

roots



**Botanic
Gardens**

Conservation

International

Education

Newsletter

BOTANIC GARDENS

**Education
for Conservation**

- **Making the most of exhibitions**
- **Intercambio de exposiciones**
- **Front end evaluation**
- **Building display panels**
- **Interactive exhibits**

February 1995

10

Exhibitions

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subscriptions

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next issue

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2 Jardin Botanique et Muséologie

▲ introduction

Les jardins botaniques peuvent être classés en trois catégories:

- ceux qui sont associés à un musée botanique; ils sont un minorité (Berlin, Chicago par exemple)
- ceux qui possèdent une salle d'exposition pour des présentations temporaires; ils forment un groupe un peu plus large (Kew, Genève par exemple). A relever que ce lieu d'exposition peut être plus ou moins grand et luxueux, suivant les jardins botaniques.
- ceux qui ne possèdent pas d'installations susceptibles d'accueillir une présentation muséologique; ils sont certainement le plus grand nombre.

Les jardins appartenant aux deux premières catégories possèdent souvent une structure associée de muséologie appliquée (scénographe, graphiste, décorateur) pour les plus chanceux, ou plus simplement une ou plusieurs personnes (éducateur, dessinateur, conservateur, jardinier) intéressées par la communication et l'exposition de vulgarisation scientifique. Ceux-ci, souhaitant mettre en valeur les collections, investissent du temps dans ce domaine et font appel à des professionnels extérieurs à l'institution (concepteur, graphiste) pour la mise en forme de leurs idées. C'est cet aspect de la question qui pose souvent problème, dans la mesure où il nécessite un financement extrabudgétaire.

Ce numéro de Roots s'adresse plutôt à la troisième catégorie, nos collègues qui ont le redoutable honneur, ou peut-être la chance (il n'est pas facile de présenter la botanique "en chambre", dans un musée, de façon

attractive sans plante vivante!), de ne compter que sur leur jardin comme théâtre muséologique. La clé de cette gageure: considérer leur jardin botanique comme un musée vivant et le traiter comme tel! Pratiquement cela veut dire: appliquer les techniques de la muséologie moderne (mise en scène, interactivité) à une structure de plein air apparemment non adaptée. Cela s'avère souvent difficile, compte tenu des impératifs techniques et financiers fondamentaux pour un espace public non surveillé que sont:

- la sécurité des visiteurs et en particulier des enfants (matériel utilisé, fixation, ...)
- la pérennité du matériel (durée de la mise en scène et non-dégradation)
- l'adéquation de la présentation avec le lieu (absence de provocation envers le visiteur et ... le jardinier responsable de la collection).

La recette: faire appel à l'imagination et au savoir faire des personnes concernées et motivées. Cela demande souvent beaucoup d'engagement et d'esprit de collaboration avec les jardiniers responsables des collections à valoriser, mais les aspects positifs (objet muséologique vivant, proximité, émotion et sensation du visiteur,...) dans la transmission du message éducatif l'emporte largement sur les inconvénients.

Musée vivant souvent rime avec muséologie vivante.
Pensez-y, c'est très stimulant!!

● introducción

Los jardines botánicos se pueden clasificar en tres categorías:

- los que están asociados a un museo botánico, que son la minoría (Berlin o Chicago por ejemplo)
- los que poseen una sala de exposiciones para exhibiciones temporales; estos forman un grupo un poco más grande (Kew o Ginebra por ejemplo). Hay que hacer notar que el lugar de exposición puede ser más o menos grande y lujoso según los jardines botánicos.
- los que no poseen instalaciones adecuadas para acoger una exhibición museológica, que son la mayoría.

Los jardines que pertenecen a las dos primeras categorías poseen a menudo una infraestructura asociada de museología aplicada (escenógrafo, grafista, decorador), para los más afortunados; o simplemente una o muchas personas (educador, diseñador, conservador, jardinero) interesadas en la comunicación y la divulgación científica. Estos, deseando dar valor a las colecciones, invierten tiempo en este campo y acuden a profesionales externos a la institución (diseñador, grafista) para que conformen sus ideas. Este es un aspecto de la cuestión que a menudo tiene problemas ya que necesita financiación.

Este número de Roots se dirige sobre todo a la tercera categoría, a nuestros colegas que tienen la formidable labor, o quizá la oportunidad, que no cuentan, más que con su jardín como teatro museológico (aunque a veces tampoco es sencillo presentar la botánica 'de Salón' de manera atractiva y sin plantas vivas en un

■ introduction

museo). La clave del éxito es: considerar tu jardín botánico como un museo vivo y tratarlo como tal. En la práctica, esto significa que se necesitan aplicar técnicas modernas de exhibición y presentación, como son las exhibiciones interactivas, en una situación al aire libre, la cual, al menos aparentemente, no está montada con ese objetivo. Para eludir algunos de los problemas frecuentes que surgieran me gustaría recomendarles que tengan presentes las ideas y presupuestos que se plantean a continuación - especialmente si la exposición no se encuentra supervisada.

- la seguridad de los visitantes y en particular de los niños en relación al material utilizado la estabilidad fijación, ...)
- la perenidad del material (duración del aparato escénico y degradación).
- la adecuación de la presentación con el lugar (ausencia de provocación hacia el visitante y ... el jardinero responsable de la colección)

La receta: pasar lista a la imaginación y participar (hacer saber) a las personas concernientes y motivadas. Esto requiere mucho empeño y espíritu de colaboración con los jardineros responsables de las colecciones, aunque los aspectos positivos (objeto museológico vivo, proximidad, emoción y sensación...) en la transmisión del mensaje educativo superan ampliamente los inconvenientes.

Museo vivo rima con museología viviente.
¡Piénsalo, es muy estimulante!

With regard to exhibitions, botanic gardens can be divided into three main groups :

- Those which are directly associated with a botanical or natural history museum, (such as the botanic gardens of Berlin and Chicago) and share exhibition space within the museum
- Those which have an exhibition hall, however large or small, where temporary expositions can be mounted. This group encompasses gardens such as those at Kew and Geneva.
- Those which have no exhibition space. This is the case for the majority of gardens.

The gardens included within the first two categories often have access to specific museum techniques or skills, such as graphic resources and artists. At the very least, they usually have staff interested in the techniques for communicating scientific ideas to the public. Gardens who want to present their collections in an attractive and educative way will, where possible, want to involve specialists in the areas of graphics and design. Such involvement however, usually draws on already scarce funds.

This edition of Roots focuses on those gardens which have no other option than to use their gardens for exhibitions. Perhaps this is fortunate, as it is not easy to present 'botany', cold, in a museum, in an attractive manner without any living plants! The key to success is to consider the garden as a living museum and to treat it as such. In practice this means applying modern exposition and presentation techniques, such as interactive displays, to an open air situation which is not, apparently, adapted to such exhibitions.

To avoid some frequently arising problems, I would like to suggest that you keep the following ideas and expenses in mind - especially if the exhibition space will not be supervised:

- the safety of visitors - in particular, children - with regard to the materials used, the stability of the design, and the safety of the fittings
- the durability of the materials and their ability to withstand decay
- the appropriateness of the location in relation to the theme of the exhibition. Take care to avoid suggesting inappropriate behaviour to the public or to the gardeners!

The recipe for success is to call upon your own imagination and that of those around you, and to engender a sense of collaboration between the various staff members involved. The benefits arising from a presentation of the collections will far outweigh the inconveniences.

Living museums require a lively approach - think about it!

Didier Roguet floristique appliquée
Conservatoire et Jardin botaniques de la Ville de Genève, Suisse.

Look for the following symbols...

■ English

▲ Français

● Español

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up date...

■ news

New International Education Course

1995 sees the start of a new International Diploma Course in Botanic Garden Education, developed by BGCI and the Royal Botanic Gardens, Kew. The course will aim to equip participants with skills and strategies that will enable them to carry out their education programmes more effectively, and to provide a forum for participants to share information and thinking about botanic garden education.

For further information about the course contact: Andrew Jamieson, Education Section, Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB, UK or BGCI.

Training course in Russia

Plans are underway to run the first Russian botanic garden education course in May 1995. Staff from botanic gardens all over Russia and the Baltic States will be invited to attend the ten day course which will be held at the Moscow Main Botanic Garden. Funding for the course is being generously provided by The British Council in Moscow.

Strategic change

The title of the document 'BGCI Environmental Education Strategy' has been changed to 'Environmental Education in Botanic Gardens: Guidelines for developing individual strategies'. Those involved in the final draft of the document agreed that this title reflected the contents of the document more accurately. The Guidelines have now been published in English and will be

▲ nouvelles

Nouveau Cours international en éducation

1995 voit le départ d'un nouveau Diplôme international en éducation dans les Jardins botaniques développé par le BGCI et le Jardin Botanique Royal de Kew. Ce cours aura pour but de proposer aux participants des techniques et des stratégies pour diriger leur programme d'éducation de façon plus efficace et d'établir un forum à l'intention des participants, ou ils puissent échanger des informations et des idées sur l'éducation dans les jardins botaniques.

Pour plus d'information sur le Cours, contactez: Andrew Jamieson, Education Section, Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB, UK or BGCI.

Cours de formation en Russie

Nous avons le projet de proposer le premier cours russe d'éducation dans les jardins botaniques en Mai 1995. Des participants provenant de jardins de toute la Russie et des pays baltes seront invités à participer à ce cours qui se tiendra au Jardin botanique principal de Moscou. Des fonds pour ce cours ont été généreusement débloqués par le British Council de Moscou.

Changement stratégique

Le titre du document "Stratégie en éducation environnementale" du BGCI a été modifié pour devenir "Education environnementale dans les jardins botaniques: idées directrices pour développer des stratégies individuelles". Les personnes ayant

● noticias

Nuevo curso internacional de educación

En el año 1995 comenzará un nuevo Curso Internacional de Educación en Jardines Botánicos, desarrollado por BGCI y el Royal Botanic Gardens de Kew. El objetivo del curso es proporcionar a los participantes útiles de trabajo y estrategias que les permitan llevar de forma más efectiva sus programas de educación, así como establecer un foro con los participantes para compartir información y reflexiones acerca de la educación en jardines botánicos. Para más información sobre el curso contactar con: Andrew Jamieson, Education Section, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, Reino Unido; o BGCI.

Curso de formación en Rusia

Se está proyectando la realización del primer curso de educación de los jardines botánicos de Rusia para mayo de 1995. Al curso, que se celebrará en el Moscow Main Botanic Garden están invitados a participar el personal de todos los jardines botánicos de Rusia y estados Bálticos. Los fondos para el curso los ha proporcionado de forma generosa el British Council en Moscú.

Cambio estratégico

El título del documento "Estrategia de Educación Ambiental de BGCI" se ha cambiado por el de "Educación Ambiental en Jardines Botánicos: Guías para desarrollar estrategias individuales". Las personas implicadas en el borrador final del documento están de acuerdo en que este título refleja los contenidos del documento

■ news

distributed shortly. BGCI is keen to translate the Guidelines into other languages and would like to hear from any garden that may be able to help.



Extra copies of the Guidelines are available from BGCI. Please send UK £2.50 (including package and postage) for individual copies. Gardens requiring larger quantities please contact BGCI for a quote.

A Natural Environment for Learning

We are in possession of a small number of copies of the proceedings of the 1991 botanic garden education congress 'A Natural Environment for Learning'. Copies, costing £3.50 sterling (including package and postage), are available from BGCI.

Funding success for Vietnam

BGCI's application to the UK Foreign and Commonwealth Office, to support the development of an education programme at the Hanoi Botanic Garden, Vietnam, has been successful. This support will enable the Garden to build an education centre and produce labels for its plants. If any other garden would like to be involved in this project and is able to offer material support please contact BGCI.

BGCI Project Officer

BGCI is delighted to announce the appointment of Ms Blaise du Puy as BGCI Programme Officer with a special remit to work with African botanic gardens. Blaise brings considerable tropical and horticultural experience to this appointment which is funded for three years by the Darwin Initiative for the Survival of

▲ nouvelles

participé à la rédaction du document final pensent qu'il reflète mieux le contenu de celui-ci.

Ces lignes directrices ont été publiées en anglais et seront distribuées prochainement. Le BGCI serait ravi de traduire celles-ci dans d'autres langues et accepterait volontiers la collaboration des jardins botaniques dans ce domaine. D'autres copies de cette brochure peuvent être obtenues auprès du BGCI au prix de UK£2.50/copie (emballage et port inclus). Les jardins qui en souhaiteraient une plus grande quantité sont priés de contacter le BGCI pour un prix de gros.

"Natural environment for learning"

Nous avons encore en stock un petit nombre des Actes du congrès sur l'éducation de 1991: "A natural environment for learning". Des copies peuvent être obtenues auprès du BGCI au prix de UK£3.50/copie (emballage et port inclus).

Recherche de fonds réussie pour le Vietnam

La demande de fonds du BGCI auprès des bureaux des Affaires étrangères et du Commonwealth afin de soutenir le développement d'un programme éducatif au Jardin botanique d'Hanoi (Vietnam) a été couronnée de succès. Cette aide permettra au Jardin construire un centre de pédagogie et de produire des étiquettes pour ses plantes. Si d'autres jardins souhaitent être associés à ce projet et offrir une aide matérielle, ils sont priés de contacter le BGCI.

Responsable des projets au BGCI

Le BGCI a le plaisir d'annoncer la nomination de Mme Blaise du Puy comme responsable des programmes du BGCI avec une attention particulière portée au travail avec les jardins botaniques africains. Blaise apporte une expérience importante dans les tropiques et en horticulture à ce nouveau poste, financé pour trois ans par l'Initiative Darwin pour la Survie des Espèces (un programme de dotation gouvernemental anglais).

