroduction research was also noted as a priority. Accounts of the techniques used and results from research studies should be published more frequently and systematically to make them accessible to all.

The role that national networks of botanic gardens can play in encouraging more botanic gardens to be involved in conservation was stressed.

Are botanic gardens willing/able to accept long-term responsibility for undertaking particular tasks in, for example, the conservation of particular species or groups of species in their national floras? And how and by whom should such tasks be assigned?

The participants agreed that amongst many botanic gardens the will is there, but that sound financial backing is essential.

Everyone felt that those working in botanic gardens should undertake long-term responsibility for the conservation of particular groups, but that in most countries no structures had been created to share out such responsibilities, or subsequently, to monitor whether these tasks are being performed adequately.

They suggested that long-term responsibilities needs to be co-ordinated at the national level, with a close collaboration between the botanic garden network and the government ministry concerned, and with adequate international overview monitoring.

DATA MANAGEMENT

What is the current state of plant records management in European botanic gardens? How can the data management systems be improved in European botanic gardens? Is greater data exchange between botanic gardens in Europe either necessary or useful? How can data exchange be managed or promoted? What could/should be the purpose of such data exchange?

It was felt that plant records management in European botanic gardens was very fragmentary and generally of an insufficiently high standard. Suggestions made to help raise the standard of record keeping included:

- the preparation and distribution of more plant records management software systems appropriate for use in botanic gardens,
- training courses for plant records officers in data management and computer systems,
- the development of closer co-operative links between plant records managers in different institutions, perhaps by the creation of a new international network or forum.

They agreed that the *International Transfer Format for Botanic Garden Plant Records* (ITF) provided a very useful and efficient means for botanic gardens to share data between them and

with organizations maintaining central monitoring or co-ordinating databases, such as BGCI or the World Conservation Monitoring Centre (WCMC).

They considered that the ITF needs to be regularly reviewed and updated to allow it to remain fully relevant to their needs.

The beginnings of a trend for the development of national botanic garden databases in several countries was noted and discussed. The work being undertaken in The Netherlands in this regard was particularly highlighted. The participants agreed that more such national databases for botanic gardens were essential and that the creation and maintenance of these could become an important function of national network organizations.

DEVELOPING BOTANIC GARDEN GENE BANKS

Is there scope for the development of more gene/seed banks for wild plants in botanic gardens in Europe?

The participants considered that gene banks are a smart economic option for the conservation of germplasm and biodiversity but that there is lack of facilities in smaller gardens throughout Europe. It was recognized that greater information on botanic garden gene banks and their holdings in Europe is urgently needed and BGCI was encouraged to seek such data and make it available. They also suggested that the development of a number of major national and regional centres was the best option.

What are the requirements for the development of such gene/seed banks?

The following considerations were discussed:

- * labour costs and the need for botanic gardens to be able to hire and maintain permanent staff positions for the on-going development and maintenance of their gene banks.
- * the need for strict and scientifically based sampling techniques and storage procedures, making use of available guidelines.
- * initiation of new research programmes in long-term propagule and tissue storage techniques.
- * development of collections policies for each individual gene bank.
- * creating new opportunities for appropriate technical training for gene bank staff in collecting, handling and storage procedures.
- * strengthening links between botanic garden gene banks and the crop genetic resource sector.

FUNDING BOTANIC GARDENS

What options are available for botanic gardens to obtain greater funding for their activities in the future, for example, from the following sources?

- international and national agencies**
- European Community**
- commercial sponsorship**

- governmental**
- aid agencies**
- self-help (commercial ventures, membership, etc.)**
- others**

The participants suggested that much stronger leadership within individual botanic gardens will be required to ensure that their ability to raise their public profile and attract new funds will be enhanced. They also believed that international organizations such as BGCI and national networks should play a greater part in helping to identify sources of new funds for botanic gardens, particularly to attract support from European Community environmental programmes.

They noted with concern the particular problems faced by university botanic gardens in raising funds and the reliance of many gardens to maintain their staff and facilities on short term project or research contract funds.

They suggested that examples of successfully funded projects in botanic gardens need to be publicised to act as models for others to follow.

What are special needs/possibilities for funding botanic gardens and their programmes in Eastern Europe?

The discussion on this question included the following points.

Eastern European botanic gardens have witnessed a dramatic decline in functional ability. This is a direct consequence of reduced funding. Some institutes have, for instance, lost all glasshouse collections because of an inability to buy heating fuel.