● noticias

de manera más exacta. Las Guías serán publicadas en inglés y distribuidas en breve. La BGCI desea traducir la Guía a otras lenguas y le gustaría saber si algún jardín puede ayudar.

Las copias adicionales de la Guía están a su disposición escribiendo a BGCI. Por favor envíanos 2.50 libras esterlinas (incluyendo embalaje y correo) para las copias individuales. Los jardines que necesiten grandes cantidades por favor contacten con BGCI para un presupuesto.

Un medio natural para aprender

Tenemos aún una pequeña cantidad de las actas del congreso de educación en jardines botánicos del año 1991 "Un medio natural para aprender". Las copias cuestan 3.50 libras esterlinas (incluyendo embalaje y correos) y están disponibles en BGCI.

Conseguir fondos para Vietnam

La petición de ayuda de BGCI a la oficina de Reino Unido Foreign and Commonwealth para apoyar el desarrollo de un programa de educación en el Hanoi Botanic Garden de Vietnam ha sido un éxito. Este apoyo hará posible que el Jardín, construir un centro d'education y realizar etiquetas para sus plantas. Si a otro jardín le gustaría participar en este proyecto y está dispuesto a ofrecer apoyo material por favor contacte con BGCI.

Coordinador de proyecto de BGCI

La BGCI se complace en anunciar el nombramiento de la Sra. Blaise du Puy como Coordinadora de Programa de BGCI, que trabajará fundamentalmente con los jardines botánicos de Africa. Blaise aportará una considerable experiencia tropical y de horticultura para este puesto que está subvencionado por tres años por un programa de becas estatales del Reino Unido denominado Darwin Initiative for the Survival of Species. Blaise está a la espera de algún jardín botánico africano que este interesado en desarrollar su programa de educación.

news

Species, a UK governmental grant programme. Blaise is very keen to hear from any African botanic garden interested in developing their education programme.

Garden News

NBI strikes Gold!

Generous sponsorship has been provided by Gold Fields and the Douglas Murray Trust to renovate an existing building as an

education centre at The National Botanical Institute, South Africa. The Gold Fields Centre will be officially opened in April 1995. In the meantime, the grounds are being landscaped to incorporate educational gardens for hands-on activities with groups.

Monumental Grant

The Education Programme at Oxford University Botanic Garden, UK, has received a grant from the Monument Trust for the Education Officer's salary. Funding for the education programme is now secure until 1997.

Section Split

Due to expansion, the Australian National Botanic Gardens, Canberra, has restructured its Education Section to form two Centres: the Horticultural Training Centre and the Centre for Environmental Education. A detailed

nouvelles

Blaise serait ravie de se mettre en rapport avec des jardins botaniques africains intéressés par le développement de leur programme d'éducation.

Nouvelles des jardins

NBI s'intéresse à l'or!

L'Institut botanique national (NBI), Afrique du sud, a bénéficié d'une généreuse donation de "Gold Fields" et du "Douglas

Murray Trust" pour rénover un bâtiment existant comme centre d'éducation. Le Centre "Gold Fields" sera inauguré officiellement en avril 1995. Dans l'intervalle, le terrain sera paysagé pour incorporer un jardin éducatif utilisé pour des travaux pratiques de groupe.

Donation monumentale!

Le programme d'éducation du Jardin botanique de l'Université d'Oxford (Grande Bretagne) a reçu une donation du "Monument Trust" afin de payer le salaire d'un chargé d'éducation. Les fonds pour de programme permettent d'assurer ce poste jusqu'en 1997.

Partage de section

Pour cause d'expansion, les Jardins botaniques nationaux australiens de Canberra (ANBG) ont restructuré leur section éducative pour former deux centres: le centre de formation à l'horticulture et le centre pour l'éducation environnementale. Une documentation détaillée mettant en

noticias

Noticias de jardines

¡La NBI encuentra oro!

El Gold Fields y la Douglas Murray Trust han proporcionado una ayuda generosa para restaurar un edificio cómo centro de educación del National Botanical Institute de Sudáfrica. El centro se abrirá oficialmente en abril de 1995. Mientras tanto, se han reestructurado los terrenos para incorporar en los jardines las actividades educativas (manuales) en grupos.

Subvención monumental

El programa de educación del Oxford University Botanic Garden del Reino Unido ha recibido una subvención del Monument Trust que permitirán cubrir el sueldo del coordinador de educación. La financiación para el programa de educación está así asegurada hasta 1997.

Sección dividida

Debido a su expansión el Australian National Botanic Gardens (ANBG) de Canberra ha reestructurado su Sección de Educación para formar dos Centros: el Centro de Formación en Horticultura y el Centro de Educación Ambiental. También se ha redactado un documento detallado subrayando la política de educación seguida por la ANBG. Para más información contactar con; Julie Foster, Education Officer, The Australian National Botanic Gardens, GPO Box 1777, Canberra, Australia.

La consecuencia de una ley francesa en los programas de educación

El 9 de mayo de 1994 el gobierno francés sacó una ley para proteger un conjunto de especies de las regiones de Provenza, Alpes y Costa Azul. Ahora los jardines botánicos franceses tienen que jugar un importante papel promoviendo la concienciación pública sobre estas especies protegidas.

La magia de la Montaña Negra

El Australian National Botanic Garden de Canberra, Australia, situado a un lado de la Montaña Negra, ha producido una serie de 6 juegos titulada "La Magia de la Montaña Negra" para que los



news

document outlining the ANBG's Education Policy has been produced. For further information contact Julie Foster, Education Officer, The Australian National Botanic Gardens, GPO Box 1777, Canberra, Australia.

French law effects education programmes

On the 9th May 1994 the French Government passed a law to protect a list of species from the regions of Provence, Alps and Cote d'Azur. Botanic gardens in France now have an important role to play in raising public awareness about these protected species.

Black Mountain Magic

The Australian National Botanic Garden, Canberra, Australia, situated on the side of Black Mountain, has



nouvelles

évidence la politique d'éducation du ANBG a été produite. Pour plus d'informations, contactez: Julie Foster, Education Officer, The Australian National Botanic Gardens, GPO Box 1777, Canberra, Australia.

Les lois françaises favorisent les programmes d'éducation

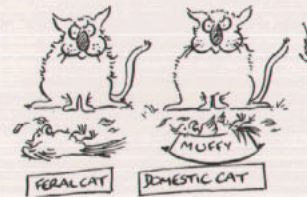
Le 9 mai 1994, le gouvernement français a promulgué une loi qui met sous protection une liste d'espèces des régions suivantes: Provence, Alpes et Côte d'Azur. Les jardins botaniques de France ont dorénavant un rôle accru et important à jouer en matière d'éducation et de sensibilisation du public pour ces espèces protégées.

"Black Mountain Magic"

Le Jardin botanique national australien de Canberra, Australie, situé sur le versant de Black Mountain, a produit une série de 6 pièces, intitulée "Black Mountain Magic", que les élèves peuvent jouer dans le Jardin comme une partie de leurs études sur les plantes menacées. Les pièces, qui mettent l'accent sur la participation des communautés locales, personnalisent le rôle des espèces menacées et mettent en exergue des concepts importants de conservation. Ces pièces furent jouées par des

noticias

estudiantes los realicen en los jardines como parte de sus prácticas sobre plantas amenazadas. Estos juegos, que hacen hincapié en la participación de la comunidad, individualizan el estado de las plantas en peligro y resalta los conceptos importantes sobre su conservación. En dichos juegos participaron un total de 945 alumnos de primaria durante el Festival de Ciencias de Australia.



¡Una exposición asombrosa!

El Bordeaux Botanic Garden de Francia celebró recientemente una exposición con motivo del quinto centenario de la introducción del maíz en Europa. La exposición investiga la historia del maíz, cómo se han seleccionado las nuevas variedades y su impacto en la cultura europea tanto desde el punto de vista doméstico como comercial. Se ha elaborado un folleto y unas hojas explicativas para la exposición. Para más información contactar con: Jardin Botanique Bordeaux, 1 place Bardineau, 33000 Bordeaux, Francia.



Children performing one of the plays from Black Mountain Magic

news

produced a series of 6 plays entitled "Black Mountain Magic" for students to perform in the Gardens as part of their studies on threatened plants. The plays, which emphasise community involvement, personalise the plight of endangered plants and highlight important concepts of conservation. During the Australian Science Festival the plays were performed, by students, to a total of 945 primary school pupils.

An amazing exhibition!

The Bordeaux Botanic Garden, France, recently held an exhibition to mark the 500th anniversary of the introduction of maize to Europe. The exhibition examined the history of maize, how new varieties are selected

Jardin Botanique BORDEAUX



Exhibition on maize at the Bordeaux Botanic Garden, France

and the impact of maize on European culture, both domestically and commercially. A booklet and leaflet have been produced to accompany the exhibition. For further information contact: Jardin Botanique, Bordeaux, 1, place Bardineau, 33000 Bordeaux, France.

Conservation Techniques Course

Tropical Botanic Garden and Research Institute, India are offering an international certificate course in 'Practical Horticulture and Conservation of Tropical Plants'. The course commences in November 1995 and can be taken for three or six months. Candidates need to have a degree in botany or horticulture, be sponsored by a botanic garden or similar organisation, have a good command

nouvelles

étudiants pendant le Festival australien de la science a quelques 945 élèves de l'enseignement primaire.

Une magnifique exposition

Le Jardin botanique de Bordeaux (France) a monté récemment une exposition sur l'introduction du maïs en Europe pour son 500ème anniversaire. L'exposition abordait des thèmes comme l'histoire du maïs, la sélection de nouvelles variétés et l'impact du maïs sur la culture européenne domestique et commerciale. Une brochure et un prospectus ont été produits pour accompagner l'exposition. Pour plus de renseignements, contactez: Jardin Botanique, Bordeaux, 1, place Bardineau, 33000 Bordeaux, France.

Cours sur les techniques de conservation

Le Jardin botanique tropical et son institut de recherche en Inde offrent un certificat international en "Pratiques horticoles et conservation des plantes tropicales". Ce cours commence en novembre 1995 et peut être suivi pendant 3 ou 6 mois. Les candidats doivent avoir une licence en botanique ou en horticulture, être financé par un jardin botanique ou une institution similaire, avoir une bonne connaissance de l'anglais et venir d'un pays en voie de développement des tropiques. Pour plus d'information, contactez: The Director, Tropical Botanic Garden and Research Institute, Pacha-Palode, Thiruvananthapuram - 695 562, India. Tel.: 047284 236 Fax: 0471-437230.

Découvrir les épices

"La découverte des épices" est le nom du nouveau programme d'éducation développé par le Conservatoire national de Mascarin à l'intention des élèves de l'enseignement primaire. Avant de sélectionner les écoles visitant le Jardin, l'éducateur va dans les écoles afin de présenter le projet et y laisse un valise contenant un vaste matériel éducatif. Ce dernier, comportant un jeu des sens, des cartes, des posters et des fiches éducatives, est utilisé pour familiariser les élèves avec le sujet avant leur visite au Jardin. Le Jardin a conduit ce

noticias

Curso sobre técnicas de conservación

El Tropical Botanic Garden y Research Institute de la India está proponiendo un curso internacional de "Horticultura práctica y conservación de plantas tropicales". El curso comenzará en noviembre de 1995 y durará tres o seis meses. Los aspirantes necesitan ser licenciados en botánica u horticultura, estar suvencionado por un jardín botánico u organización similar, tener un buen nivel de inglés y pertenecer a un país en vías de desarrollo/tropical. Para más información contactar con: El director del Tropical Botanic Garden and Research Institute, Pacha-Palode, Thiruvananthapuram - 695 562, India. Tel.: 047284 236 Fax: 0471 437230.

Descubriendo especies

"Descubre especies" es el nombre de un nuevo proyecto educativo para los escolares de primaria desarrollado por el Conservatoire Botanique National de Mascarin de Reunión (Francia).

Antes de que los colegios seleccionados visiten el jardín botánico, el educador va al colegio para presentar el proyecto y deja una maleta conteniendo una serie de material para la enseñanza. Este material, que incluye un juego sensorial, mapas, carteles y notas para el profesor, se utiliza para familiarizar a los estudiantes con el tema antes de su visita al jardín.

El Jardín ha probado el proyecto con éxito en cinco escuelas primarias. Este año el proyecto se ampliará y se desarrollará en otras siete escuelas.

Biosfera II

La exposición de ciencia celebrada en Reunión (Francia) en mayo de 1994 estuvo marcada por la asistencia de la señora Silverstone uno de los miembros principales del equipo de Biosfera II. Aprovechando esta oportunidad el Conservatoire Botanique National de Mascarin organizó la asistencia a la exposición de dos grupos de estudiantes para que averiguaran más sobre los ecosistemas representados en

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Tropical Botanic Garden and Research Institute

of English, and belong to a developing/tropical country. For more information, contact: The Director, Tropical Botanic Garden and Research Institute, Pacha-Palode, Thiruvananthapuram - 695 562, India. Tel.: 047284 236 Fax: 0471-437230.

Discovering Spices

'The discovery of spices' is the name of a new educational project for primary school children, developed by the Conservatoire Botanique National de Mascarin, Réunion, France. Prior to selected schools visiting the botanic garden, the education officer goes to the school to present the project, and leaves a suitcase containing a variety of teaching material. The material, which includes a sensory game, maps, posters and teaching notes, is used to familiarise the students with the subject before they visit the garden.

The Garden has successfully trialled the project in five primary schools. This year the project will be extended to run in seven primary schools.

Biosphère II

The Science Fair held in Réunion, France, in May 1994 was marked by the attendance of Ms Silverstone, one of the first team members of Biosphere II. Taking advantage of this opportunity, the Conservatoire Botanique National de Mascarin organised for two groups of young students to attend the Fair and find out more about the ecosystems represented in Biosphere II (desert, mangrove, tropical forest, savanna). The students made comparisons between Biosphere II, planet Earth and Réunion Island, with particular reference to water cycles, air pollution and the role of plants. They then attended a video conference where they were able to put their questions directly to the people of Biosphere II.

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programme avec succès pour cinq écoles primaires. Le projet sera étendu cette année à sept autres écoles.

Biosphère II

La Fête de la science qui s'est tenue à la Réunion (France) en mai 1994 a été marquée par la présence de Mme Silverstone, une des principales membres de l'équipe de Biosphère II. Saisissant cette opportunité, le Conservatoire Botanique National de Mascarin a organisé une participation à la Fête pour deux groupes de jeunes élèves, les informant ainsi sur les écosystèmes représentés dans Biosphère II (désert, mangrove, forêt tropicale, savane). Les élèves firent des comparaisons entre Biosphère II, la Terre et l'île de la Réunion avec des références particulières au cycle de l'eau, à la pollution de l'air et au rôle des plantes. Ils participèrent ensuite à une vidéo conférence qui leur permit de poser directement des questions aux participants à Biosphère II.

Valises de vacances

Le Conservatoire et Jardin botanique National de Mascarin (France) poursuit un programme pilote avec les centres de loisirs et de vacances sur l'île, appelé "Découvre l'environnement". Les voyageurs passent trois à quatre semaines à explorer l'environnement avec l'aide de trois valises d'éducation. Celles-ci sont prêtées aux centres par le Jardin et contiennent des livres, des jeux, des "kits" de recyclage du papier, des cartes, etc... Les activités se déroulent en partie dans les centres ou au Jardin. Pour plus d'informations, contactez: Monique Paternoster, chargée de l'éducation, Conservatoire et Jardin botanique de Mascarin, Domaine des Colimaçons, F-97436 Saint-Leu, Ile de la Réunion, France.

Ouvrir un chemin à Brooklyn

Ouvrir un chemin plantes et hommes" est le titre d'une nouvelle présentation permanente et interactive, qui devrait être inaugurée en automne 1995 au Jardin botanique de Brooklyn (USA). Des plantes vivantes, des modèles et des médias interactifs mettront en exergue les adaptations des plantes qui survivent en zone urbaine dans

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Biosfera II (desierto, manglares, bosques tropicales, savana). Los estudiantes compararon los ecosistemas de Biosfera II, el planeta Tierra y la isla de Reunión, con especial referencia al ciclo del agua, contaminación del aire y el papel de las plantas. Luego asistieron a una video-conferencia en la que pudieron preguntar sus dudas directamente a las personas de Biosfera II.

Carpetas educativas de vacaciones

El Conservatoire et Jardin Botanique National de Mascarin (Francia) esta desarrollando un proyecto piloto llamado "Descubrir el medio ambiente" con los centros de vacaciones y ocio de la isla. Los turistas dedican tres o cuatro semanas explorando el medio ambiente con la ayuda de tres carpetas educativas. El Jardín presta estas carpetas a los centros. Contienen libros, juegos, equipos de papel reciclado, mapa, lupas, etc. Las actividades se pueden llevar a cabo en el centro o en el Jardín. Para más información contactar con: Monique Paternoster, Education Officer, Conservatoire et Jardin Botanique de Mascarin, Domaine des Colimaçons, F-97436 Saint-Leu, Ile de la Reunion, Francia.

Abriendo camino en Brooklyn

"Abriendo camino: Plantas y personas" es el nombre de una nueva exposición interactiva permanente que se abrirá en otoño de 1995 en el Brooklyn Botanic Garden de EE.UU. Plantas vivas, modelos y medios interactivos destacarán las adaptaciones de las plantas que sobreviven en las zonas urbanas, el crecimiento de las plantas en lugares no usuales y la diversidad de vida en los solares vacíos. La exposición está dirigida a los niños entre 6 y 12 años y a sus familias. Para más información contactar con: Carol Garfinkel, Project Coordinator, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, New York, NY 11225-1099, EE.UU.

Un itinerario sobre la cultura indonesia

Se ha desarrollado un nuevo itinerario sobre la cultura y lengua indonesia en

news

Holiday suitcases

The Conservatoire et Jardin Botanique National de Mascarin, France is running a pilot project with holiday and leisure centres on the island called 'Discover the environment'. Holiday makers spend three to four weeks exploring the environment with the help of three educational suitcases. These are loaned to the centres by the Garden, and contain books, games, paper recycling kits, map, magnifying glasses etc. Activities are either carried out at the centre or in the Garden. For further information contact: Monique Paternoster, Education Officer, Conservatoire et Jardin Botanique de Mascarin, Domaine des Colimaçons, F-97436 Saint-Leu, Ile de la Réunion, France.



Breaking Ground at Brooklyn

"Breaking Ground: Plants and People" is the name of a new permanent interactive exhibition scheduled to open in the autumn of 1995 at Brooklyn Botanic Garden, USA. Live plants, models and interactive media will highlight the adaptations of plants that survive in urban areas, the unusual places plants grow and the diversity of life in vacant lots. The exhibition is targeted at children, 6-12 years old, and their families. For further information contact: Carol Garfinkel, Project Coordinator, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, NY 11225-1099, USA.

On the trail of Indonesian culture

A new Indonesian cultural and language trail has been developed at the Adelaide Botanic Garden and Bicentennial Conservatory, Australia. The aim of the trail is for students to have a glimpse at traditional

nouvelles

des endroits inhabituels et la biodiversité dans les terrains vagues. L'exposition est ciblée sur des enfants de 6 à 12 ans et leur famille. Pour plus d'informations, contactez: Carol Garfinkel, Project Coordinator, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, NY 11225-1099, USA.

Sur le chemin de la culture indonésienne

Une nouveau parcours à la découverte des langues et de la culture indonésienne a été développé au Jardin botanique d'Adélaïde et son conservatoire bicentenaire (Australie). Le but de ce parcours est pour les élèves d'avoir une idée de la vie dans un village traditionnel indonésien et d'expérimenter le sentiment d'être entouré par une forêt tropicale. Le parcours, qui comprend des missions basée sur le langage de base, a été présenté aux écoles sous la forme d'une brochure qui inclut des idées pré-et post-visite d'activités pour les enseignants.

Apprendre en travaillant

15 jeunes gens ont récemment commencé à travailler dans des "coopératives" environnementales grâce au Jardin botanique "Viejo y Clavijo" (Las Palmas, Espagne). Le Jardin a mis sur pied le cours de formation à leur intention.

Atelier d'habillage de l'arbre

Le 4 décembre 1994, la Base d'éducation des Jardins botaniques de Birmingham (Grande Bretagne), a accueilli une série d'ateliers pour des groupes participants à la "Journée d'habillage des arbres". Pour plus d'informations, contactez: Bill Graham, Birmingham Botanical Gardens Base, Environmental Studies Centre, Westbourne Road, Edgbaston, Birmingham B15 3TR, UK. See also, Roots 8, p.11.

Promenade écologique en Méditerranée

Le Jardin botanique de la ville de Nice (France), situé sur une colline surplombant la mer Méditerranée, a développé une nouveau parcours

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el Adelaide Botanic Garden y Bicentennial Conservatory de Australia. El objeto del itinerario es que los estudiantes tengan una visión de la vida de los pueblos tradicionales indonesios y que experimenten el sentir estar rodeados por un medio ambiente de selva tropical. Para el itinerario, que incluye trabajos basados en prácticas de lenguaje, se ha elaborado un folleto para profesores que incluye ideas y actividades para antes y después de su visita.

Aprender sobre el trabajo

15 jóvenes han comenzado a trabajar recientemente en cooperativas ambientales gracias al Jardín Botánico "Vieja y Clavijo" de Las Palmas de Gran Canaria, España. El Jardín fué el encargado de llevar a cabo este curso de formación ocupacional.

Talleres sobre adornar el árbol

El 4 de diciembre de 1994 el Birmingham Botanical Gardens Base de Reino Unido ha celebrado una serie de talleres sobre "Adornar el árbol" para grupos. Para más información contactar con Bill Graham, Birmingham Botanical Gardens Base, Environmental Studies Centre, Westourne Road, Edgbaston, Birmingham B15 3TR, Reino Unido. Ver también Roots nº8, p.11.

Un paseo ecológico en el Mediterráneo

El Jardin Botanique Ville de Nice de Francia, situado en una ladera que mira hacia el mar Mediterráneo, ha elaborado un nuevo itinerario educativo llamado "Paseo ecológico en el Mediterráneo". En colaboración con el Servicio de Actividades Culturales de la ciudad de Niza se ha creado un itinerario para escolares de 9 y 10 años. Está enfocado hacia la adaptación de las plantas al clima mediterráneo e incluye variadas, y actividades, realizar el itinerario completo lleva unas dos horas. Para más información contactar con: Y. Bousquinaud, Service des Espaces Verts, Jardin Botanique, 78, Corniche Fleurie, 06200 Nice, Francia.

news

Indonesian village life and experience the feeling of being surrounded by a tropical rainforest environment. The trail, which involves practical language based tasks, has been produced for schools in booklet form and includes pre-visit and post-visit ideas and activities for teachers.

Learning on the job

15 young people have recently started working in environmental co-operatives, thanks to the 'Viera y Clavijo' Botanic Garden, Las Palmas, Spain. The garden was instrumental in setting up the occupational training course.

Tree Dressing Workshops

On December 4th 1994, Birmingham Botanical Gardens Base, UK hosted a series of workshops for groups participating in "Tree Dressing" day. For more information contact Bill Graham, Birmingham Botanical Gardens Base, Environmental Studies Centre, Westbourne Road, Edgbaston, Birmingham B15 3TR, UK. See also, *Roots* 8, p.11.

Ecological walk in the Mediterranean

The Jardin botanique Ville de Nice, France, situated on a hillside overlooking the Mediterranean Sea,

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éducatif appelé "Promenade écologique méditerranéenne". Travaillant en parallèle avec Le Service des activités culturelles de la ville de Nice, la promenade a été créée pour des enfants scolarisés de 9 à 10 ans. Mettant l'accent sur les adaptations des plantes au climat méditerranéen, le parcours inclut un éventail d'activités et prend environ deux heures. Pour plus d'informations, contactez: Y. Bousquinaud, Service des Espaces Verts, Jardin botanique, 78, Corniche Fleurie, 06200 Nice, France.

Planification stratégique

L'Institut national botanique (Afrique du Sud) a publié récemment la première édition d'un plan stratégique pour l'éducation. Pour plus d'informations, contactez: Ally Ashwell, Head: Education, NBI, Head Office, Kirstenbosch, Private Bag X7, Claremont 7735, South Africa.

Fléau de la pomme-de-terre

Le Jardin botanique national de Glasnevin en Irlande prépare une présentation imagée concernant la pomme-de-terre et le fléau *Phytophthora*. L'exposition a été mis sur pied pour le 150ème anniversaire de la Grande Famine, qui s'est

noticias

Planeando una estrategia

Recientemente el National Botanical Institute de Sudáfrica ha publicado la primera edición del Proyecto de estrategia para la educación. Para más información contactar con: Ally Ashwell, Head: Education NBI, Head Office, Kirstenbosch, Private Bag X7, Claremont 7735, Sudáfrica.

La roya de la papa

El National Botanic Garden de Glasnevin (Irlanda) esta preparando una exposición sobre la papa y la roya *Phytophthora*. Esta exposición es para conmemorar el 150 aniversario del Hambre causado por la pérdida de la cosecha de papas. Para más información contactar con: National Botanic Gardens, Glasnevin, Dublin 9, Ireland.

Jardín chino hecho oficialmente centro educativo

El Nanjing Botanical Garden Mem. Sun Yat-Sen (China) se ha convertido en uno de los siete centros oficiales de educación en ciencias para colegios de enseñanza primaria y media en Nanjing. Para señalar este reconocimiento se celebró una ceremonia en el jardín el 13 de septiembre. En la misma, el jardín fue premiado con una placa de bronce por el departamento de educación de Nanjing.

Recursos

Salvar el planeta verde

El Cincinnati Zoo Books anuncia la publicación del libro "Salvar el planeta verde: proteger las plantas amenazadas de la Tierra" de Robert R. Halpern (Franklin Watts, New York, 1994). Este libro esta dedicado a los niños entre 10 y 14 años y a los que introduce sobre la importancia de las plantas y su conservación. Para más información contactar con: Franklin Watts, 95 Madison Avenue, New York, NY 100016, EE.UU.

Video sobre historia

El Jardín Botánico de Rio de Janeiro en Brazil ha publicado recientemente un video educativo para los escolares titulado "Historia del Jardín Botánico". Para más información contactar con:



Children studying plant adaptations on the Mediterranean Ecological Walk

■ news

has developed a new educational trail called the Mediterranean Ecological Walk. Working alongside the Cultural Activities Service of the town of Nice, the walk has been created for school children aged 9-10. The walk involves a range of activities and focuses on the adaptation of plants to the Mediterranean climate. It takes about two hours to complete. For further information contact: Y. Bousquinaud, Service des Espaces Verts, Jardin botanique, 78, Corniche Fleurie, 06200 Nice, France.

Strategic Planning

The National Botanical Institute, South Africa, has recently published the first edition of a Strategic Plan for Education. For further information contact Ally Ashwell, Head: Education, NBI, Head Office, Kirstenbosch, Private Bag X7, Claremont 7735, South Africa.

Potato blight *Phytophthora*

The National Botanic Gardens, Glasnevin, Ireland is preparing an interpretative display on the potato and *Phytophthora* blight. This display is to mark the 150th anniversary of The Great Famine which was triggered by the failure of the potato crop. For further information contact: National Botanic Gardens, Glasnevin, Dublin 9, Ireland.