The method of funding of most Eastern European botanic gardens has changed. In general, gardens are seeing a decline in core funding with funds increasingly supporting specific research programmes. Accordingly, it is becoming difficult to support general plant collections, activities and facilities such as glasshouses.

It was generally felt that botanic gardens are politically marginalised because their contemporary function does not relate to the interest of their supporting government departments. However, they did comment that the profound changes in Eastern Europe, may ironically, offer opportunities to rectify such anachronisms.

A number of funding opportunities were discussed:

International funding

The workshop felt that some money would be available, but recognized the difficulty in identifying sources and the mechanisms of application. Some examples were cited, namely the activities of NORAIID in the Baltic countries and the "Go West, Go East" Programme of the European Community were identified as useful source of funding to support staff exchanges etc. They also noted, for instance, that botanic gardens have been slow to investigate GEF funding.

Commercial sponsorship

The economies of the Eastern European countries are not yet in a position to support sponsorship. However, companies can often donate equipment and/or resources as a substitute to cash. There is little or no experience of such private enterprise in some countries though.

Government funding

Governments are suffering a general decline in ability to support core funding for many institutions they maintain, and certainly are not willing to support new expenditures. Botanic gardens need to establish themselves solidly as part of national support systems for science and conservation if they are to avoid being regarded as non-essential amenity resources. As mentioned earlier, opportunities exist to further the recognition of botanic gardens when nations undertake Biodiversity Action Plans following the UNCED meeting.

Some botanic gardens suffer from inappropriate or anachronistic governmental affiliations that do not reflect their contemporary function.

Self help

This was generally recognized as the most useful short-term response to their present situation, limited only by the imagination and business experience of the institute/individuals involved. Necessity has already forced many botanic gardens in the East into the comparatively new activities of consultancy, retailing, etc. However, there is an urgent need to improve banking (financing) skills.

Some delegates expressed the view that botanic gardens should not become too closely involved commercially in the sale of plants.

They mentioned that an additional source of revenue is the "friends of the garden" which is often an overlooked resource.

What are the possibilities of the development of international consortia of botanic gardens for making funding applications and project development and their subsequent implementation?

It was strongly felt that there was an urgent need to reinforce national and international cooperation in the development of funding proposals. A suggestion was made that it would be useful to have a representative in Brussels in order to make joint botanic garden project applications to the European Community.

STAFF TRAINING

Are there sufficient opportunities available for botanic garden staff training in Europe and what are the priorities for staff training in botanic gardens and how can new training opportunities be created?

environmental education
computers, databases and plant records management
garden development and management
gene banking
plant conservation techniques
fund raising, public relations
horticulture
plant taxonomy
others

The participants felt that there are not sufficient opportunities available for botanic garden staff training in Europe and that a series of new specialized short but intensive training sessions/courses are needed.

They suggested that staff need to be trained at two levels:

- Most thought that the top management in botanic gardens should be trained scientists, but should have good knowledge of horticulture, and with training in management (and fund-raising),
- On the second level, it was felt that the majority of staff in botanic gardens should be provided with training opportunities to increase their expertise and skills in horticulture, conservation techniques (also ecology) and education.

It was felt that short training sessions would help accomplish this, and that a new programme for the exchange of personnel between botanic gardens is needed. BGCI was urged to help organize such courses, which should be run in several languages.

Conclusions

The concluding specific recommendations of the participants in the workshop were that:

- BGCI produce a briefing document on the implications of UNCED (United Nations Conference on Environment and Development) for Europe's botanic gardens;
- a European-wide review of botanic garden activities and priorities be developed;
- a European co-operative training programme of relevance to botanic gardens be established;
- a network of centralised and/or national seed banks for wild plants be created to support conservation programmes;
- a set of protocols for conservation activities in botanic gardens be established;
- that closer co-operation between plant records managers in botanic gardens be fostered to help raise the general standard of record keeping in plant collections;
- that the role of botanic gardens in heightening environmental awareness in Europe be more widely developed with the creation of new garden-based education programmes;
- there is an urgent need to produce a briefing document for botanic gardens on the international funding opportunities;
- BGCI compile a briefing document, using Agenda 21 as a basis, to review international funding opportunities;
- a training course be run in Eastern Europe focusing upon fund-raising, banking and financial management for botanic gardens.