Chinese Garden made official education centre

The Nanjing Botanical Garden, Mem. Sun Yat-Sen, China has become one of seven official Science Education Centres for primary and middle schools in Nanjing. To mark this recognition a ceremony was held at the garden on the 13th September, during which the garden was awarded a bronze plate by the Nanjing Education Bureau.

Resources

Green Planet Rescue

Cincinnati Zoo Books announces the publication of Green Planet Rescue: saving the Earth's Endangered Plants by Robert R. Halpern, (Franklin Watts, New York, 1994) The book is aimed at

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matérialisée par la faillite de la culture de la pomme-de-terre. Pour plus d'informations, contactez: National Botanic Gardens, Glasnevin, Dublin 9, Ireland.

Un jardin chinois crée un centre d'éducation

Le Jardin botanique de Nanjing, Mem. Sun Yat-Sen (Chine) est devenu l'un des sept Centres d'éducation à la science pour les degrés primaires et secondaires à Nanjing. Afin de marquer cette reconnaissance, une cérémonie a eu lieu au Jardin le 13 septembre dernier, pendant laquelle le Jardin s'est vu décerné une plaque en bronze par le Bureau d'éducation de Nanjing.

Matériel

Sauvetage de la planète verte

Les éditions du zoo de Cincinnati (USA) annoncent la publication de "Green Planet Rescue: Saving the Earth's Endangered Species", un ouvrage de Robert R. Halpern (Franklin Watts, New York, 1994). Le livre s'adresse à des enfants de 10 à 14 ans et présente l'importance des plantes et de leur conservation. Pour plus d'informations, contactez: Franklin Watts, 95 Madison Avenue, New York, NY 10016, USA.

Vidéo historique

Le Jardin botanique de Rio de Janeiro (Brésil) a produit récemment une vidéo éducative pour les écoles intitulée "Histoire du Jardin botanique". Pour plus d'informations: Jardim Botânico do Rio de Janeiro, Rua Pacheco, Leao 915 22.460-030, Rio de Janeiro, Brazil.

Eaux douces et champignons

Deux nouveaux dossiers éducatifs ont été produits par les Jardins botaniques nationaux australiens (Canberra): "Discover our fascinating fungi" qui comprend des informations sur les champignons australiens et une série d'activités pour les élèves, et "Life in freshwater", un petit livre sur des activités concernant la diversité et les adaptations des animaux et des plantes vivant dans les mares et les ruisseaux du Jardin. Des informations sur ces dossiers figurent dans le

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Jardim Botânico do Rio de Janeiro, Rua Pacheco, Leao 915 22.460-030, Rio de Janeiro, Brazil.

Agua dulce y hongos

El Australian National Botanic Gardens de Camberra (Australia) ha creado dos nuevas carpetas educativas. "Descubrir nuestros fascinantes hongos", que incluye información sobre los hongos de Australia y una serie de actividades para los estudiantes y el folleto "Vida en las aguas dulces" con actividades sobre la diversidad y adaptaciones de las plantas y animales que viven en las charcas y riachuelos de los Jardines. La información sobre estos recursos está en el Catalogo de Recursos Educativos de BGCI y pueden obtenerlos directamente de los jardines (ver dirección arriba).

Planeta verde

Una asociación educativa de Sudáfrica, ECOLINK, ha emprendido un programa "Planeta verde" para promover: la concienciación ambiental, la educación y el desarrollo sostenible en las comunidades rurales. Están elaborando diez folletos en inglés, zulú y soto del norte para explicar los problemas ambientales globales y locales; y a su vez están intentando llenar el vacío educativo entre los niños y sus padres. Los folletos se han elaborado consultando con mujeres campesinas y actualmente están siendo evaluados en el campo. Para más información contactar con: ECOLINK, PO Box 727, White River 1240, Sudáfrica.

Redes

Congreso Anual de la BGEN

36 delegados de 25 jardines botánicos participaron en el congreso anual de 1994 de la Red de Educación de Jardines Botánicos (BGEN) celebrada en el Birmingham Botanical Gardens Base de Reino Unido. Los participantes asistieron a los talleres sobre promoción de la educación en los jardines botánicos, financiación externa y aprendizaje multicultural. A lo largo de esta reunión se constituyó

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children between the ages of 10-14 years and introduces the importance of plants and plant conservation. For more information, contact: Franklin Watts, 95 Madison Avenue, New York, NY 10016, USA.

Historical video

The Rio de Janeiro Botanic Garden, Brazil, has recently published an education video for schools entitled 'History of the Botanic Garden'. For more information contact: Jardim Botânico do Rio de Janeiro, Rua Pacheco Leao 915 22.460-030, Rio de Janeiro, Brazil.

Freshwater and Fungi

Two new education packages have been produced by the Australian National Botanic Gardens, Canberra: "Discover our Fascinating Fungi", which includes information on Australia's fungi and a range of activities for students, and "Life in Freshwater", a booklet of activities on diversity and adaptations of plant and animal life in ponds and creeks of the Gardens. Information about these resources are included in the BGCI Education Resource Catalogue and can be obtained direct from the Gardens (see address above).

Green Earth

ECOLINK, an education association in South Africa, is undertaking a 'Green Earth Programme' to promote environmental awareness, education and sustainable development in rural communities. It is producing ten booklets in English, Zulu and Northern Sotho to explain local and global environmental problems and is attempting to bridge the educational gap between children and their parents. The booklets have been devised in consultation with women and are currently being evaluated in the field. For further information contact ECOLINK, PO Box 727, White River 1240, South Africa.

Networking

BGEN Annual Conference

36 delegates from 25 botanic gardens participated in this year's annual

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Catalogue des ressources en matière d'éducation du BGCI ou peuvent être obtenues directement auprès du Jardin (voir l'adresse ci-dessus).

Terre verte

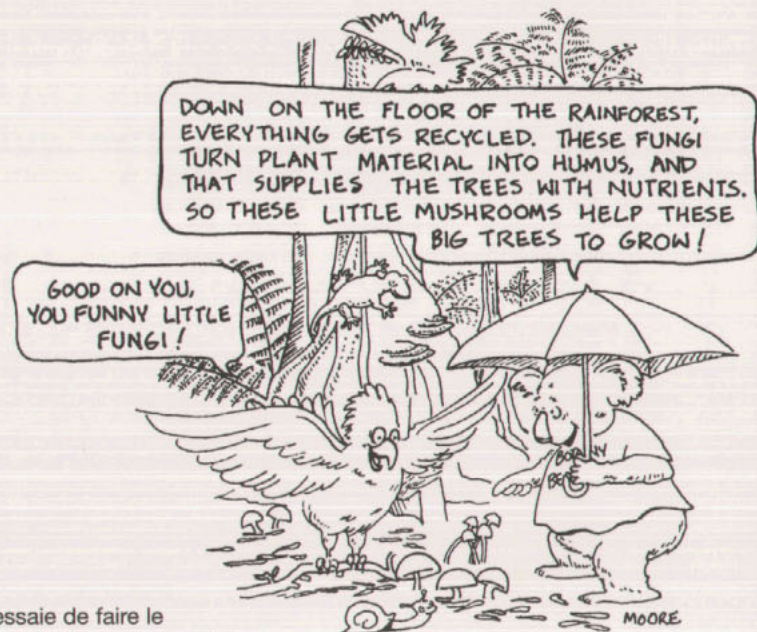
ECOLINK, une association éducative sud-africaine, entreprend un programme "Terre verte" afin de promouvoir la sensibilisation en matière d'environnement, l'éducation et le développement durable dans les communautés rurales. Elle produit 10 brochures en anglais, zoulou et soto du nord afin d'expliquer les problèmes d'environnement locaux ou plus globaux.

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formalmente la BGEN y se eligió un comité para poner en marcha la red. Para más información sobre BGEN contactar con: Timothy Walker, Oxford University Botanic Garden, Rose Lane, Oxford, OX1 4AX, UK.

Red colombiana

El Jardín Botánico Guillermo y Piñeres de Cartagena (Colombia) fue el anfitrión del segundo taller de educación en jardines botánicos colombianos, celebrado durante los primeros días del mes de junio de este año y organizado conjuntamente con BGCI. Asistieron al taller 29 delegados



Elle essaie de faire le pont en matière d'éducation entre les enfants et leurs parents. Les brochures ont été mises au point avec des femmes d'origine paysanne et sont en voie d'évaluation sur le terrain. Pour plus d'informations, contactez: ECOLINK, PO Box 727, White River 1240, South Africa.

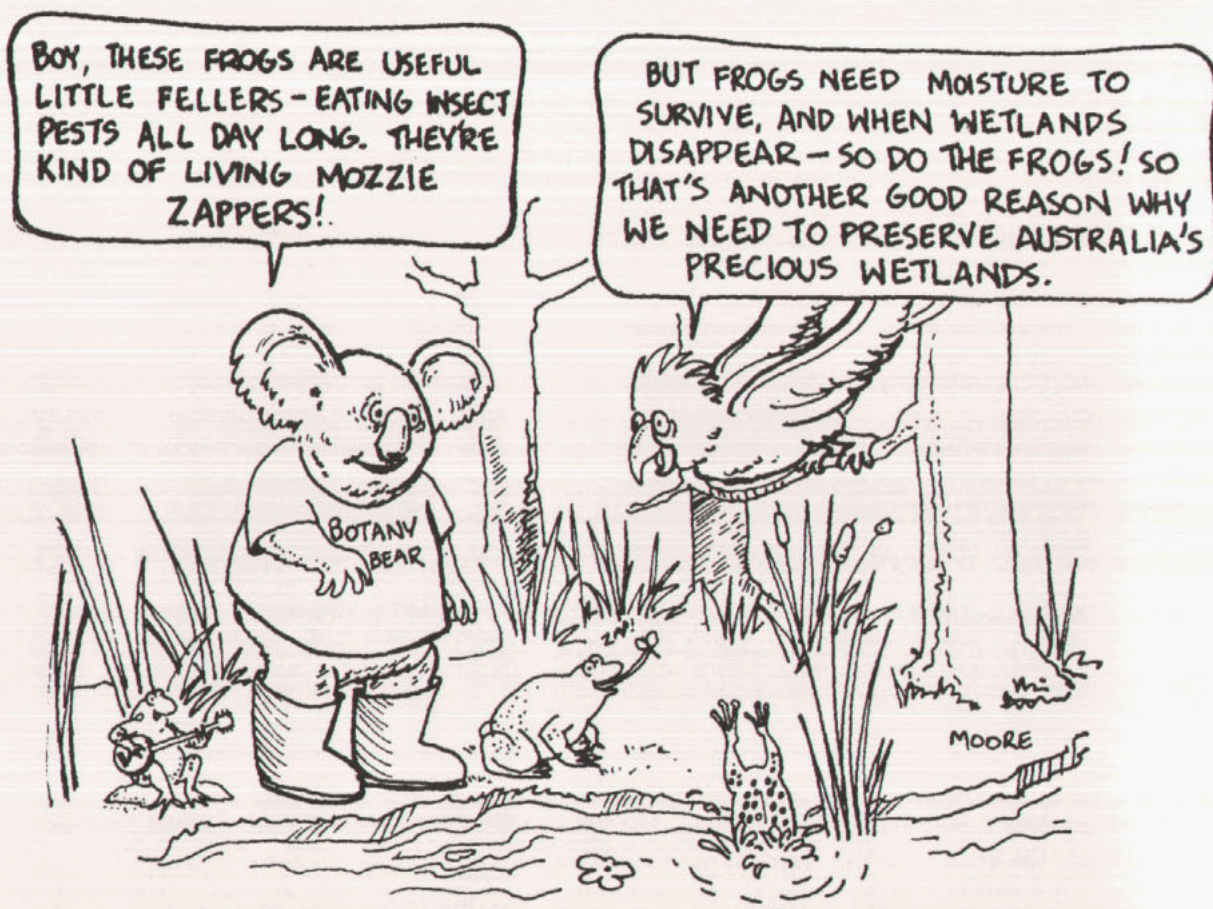
Réseau

Conférence annuelle du BGEN

36 délégués de 25 jardins botaniques ont participé à la conférence annuelle du "Botanical Gardens Education Network" (BGEN) qui s'est tenue à la Base éducative du Jardin botanique de Birmingham (Grande Bretagne). Les participants ont pu assister à des

de varias regiones y organizaciones incluyendo los jardines botánicos. La enseñanza del taller se llevó a cabo con la ayuda de Terry Keller, directora del programa "Reverdecer el Bronx" del New York Botanic Garden (EE.UU.) y de Julia Willison de BGCI.

Se hicieron planes para celebrar el tercer taller en el Jardín Botánico "Joaquín Antonio Uribe" de Medellín. Para más información contactar con: Claudia Elena Martínez y Liliana Salazar A., Jardín Botánico "Joaquín Antonio Uribe", Cra. 52 # 73-298, Medellín (Antioquia), Colombia.



conference of the Botanic Gardens Education Network (BGEN), held at Birmingham Botanical Gardens Base, UK. Delegates attended workshops on botanic garden education promotion, external funding and multicultural learning. During the conference BGEN was formally constituted and a committee was elected to run the network. For further information about BGEN contact: Timothy Walker, Oxford University Botanic Garden, Rose Lane, Oxford, OX1 4AX, UK.

Colombian Network

The 'Guillermo y Piñeres Botanic Garden', Cartagena, Colombia was host to the Second Colombian Botanic Garden Education Workshop, organised in conjunction with BGCI and held in June earlier this year. 29 delegates from a variety of regions

ateliers sur la promotion de l'éducation dans les jardins botaniques, les financements extérieurs et l'apprentissage multiculturel. Pendant cette conférence, le BGEN s'est formellement constitué et un comité a été élu pour faire fonctionner le réseau. Pour plus d'informations, contactez: Timothy Walker, Oxford University Botanic Garden, Rose Lane, Oxford, OX1 4AX, UK.

Réseau colombien

Le Jardin botanique "Guillermo y Piñeres" (Carthagène, Colombie) fut l'hôte du deuxième Atelier colombien pour l'éducation dans les jardins botaniques, organisé en juin dernier conjointement avec le BGCI. 29 délégués de diverses régions et organisations, incluant des jardins botaniques, participèrent à l'Atelier. L'enseignement lors de cet Atelier fut prodigué avec l'aide de Terry Keller,

Red orgánica

La Organic Matter Management Network (OMMN) establecida originalmente en Kenia, se ha difundido ahora a Etiopía, Uganda y Tanzania. Sus objetivos son transferir información, intercambiar experiencias y colaborar en actividades a nivel básico. Los miembros son: organizaciones no gubernamentales, instituciones gubernamentales y otras implicadas en la conservación y protección de pastos. Para más información contactar con: Kenya Institute of Organic Farming (KIOF), PO Box 34972 Nairobi, Kenia.

Próximas Reuniones

Reunión de la AABGA en Montreal

El Congreso anual de la asociación americana de Jardines Botánicos y

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and organisations, including botanic gardens, attended the workshop. Teaching on the workshop was carried out with the help of Terry Keller, Director of the Green Up Bronx Program, New York Botanic Garden, USA and Julia Willison, BGCI. Plans were made to hold the third workshop at the 'Joaquín Antonio Uribe' Botanic Garden, Medellín. For further information contact Claudia Elena Martínez and Liliana Salazar A., Jardín Botánico Joaquín Antonio Uribe, Cra 52 # 73-298, Medellín (Antioquia), Colombia.

Organic Network

The Organic Matter Management Network (OMMN), originally established in Kenya, has now spread to Ethiopia, Uganda and Tanzania. Its aims are to transfer information, exchange experiences and collaborate on activities at grass-roots level. Members include NGOs, government institutions and others involved in conservation and food security. For further information contact Kenya Institute of Organic Farming (KIOF), PO Box 34972 Nairobi, Kenya.

Forthcoming meetings

AABGA meeting in Montreal

The 1995 Annual Conference of the American Association of Botanical Gardens and Arboreta entitled 'From natural to cultural diversity in public gardens' will be held in Montréal, Québec, Canada from 22-25 July. Education will, as usual, be one of the main themes of the conference. For further information contact: AABGA, 1995 Annual Conference Program, 786 Church Road, Wayne, PA 19087, USA.

African Links

An international conference on Environmental Education is planned for 18-21 July 1995 in Kwazulu-Natal, South Africa. African members of BGCI are particularly invited to attend with a view to meeting one another and establishing an African BGCI network. For more information contact: Ally Ashwell, NBI, Private Bag X7, 7735 Claremont, South Africa.

nouvelles

directeur du programme "Green Up" du Bronx (Jardin botanique de New York, USA) et Julia Willison (BGCI). Il est agendé de tenir le troisième Atelier au Jardin botanique "Joaquín Antonio Uribe" (Medellín, Colombie). Pour plus d'informations, contactez: Claudia Elena Martínez and Liliana Salazar A., Jardín Botánico Joaquín Antonio Uribe, Cra 52 # 73-298, Medellín (Antioquia), Colombia.

Réseau organique

Le "Organic Matter Management Network" (OMMN), établi au Kenya, s'est étendu en Ethiopie, en Ouganda et en Tanzanie. Ses buts sont le transfert d'informations, l'échange d'expériences et la collaboration en matière d'activités "vertes" au niveau de base. Font partie de ce réseau des organisations non-gouvernementales (ONG), des institutions gouvernementales ou autre, impliquées dans la conservation et la sécurité des aliments. Pour plus d'informations, contactez: Kenya Institute of Organic Farming (KIOF), PO Box 34972 Nairobi, Kenya.

Réunions à venir

Réunion de l'AABGA à Montréal

La Conférence annuelle de l'Association américaine des jardins botaniques et arboretums (AABGA), intitulée "De la nature à la diversité culturelle dans les jardins publiques", se tiendra à Montréal (Québec, Canada) du 22 au 25 juin 1995. L'Education sera comme d'habitude un des thèmes majeurs de la conférence. Pour plus d'informations, contactez: AABGA, 1995 Annual Conference Program, 786 Church Road, Wayne, PA 19087, USA.

Relations africaines

Une conférence internationale sur l'éducation environnementale se tiendra du 18 au 20 juillet 1995 au Kwazulu-Natal (Afrique du Sud). Les membres africains du BGCI sont particulièrement invités à y participer afin d'établir des liens entre eux et créer un réseau africain du BGCI. Pour plus d'informations, contactez: Ally Ashwell, NBI, Private Bag X7, 7735 Claremont, South Africa.

noticias

Arboreta de 1995 titulado "Diversidad natural y cultural en los jardines públicos" se celebrará en Montreal (Québec - Canada) del 22 al 25 de julio. La educación será, como es habitual, uno de los temas principales del congreso. Para más información contactar con: AABGA, 1995 Annual Conference Program, 786 Church Road, Wayne, PA 19087, EE.UU.

Enlaces africanos

Se ha planeado un Congreso internacional de educación ambiental del 21 al 25 de julio de 1995 en Kwazulu-Natal (Sudáfrica). Están invitados a asistir particularmente los miembros africanos de BGCI con miras a reunir a unos y otros, y de establecer un red africana de BGCI. Para más información contactar con: Ally Ashell, NBI, Private Bag X7, 7735 Claremont, Sudáfrica.

Nombramientos

Australia

Perth

Recientemente el Kings Park y Botanic Garden de Perth (Australia) ha nombrado a Nail Morich como responsable del enlace aborigen. Las funciones que tiene Nail incluyen la formación de 30 guías y el desarrollo de programas aborígenes para los colegios.

Sydney

La Sra. Nerida Gill ha ingresado en la sección de educación del Royal Botanic Gardens de Sydney (Australia) como coordinadora de los programas sociales. Ahora el personal de educación de Sydney esta compuesto por, un coordinador de educación, un coordinador de programas sociales y un horticultor superior.

Hong Kong

El Kadoorie Farm y Botanic Garden de Hong Kong anuncia el nombramiento del Dr. Lawrence K. C. Chau como coordinador de educación. El Dr Chau se hace cargo de responsabilidad es de la Sra. Sian Jones, que ya no trabaja en el centro.

■ news

Appointments**Australia****Perth**

Kings Park and Botanic Garden, Perth, Australia, has recently appointed Nail Morich as Aboriginal Liaison Officer. Nail's duties have recently included the training of 30 guides and the development of Aboriginal programmes for schools.

Sydney

Ms Nerida Gill has joined the Education Section of the Royal Botanic Gardens, Sydney, Australia, as Community Programmes Officer. Education staff at Sydney now comprise a full-time Education Officer, Community Programmes Officer and Senior Horticulturist.

Hong Kong

The Kadoorie Farm & Botanic Garden, Hong Kong announce the appointment of Dr Lawrence K.C. Chau as Education Officer. Dr Chau is taking over the responsibilities of Ms Sian Jones, who is no longer working at the Farm.

▲ nouvelles

Nominations**Australie****Perth**

Le "Kings Park and Botanic Garden" à Perth (Australie) a récemment nommé Nail Morich comme Officier de liaison avec les aborigènes. Le cahier des charges de Nail a, dernièrement, consisté à former 30 guides et à développer des programmes aborigènes pour les écoles.

Sydney

Madame Nerida Gil a rejoint la Section d'éducation des Jardins botaniques royaux de Sydney (Australie) comme Responsable des programmes pour la communauté. Le personnel dans ce secteur à Sydney comprend dorénavant un Responsable de l'éducation à plein temps, un Responsable des programmes pour la communauté et un Horticulteur expérimenté.

Honk-Kong

Le "Kadoorie Farm & Botanic Garden" (Honk-Kong) annonce la nomination du Dr. Lawrence K.C. Chau comme

● noticias

Holanda

Se han hecho dos nuevos nombramientos en educación en el Utrecht University Botanic Gardens de Holanda; la Sra. Rutu de Jonge como coordinadora de proyecto para el tema del jardín que se abrirá en 1995, y la Sra. Akkie Jooose como coordinadora de comunicaciones.

Sudáfrica

El National Botanical Institute de Sudáfrica ha nombrado recientemente a una nueva coordinadora de educación mediante un contrato subvencionado por la Douglas Murray Trust. Cynthia Slattery que previamente fue una educadora voluntaria, será ahora la responsable de desarrollar el programa de visitas escolares, el programa de educadores voluntarios y los programas para los días de lluvia.

El National Botanical Institute espera conseguir dos educadores más para promocionar programas de conexión entre dos de sus jardines, el Kirstenbosch de Ciudad del Cabo y el Witwatersrand Garden de Yohannesburgo. ¡Los jardines estan



■ news

The Netherlands

Two new education appointments have been made at the Utrecht University Botanic Gardens, The Netherlands; Ms Rutu de Jonge as Project Coordinator for the theme garden, which is to be opened in 1995, and Ms Akkie Joose as Communications Officer.

South Africa

The National Botanical Institute, South Africa, has recently appointed a new Education Officer to a contract position, sponsored by the Douglas Murray Trust. Cynthia Slattery, previously a volunteer education officer, will now be responsible for developing the school visit programme, the volunteer education officer programme and the indoor programmes for wet days.

Two Extension Officers are also being sought by The National Botanical Institute, South Africa, to promote linking programmes between two of its Gardens: Kirstenbosch in Cape Town and the Witwatersrand Garden in Johannesburg. The gardens are looking forward to the appointment of these two officers, who will effectively double their education staff complement!

Spain

Nieves Gonzales has left her position as Education Officer for the 'Viera y Clavijo' Botanic Garden, Las Palmas, to join the Marine Research Centre in Las Palmas. As well as running a highly successful education programme, Nieves also co-edited the Spanish section of *Roots* for two years. BGCI is immensely grateful to Nieves, whose tremendous effort has enabled many more education officers around the world to become involved in the international botanic garden education network. We will miss her contribution yet wish her success with her new job.



▲ nouvelles

Responsable de l'éducation. Dr. Chau reprend les responsabilités de Madame Sian Jones, qui ne travaille plus pour le Jardin.

Les Pays Bas

Deux nominations dans le domaine de l'éducation aux Jardins botaniques universitaires d'Utrecht (Hollande): Madame Rutu de Jonge comme Coordinateur de projet pour le "Jardin à thèmes" qui ouvrira en 1995 et Madame Akkie Joose comme Responsable de la communication.

Afrique du Sud

L'Institut National Botanique (Afrique du Sud) a nommé récemment un nouveau Responsable de l'éducation, sous contrat, payé par le "Douglas Murray Trust". Cynthia Slattery, qui était précédemment bénévole à ce poste, sera dorénavant responsable du développement du programme de visites des écoles, du programme concernant les éducateurs bénévoles et du programme en salle pour les jours pluvieux.

Cet Institut pense aussi à la nomination de deux responsables de liaison afin de promouvoir les échanges et les liens entre deux de ces jardins botaniques: Kirstenbosch, au Cap, et Witwatersrand, à Johannesburg. Les jardins attendent la nomination de ces deux responsables, qui devront se dédoubler dans leurs tâches éducatives.

Espagne

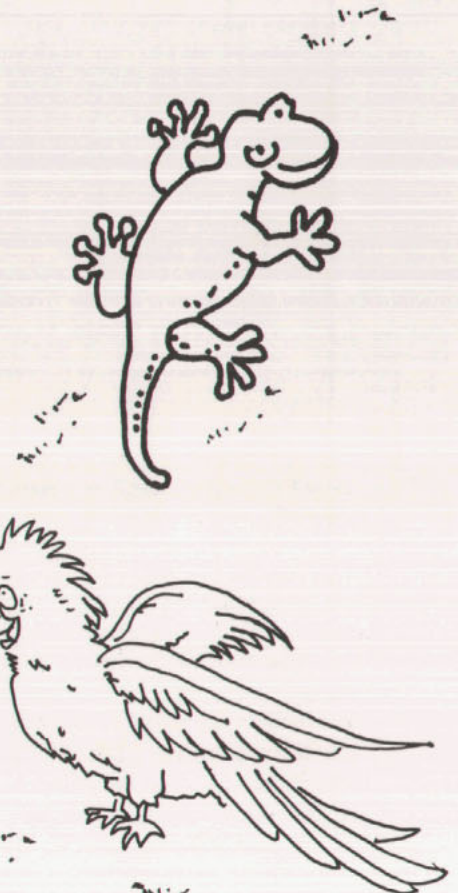
Nieves Gonzales a quitté son poste de Responsable de l'éducation au Jardin botanique "Viera y Clavijo" (Las Palmas, Gde Canaries) pour se joindre au Centre de recherche marine de Las Palmas. Nieves a dirigé un programme éducatif plein de succès, mais était aussi coéditrice de la section espagnole de *Roots* pendant deux années. BGCI est très reconnaissant à Nieves pour son travail considérable qui a permis à beaucoup d'éducateurs dans le monde de participer au réseau créé par le BGCI. Sa contribution nous manquera et nous lui souhaitons plein succès dans son nouveau travail.

● noticias

muy interesados en el nombramiento de estos dos educadores ya que doblarán su dotación de personal de educación!

España

Nieves González ha dejado su trabajo como coordinadora y responsable de educación del Jardín Botánico "Viera y Clavijo" de Gran Canaria para incorporarse a un Centro de Investigaciones Marinas (ICCM) de Gran Canaria. Además de poner en marcha con éxito un programa de educación, Nieves también ha sido coeditora durante dos años de la sección en español de la revista *Roots*. La BGCI le está muy agradecida porque su esfuerzo ha permitido a muchos educadores del mundo integrarse en la red internacional de educación en jardines botánicos. Echaremos de menos su contribución, sin embargo le deseamos éxito en su nuevo trabajo.



Faire ressortir la quintessence
de vos expositions

Aprovecha tus exposiciones

Making the most of exhibitions

Do you want to make the most of your exhibitions?

Although many exhibitions will comprise a variety of media, for example audio visual aids, tableaux and models, we can only concern ourselves here with graphic panels and small-scale exhibits.

Before any design is started, some basic questions need to be asked, and decisions made, which will help you to achieve a successful exhibition.

Who are your visitors?

What is the age range and composition of your expected visitors? What will be their previous knowledge of the subject and what vocabulary will they be used to?

What do you want to say to the visitor?

What are your educational objectives? What are your priorities? What do you want this visitor to go away knowing or doing?

What does the visitor want to know?

This may be very different from what you want to tell them and some research here, before the exhibition is developed, could be extremely helpful. Although museum visiting has increased over recent years, always remember that the majority are visiting in their leisure time. The visit to them is a recreational activity to be enjoyed. The weight of information that these visitors will require is therefore likely to

be far lighter than that for the specialist. Many visitors will want to relate the information back to themselves and their lives. You should try to help them make these links.

How are you going to get the information across?

What are the information needs of the visitor throughout the exhibition? How long will the 'average' visitor stay in the exhibition? Think through the process of the visit and decide what information needs to be given and when.

All visitors will need, on arrival, a brief introduction to the exhibition. This not only gives them the basic information that they need to explore the individual exhibits, but it should also take them out of their own environment and place them in a new environment appropriate for the theme of the exhibition. For example, visitors may need help adjusting to a colourful, scented botanic garden after stepping from dusty, grey, urban streets.

Think too, at this stage, what will be the ending or climax of the exhibition. This should be one of the most memorable experiences of the visit and should briefly summarise what the visitor has just seen. This is the encapsulation of knowledge that the visitor will take away and remember.

In between is the exhibition itself with as much interest, excitement, stimulus and provocation as resources allow. But try to pace the visit so that there are high moments interspersed with calmer areas allowing reflection. Too many highs, too closely together,

only cause confusion. Lastly, always ask yourself "why should we expect a visitor to travel through the hubbub of our city streets, carrying with them the normal mental and physical distractions of everyday life, and then expect them to stand for 30 minutes or more and read lots of words, look at lots of objects and be told lots of facts?" The more we can break down this horrendous experience, the more enjoyable and appreciated the visit will be.

The illustrations overleaf suggest just some ways of communicating with the visitor more effectively and with some fun.

Recommended reading:

On Display: A Design Grammar for Museum Exhibitions, Margaret Hall, Lund Humphries Publishers, London, UK. ISBN 0 85331 4551.

▲ résumé

Cet article du Centre pour l'interprétation environnementale (CEI) montre comment un Jardin botanique peut développer avec succès des expositions à une échelle réduite et des panneaux graphiques. Pour mener ceci à bien, il démontre que certaines questions de base doivent être posées avant de s'embarquer dans une réalisation. Des questions comme: Qui sont les visiteurs? Que voulez-vous leur communiquer? Que veulent-ils savoir? Comment allez-vous leur transmettre l'information? sont à considérer. Le scénographe de

l'exposition est encouragé à réaliser celle-ci avec le point de vue du visiteur. Des suggestions pour la typographie, le positionnement de l'exposition et des lectures sont recommandées.

● resumen

Este artículo del Centre for Environmental Interpretation (CEI) nos demuestra cómo un jardín puede desarrollarse (desplegarse) a través de pequeñas exposiciones y paneles. Para llevar a cabo esto, se debe tener en cuenta que necesitamos preguntarnos algunas cuestiones básicas antes de embarcarnos en un diseño. Tenemos que considerar cuestiones tales como: ¿Quiénes son nuestros visitantes? ¿Que es lo que deseamos mostrarles? ¿Que es lo que ellos desean saber? ¿De dónde vamos a obtener la información que les daremos?

La idea de una exposición se verá recompensada si pensamos en el diseño desde el punto de vista del visitante. Damos sugerencias para tipografía, lugares para exposiciones así como sugerencias de bibliografía.

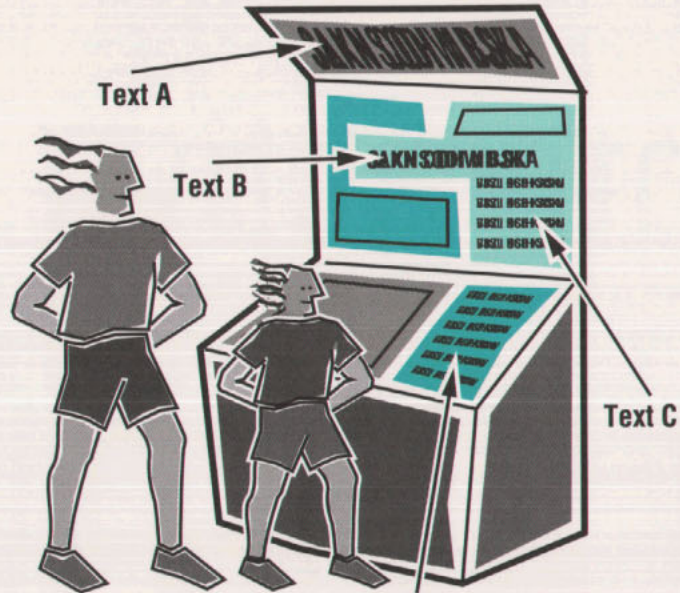
Remember that visitors, particularly children, can learn through touch.



Some mechanical interactive exhibits are cheap to produce. Devices such as hinged flaps can be pushed aside to reveal hidden information. Here, the grass is removed to reveal a section of the soil showing a grub eating the roots of a plant.



Feeling boxes are cheap and effective exhibits. Here, visitors can explore hidden objects with their hands to guess texture, size and identity



Text D

Information should be grouped into hierarchies to suit the needs, the age and the experience of the visitor. Text A alerts the viewer to the subject of the exhibit and can be seen at a distance over the heads of the visitors. Text B provokes the curiosity of the viewer, perhaps by asking a question. Text C provides the basic information. Text D can be used to give supporting information to either a child or specialist.

Note, the text should be as clear and well laid out as possible to maximise legibility even for those with impaired vision.

- The main text should be short (no more than 100 words) and in large size type (eg 48pt - 60pt)
- The line lengths should be short (eg 10 words per line) and the lines of unequal lengths (ie unjustified)
- It is usual for display or exhibition text to be in a sans serif type face as most research has found it to be more easily read.
- Close to the exhibition panel, the adult's field of vision is restricted. The main text should be between 1600mm and 1000mm from the ground.

Also, be aware if your exhibition is likely to attract a large number of children or the elderly. On these occasions a lower viewing position will be necessary.

Gordon Rankmore, Centre for Environmental Interpretation, The Manchester Metropolitan University, St Augustine's, Lower Chatham Street, Manchester, M15 6BY, UK.

Interactive exhibits

Situated in an oasis of desert land in the heart of metropolitan Phoenix, the Desert Botanical Garden is one of the only botanical gardens in the world dedicated to the study of deserts, desert plants, desert ecology, and desert conservation. For fifty-five years, the Desert Botanical Garden has served as a unique educational and research institution, attracting scientists and interested visitors from around the world.

The Educational Challenge

Like most botanical gardens, our Garden was not planted in beds designed to teach scientific concepts. Consequently this has presented us with the following challenges: How can we use our spectacular and dramatic plant collections to stimulate the visitors' interest in deserts, desert plants, and conservation? How do we preserve an important

scientific collection while encouraging visitors to explore, observe, touch, and experience the Garden as an outdoor learning centre with participatory exhibits?

The Search for Solutions

The search for solutions to this educational challenge has taken us on an exciting ten-year journey. Some of the solutions have been inexpensive and easily funded through our existing operating budget, while others have been possible only with the addition of outside funding.

Plants and People of the Sonoran Desert Trail

In 1986, we were awarded a matching grant from the National Endowment for the Humanities to build the Plants and People of the Sonoran Desert Trail, a participatory exhibit which introduces visitors to the ethnobotanical importance of desert plants. This exhibit is now the most popular area of the Garden and attracts most visitors and over 95% of all school groups.

Comprehensive Desert Exhibit

In 1992, the Garden received a three-year grant from the National Science Foundation to transform our plant collections into a Comprehensive Desert Exhibit. The Comprehensive Desert Exhibit features a hierarchy of exhibits, including the Plants and People of the Sonoran Desert Trail and three additional participatory exhibits -



Families and children playing Desert Detectives game in Garden

Photo:
Pam McCarroll



Desert Discovery Trail, Sonoran Desert Ecology Trail, and The Center for Desert Living Trail.

Summary of Successful Solutions

Listed below you will find a brief summary of four successful solutions that we are currently using to transform our desert plant collections into participatory exhibits.

1 Touch Carts and Investigation Stations - To the delight of visitors of all ages, Garden touch carts have changed our focus from "Don't Touch" to "Please Touch". Since 1985, we have offered visitors the chance to use

their senses to explore plant items displayed on touch carts which can be moved throughout the Garden. Trained volunteer docents offer visitors a chance to taste prickly-pear cactus jelly just across the path from a dramatic prickly-pear collection, or to hold a callused nest that a woodpecker builds high inside a saguaro cactus.

With funding from the National Science Foundation, we have created investigation stations that provide room for visitors to examine the hands-on items more closely and to ask questions of our volunteer docents. When not in use, these investigation stations, which are off the main trail, double as comfortable seating areas.

2 Seasonal Signs - "What is that flower that smells like grape bubblegum?" "Is that a fruit or flower on that cactus?" Years of similar questions from our visitors prompted us to develop a temporary sign programme that addresses the seasonal changes in the Garden. To encourage visitor participation, the signs include questions that encourage close observation of the plant. Some of the signs are even hand-written and signed by our horticulturists, giving our visitors a glimpse into the inner workings of our scientific institution. Visitors are captivated by the seasonal signs which are displayed informally on clipboards throughout the Garden.

3 Desert Detective Game
As families arrive at the admissions booth, they are offered a free Desert Detective game which they can use to explore the Garden. Children are invited to join the Desert Detective Agency and to assist in solving clues which relate to "The Case of the Living Desert". Parents often find themselves enthusiastically assisting in the search for hummingbirds visiting the tubular flowers of the ocotillo or for silky hairs protecting the growing tips of spiny cacti. The related information that accompanies each clue helps to explain basic concepts of desert ecology and usually serves as a springboard for animated conversations between children and their parents. After completing the game, children enjoy filling out the Detective Agency certificate which names them Desert Detectives, Cactus Captains, or Super Saguaro Sleuths.

4 Interactive Displays - Interactive displays at the Desert Botanical Garden are made up of interpretive signs and related activities which teach people about plants in the display. The interpretive signs are carefully designed to answer visitors' questions and to attract visitors with dramatic illustrations and interesting titles. The related activities enhance the instructional value of the display by involving visitors directly with the plants and the important ideas being communicated.

The Plants and People of the Sonoran Desert trail, our first participatory exhibit, is well-known for its five interactive displays. One of the most

A visitor pounds a yucca leaf into a paint brush at the Interactive Display - Plants and People

Photo:
Pam McCarroll

popular is situated in a mesquite tree forest and features an interpretive sign about the ways desert people have used the tree for food and shelter. In addition, there is an activity area in the forest where visitors pound mesquite bean pods into edible flour. In another interactive display, visitors are given an opportunity to view mature yucca plants, read a sign about the uses of yucca, and make a yucca paintbrush to take home. As our other participatory exhibits are developed, more interactive displays will be created to highlight our plant collections and to involve our visitors in activities which expand their understanding of desert ecology, conservation and science.

Sharing Information

If you would like more information about the development of our participatory exhibits or if you are willing to share information on the subject, please contact us.

Kathleen Socolofsky, Director of Education, Desert Botanical Garden, 1201 North Galvin Parkway, Phoenix, Arizona, 85008, USA.

▲ résumé

Transformer une collection de plantes en une exposition interactive

Il y a 10 ans, le "Desert Botanical Garden" (USA), a relevé le défi de trouver des moyens par lesquelles les collections pourraient être utilisées pour stimuler l'intérêt du visiteur pour les déserts, les plantes qui y poussent et leur conservation. Quelques solutions peu onéreuses furent prises en charge par le budget interne du Jardin alors que d'autres ne purent être réalisées que grâce à des appuis extérieurs. L'article décrit quatre exemples utilisés avec succès dans le programme d'expositions interactives du Jardin:

1. "Touch Carts and Investigation Stations" qui offre au visiteur la chance d'utiliser leurs sens afin d'explorer des exemplaires de plantes.
2. "Seasonal Signs": qui encourage une observation rapprochée des plantes
3. "The Desert Detective Game", un jeu gratuit pour la famille afin d'explorer le Jardin
4. "Interactive Displays", qui donne un enseignement aux gens sur les plantes présentées dans les massifs.

● resumen

Transformar colecciones de plantas en exposiciones interactivas

Hace 10 años el Desert Botanical Garden (EE.UU.) hizo frente a reto de buscar la forma en que sus colecciones pudieran ser utilizadas para estimular el interés de los visitantes por las zonas desérticas, sus plantas y su conservación. Algunas soluciones de bajo coste fueron subvencionadas a través de los presupuestos del Jardín, mientras que otras fueron posibles gracias a subvenciones externas. Este artículo describe cuatro programas de exposiciones interactivas usados en el jardín:

1. "Carro de comunicaciones y estaciones de investigación" ofrece a los visitantes la ocasión de usar sus sentidos para explorar partes de las plantas.
2. "Señales estacionales" fomenta la observación cuidadosa de las plantas.
3. "El juego del detective del desierto", es un juego para que las familias exploren el jardín.
4. "Muestras interactivas", para enseñar a las personas sobre el uso de las plantas mostradas.



Investigation Station on the Desert Detectives Trail. Visitors of all ages enjoy holding the nests of desert birds

Photo:

John Nemerovski

Planimals invade

What were 'planimals'? Why did these mysterious creatures invade the Adelaide Botanic Garden in Australia? What have they got to do with learning in a botanic garden?

'Planimals' were part of a unique ecological trail-cum-art exhibition at the Adelaide Botanic Garden. Aptly entitled 'Planimal Art', this exhibition was the creation of year one to year seven students from the Hillcrest Primary School, who worked alongside practising artist and teacher, Audrey Emery, to explore some of the intriguing interrelationships between Australian plants and animals. Support in the form of production and education materials came from the Adelaide Botanic Garden.

The project began with the children visiting the Garden to observe the plants that would feature in their paintings and to hear stories about the links between these plants and specific Australian animals. Some of the stories depicted in their paintings included: how rainforest is spread by cassowary birds; how wasps force wattles to make gall homes for them; and how koala bears are able to overcome the toxic defenses of gum leaves.

Other themes related to: bird trapping plants, pollination, seed dispersal, camouflage, animal homes and seed germination. Back in the classroom this ecological theme was further developed as part of the school environmental studies programme.

Working under Audrey's guidance, the children painted onto large, individually shaped, twin plywood sheets using durable, waterproof paint. The plywood sheets were then wired



The students were involved in all stages of producing the exhibition

together at the top to form free standing sandwich boards and anchored to the ground with pegs. The finished work was colourful and captivating with each piece relating to a particular story about a plant/animal interrelationship.

The twenty-one colourful pieces were placed along a winding trail through the Australian forest section of the Garden. Each painting was located next to the plant it featured. The informal setting of this part of the Garden, with its tall majestic gums, created an appropriate Australian bush atmosphere. An official launch gave public recognition to the work done by the children and their school, and from the comments, such as "I did this one, isn't it great?", it was clear that the children took great pride in seeing their work on public display.

To accompany the exhibition an interpretive pamphlet and activity sheets were produced. The pamphlet guided people through the exhibition

and told the environmental story behind each art piece. The activity sheets helped students focus on the links between the artwork and the living plant. Teachers used the interpretive materials as a basis for impromptu, mobile lessons.

The exhibition was used in a variety of ways by over four thousand visiting students. For the very young there was the irrepressible urge to rush ahead to solve the mystery of what 'planimal' was around the next bend. Older students often clustered in small groups with parents or teachers to view the art and discuss its links with the nearby plants. Comments from regular visitors indicated that they appreciated the way in which the exhibition added a different dimension to their knowledge of plants in this familiar section of the garden. Feedback indicated that visitors enjoyed the children's art and at the same time gained a greater awareness of how living things are interconnected.

One clear point to emerge from this project was the effective role the visual arts can play in learning about the outdoor environment. Similar exhibitions using local environments such as school grounds, nearby parks or bushland, could be equally as successful. A variety of themes are possible depending on the local environment or garden collection in which the art work is to be placed. Topics could be specific and focus on local flora or they could be more wide ranging and feature nearby habitats and ecosystems.

Students can be involved in all stages of producing the exhibition which include:

- researching the topic
- creating the artwork
- preparing interpretive pamphlets and student activity sheets
- installing the exhibition
- officially launching the exhibition
- promoting and publicising the project
- visiting the exhibition

These activities provide the opportunity for an across the curriculum approach to learning about the environment. Subject areas touched on include language, art, science, geography and technical studies. Students can also develop their social skills by acting as exhibition guides for other students. When the exhibition is finished the art pieces can be put on permanent display in the school or local community centre.

Planimal Art was a partnership between artist, school community and botanic garden. It provided people with a powerful and enjoyable way of learning about the natural world in a relevant outdoor setting. The success of this project highlights how thematic visual arts programmes can raise community awareness about the learning experiences to be had in living museums such as botanic gardens.

Steve Meredith, Education Officer, Botanic Gardens of Adelaide and State Herbarium, North Terrace, Adelaide, South Australia 5000. Tel (08) 228 2322; Fax: (08) 223 1809.

▲ résumé

Invasions "planimales"

"Planimal Art" était le titre d'une exposition et d'un sentier artistiques de plein-air organisés par le Jardin botanique d'Adélaïde en Australie.

Le but du projet était de proposer aux enfants l'exploration des interrelations entre les plantes et les animaux australiens, et de créer leur propre exposition.

Le projet commença avec les enfants visitant le Jardin botanique. A la suite de recherches supplémentaires à l'école, les enfants créèrent 21 oeuvres d'art. Ces dernières furent placées le long d'un parcours et un prospectus d'interprétation fut produit pour guider le visiteur à travers l'exposition. Des feuilles d'activités furent aussi produites, afin de focaliser l'attention des élèves sur les liens entre les végétaux et les oeuvres placées à côté d'eux.

"Planimal Art" fut un partenariat entre artistes, écoles et Jardin botanique. Il démontre clairement le rôle effectif que peut jouer l'art visuel dans l'apprentissage en matière d'environnement.

● resumen

nos invaden los plantanimals

"Arte plantanimal" fue el título de una exposición para niños sobre sendas ecológicas y arte que se celebró en el Adelaide Botanic Garden de Australia. El objetivo del proyecto era que los niños descubrieran la relación entre las plantas y los animales de Australia para crear sus propias exposiciones.

El proyecto empezó con la visita de los niños al jardín botánico, continuando la investigación del tema en el colegio, donde realizaron 21 obras de arte que se colocaron a lo largo de la senda. Se hicieron folletos para guiar a los visitantes a través de la exposición, también se elaboraron hojas de actividades que atraerían la atención de los estudiantes acerca de la relación que existe entre la obra de arte y la planta viva.

"Arte plantanimal" fue una relación entre artista, comunidad escolar y jardín botánico, demostrando claramente el importante papel que el arte visual puede jugar en la enseñanza del medio ambiente.

Each painting was located next to the plant it featured, along a winding trail through the Australian forest section of the Garden



construction de panneaux d'exposition
hacer exposiciones de paneles

Building display panels

The following panels are easy to assemble and disassemble. They can be set up in different arrangements and, being light and strong, they are easy to transport. The following instructions explain how to build one panel and two stands. From this basic model, large stand-alone exhibitions can be built.

Stands

You will need two sections of log (about 25cm in diameter) and two lengths of timber ((200cm X 4cm X 4cm). The timber can either be square or round in shape.

Cut a square or round hole (4cm X 4cm) through the centre of the log sections. Make sure the hole is at right angles to the surface of the log section. If it deviates the stand will not be upright, and it will be difficult to properly attach the panel (Fig. 1).

Insert the stands into the holes. Slight deviations from the upright position can be corrected by driving in wedges.

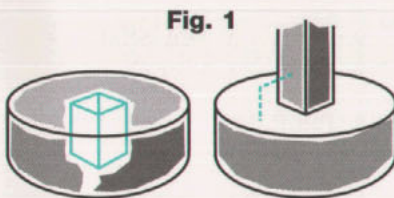


Fig. 1

Panel

The panel consists of a frame sandwiched between two thin (4mm) sheets of plywood. The frame lends rigidity and strength to the panel. Construct the frame using lengths of

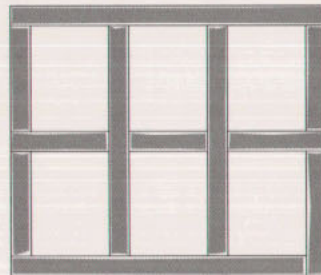


Fig. 2

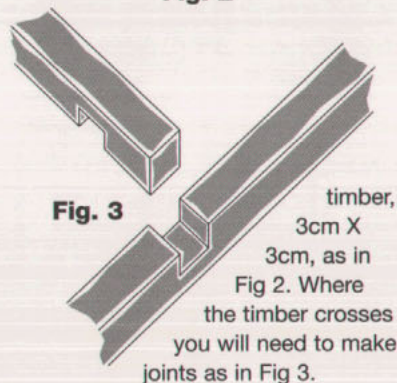


Fig. 3

timber,
3cm X
3cm, as in
Fig 2. Where
the timber crosses
you will need to make
joints as in Fig 3.

Pictures and objects will be attached to the plywood. Heavier objects will have to be anchored in the frame. If you are planning on exhibiting something heavy you may want to insert an additional strut in the appropriate place.

Apply latex glue to one side of the frame and place the sheet of plywood on top. Nail it on. Do not space the nails any further than 10cm apart. Do the same with the other side. Smooth the edges with sandpaper and finish with woodstain or varnish.

Attaching the panels

To attach the panel to the stand you need to fix something to the top of the panel that will hook into the top of the stand.

1 Saw (or file) a 3cm length off a fat nail. Drive the nail dead centre into the top stand so that about one centimetre still sticks out (Fig. 4). You must drill a hole slightly smaller than the nail or the wood will split.

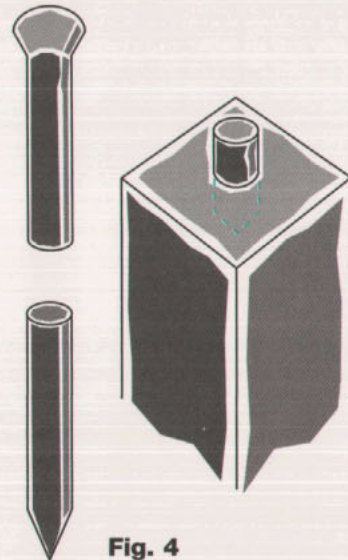


Fig. 4

2 Make two metal latches from sheet iron, as shown in Fig. 5. The large hole should be slightly bigger than the nail on top of the stand. The smaller ones should be big enough to accommodate 15mm screws.

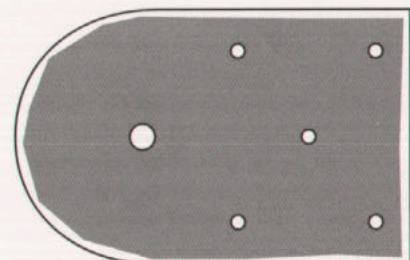


Fig. 5

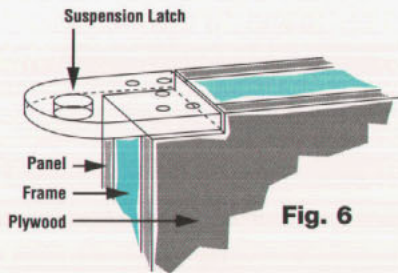


Fig. 6

3 Screw the metal latches to the top of the panel as shown in Fig.6. The two latches bear the whole weight of the panel so you must use screws, not nails, to attach them to the panel.

4 You can now slip the panel latches on the nails. You can add more panels to the left and to the right. Only one stand is required for an additional panel because two panels can share one stand.

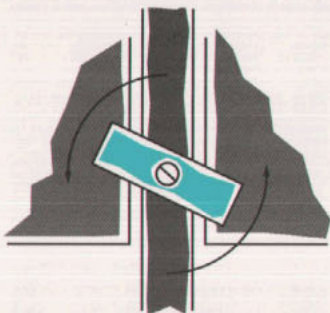
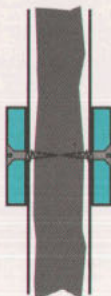
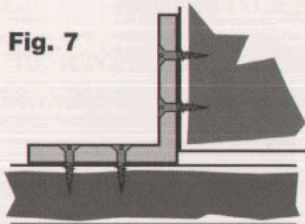


Fig. 7

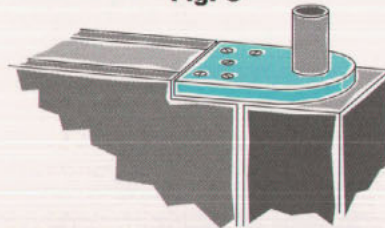


5 If the panel seems too wobbly at the bottom edge, you can fasten it with a small piece of wood screwed to the stand. This piece of wood swivels around its single screw support and fastens or releases the panel quickly.

Iron brackets screwed to the lower edge of the panel and to the stand are not so easily un-done, but may be better if the position of the panel is permanent (Fig.7).

Although square posts will probably be easier to obtain than round posts, when the panels are attached together they will only form a straight line (Fig.8).

Fig. 8



If you want to arrange the panels at different angles then you will need to use round stand posts. Where two panels meet each other at an angle, they can be secured at the lower panel edge with a wedge shaped piece of wood and a long screw (Fig. 9)

Occasionally two panels will need to be positioned at an angle of less than 90 degrees to each other. Placing a smaller, third panel between the panels, as indicated in Fig. 10, will reduce the negative visual impact of a narrow corner. This panel can be made from 10mm plywood and fitted with a device that hooks into the top edge of the adjoining panels.

From 'Guidelines and Techniques for Environmental Interpretation' by Klaus Berkmüller.

▲ résumé

Construction de panneaux d'exposition

Cet article explique comment construire des simples panneaux de présentation qui peuvent se monter et se démonter facilement. Les panneaux sont interchangeables, légers et solides, ce qui permet un transport facile. A partir de cet exemple de base, on explique comment il est possible de monter un exposition avec cet unique support.

● resumen

Hacer exposiciones de paneles

Este artículo explica cómo hacer una exposición de paneles sencilla que sea fácil de armar y desarmar. Los paneles se pueden intercambiar, son livianos y fuertes, lo que les permite su fácil transporte. A partir de este modelo básico se explica cómo se puede hacer una exposición en un único soporte.



Fig. 9

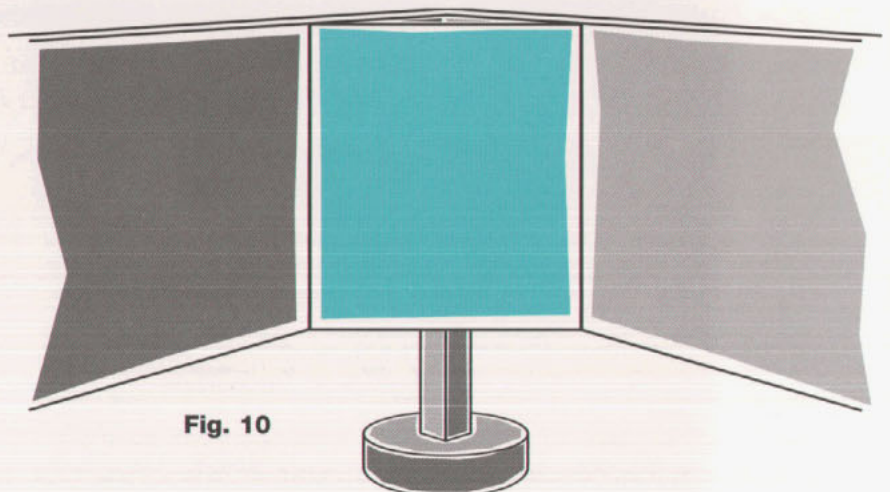


Fig. 10

Setting up

There are generally two ways of displaying information in an exhibition:

- 1 Systematically - laid out in some explicit order: chronological, scientific, biological or evolutionary.
- 2 Thematically - laid out as a story, around a central theme.

In recent years there has been a strong move towards thematic displays, as 'story' titles make evocative and inviting exhibition themes. However, the two methods can be mixed so that a thematic exhibition can be chronologically ordered.

Ordering information

Ordering information will effect the planning of an exhibition site. Even the smallest exhibit will need to have the layout of information considered. Signs and text panels will encourage visitors to follow a route but other methods such as marked pathways (for example with arrows, footprints or tyre marks) and images that 'point' in the right direction could also be used.

Lighting

Lighting is integral to any exhibition and important to consider before laying out the floor plan. If no artificial lights are to be used and the exhibition is to be sited inside, then the room needs to be bright. Care needs to be taken that erected panels are not blocking out any light, unless a particular ambience is required. Be aware that even if daylight from rooflights and windows is sufficient, it can fall in the 'wrong' places and, if

areas of the floor and walls are brighter than the exhibits, visitors can be distracted.

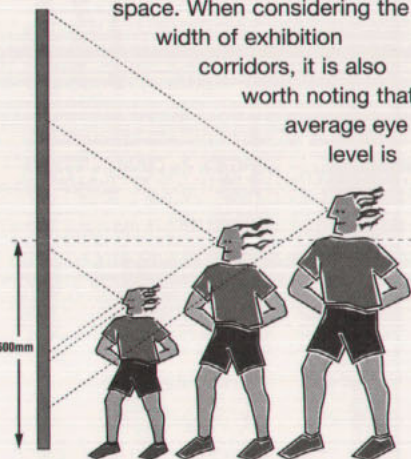
Using artificial lights is a complex business and, although there is insufficient space here to go into the technicalities, it is worth pointing out that incorrectly placed lighting can cause problems such as glare and reflection as well as high fuel bills!



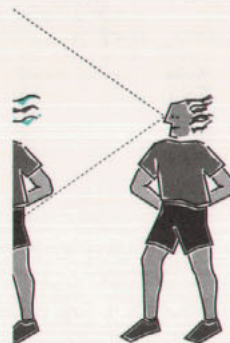
Floor plans

If the exhibition is to be sited inside, you will need to consider the dimensions of the room. The overall plan must allow visitors to flow through the exhibition and enable sufficient space for one person to stand and look at the display while others pass behind.

People with disabilities, for example in wheelchairs, may need more space. When considering the width of exhibition corridors, it is also worth noting that average eye level is



about 1600mm from the floor (see diagram). If a vertical display panel is approximately one metre high and one metre off the ground the viewer will have to be about a metre away from it to view or 'read' a square metre of it comfortably. If you mount a display that starts near



floor level and rises to three metres up, then the visitor will need to view it, initially, from at least three metres away.

By designing a floor plan, you are organising the movement of visitors. A narrow corridor is easy to arrange

but will only be suitable for a linear exhibition. Other arrangements, although appearing to allow random access to displays, can still be tightly controlled and will enable you to be more creative. Bays, for example, can be organised in such a way that they indicate that some of the material is subsidiary to the main displays and visiting it is optional. Floor plans for free-standing exhibitions (island sites) have the unique problem that visitors will approach it from all directions. This makes it difficult to organise information logically and you will need to use various devices to encourage visitors to move in the direction you want, for example, by placing the most eye-catching feature at the beginning of the story.

As has been shown, the size and layout of any exhibition will depend on many factors such as; budget, available resources, space, subject matter and creativity. The following floor plans, while not taking any of these considerations into account, are intended to give you an idea of the various ways in which an exhibition could be arranged.

References

Designing Exhibitions, Giles Velarde, The Design Council, London, UK. ISBN 0 85072 223 3.

On Display: A Design Grammar for Museum Exhibitions, Margaret Hall, Lund Humphries Publishers, London, UK. ISBN 0 85331 4551.

The Design of Educational Exhibits, R.S.Miles, Unwin Hyman Ltd, London. ISBN 0 04 445078.

▲ résumé

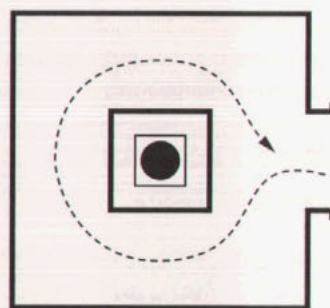
Monter une exposition

Cet article traite de la présentation d'exposition en fonction l'ordre de l'éclairage ainsi de l'exposition. Il propose des concepts concernant la largeur des allées et des plans de présentation. Ces plans suggèrent des idées afin que le flux des visiteurs se déroule dans la direction souhaitée par l'organisateur.

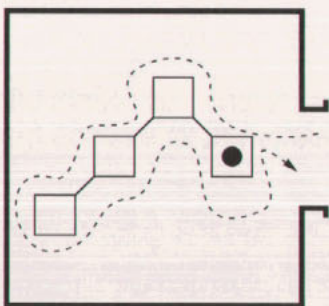
● resumen

Montar una exposición

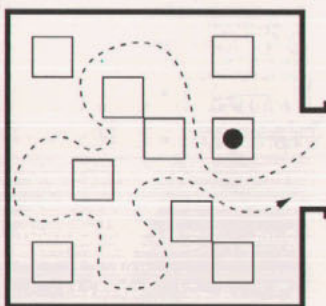
En este artículo se hacen consideraciones sobre la colocación de las exposiciones con miras a ordenar la información, la iluminación y la distribución. Se hacen sugerencias sobre la amplitud de los pasillos y así mismo se ofrecen varias soluciones de distribución para que los visitantes se muevan alrededor de la exposición en la dirección deseada.



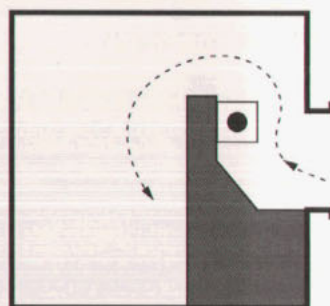
a) The island display, the main route round it, with no options



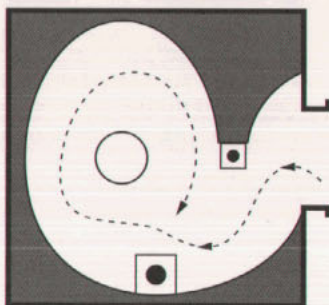
b) The linked 'archipelago', a cluster of objects on the main route with some points of emphasis



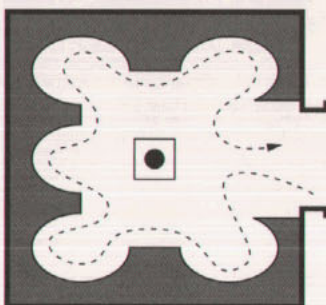
c) The 'archipelago' forming a mosaic of objects or information with a point of emphasis to draw visitors into the room



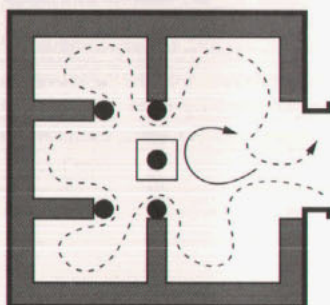
d) The arresting entry point pulling visitors into the room



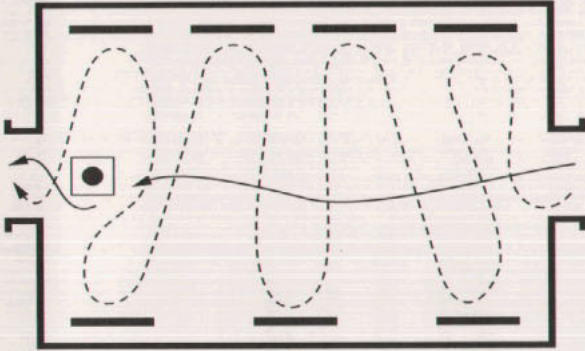
e) pulling visitors into the room in order to encourage them to view a chronological display or storyline in the desired order



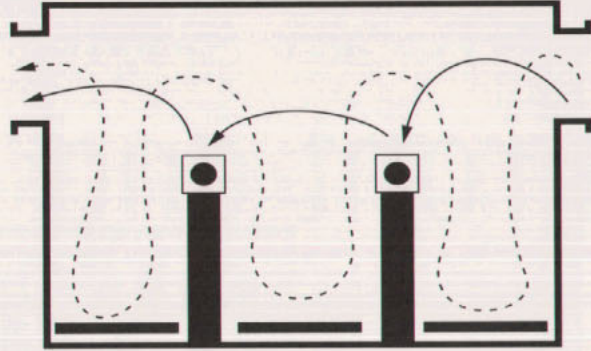
f) The central reference point with associated material in surrounding bays



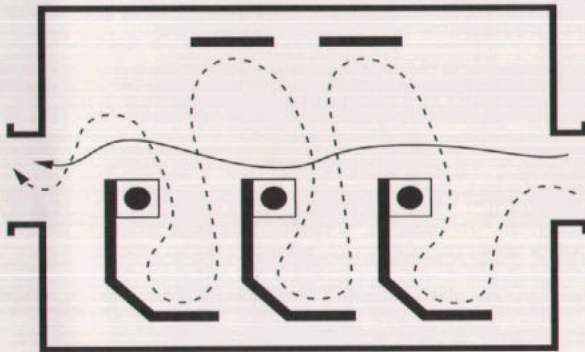
g) Featured objects draw visitors to related material in each section



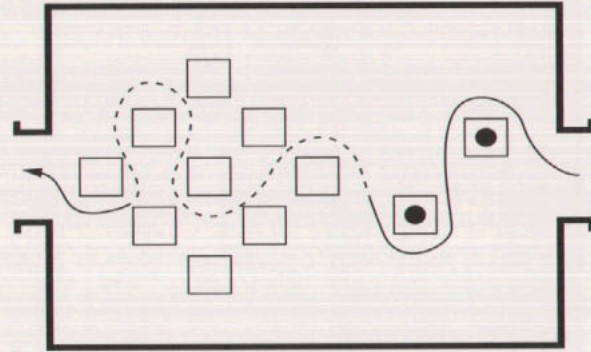
h) Corridor display with fast and slow routes, the object of special importance providing a 'draw' at the end of the room



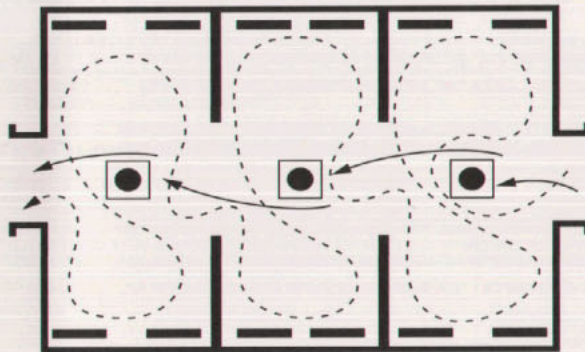
i) The 'comb' planning device, with the fast lane attracted only to the tips of the comb's 'teeth'



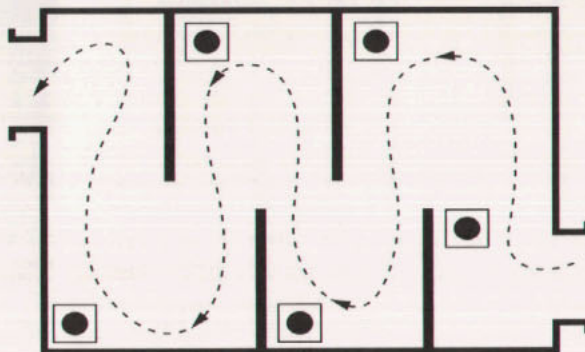
i) and j) The corridor divided into bays with emphasis points placed to 'pull' visitors through



m) Providing a change of pace within a room, with two single points of emphasis leading to a meander through clusters of exhibits



n) A feature at the entrance with choice of route, right or left, leading to a vista with an object of special importance to draw visitors through the rest of the room



k) The 'interlocking comb' device where visitors are forced to pass every part of the display and are pulled through by points of special emphasis

Note: In all illustrations, 'pacing lines' are indicated by:

- * solid line = fast lane
- * dotted line = slow lane

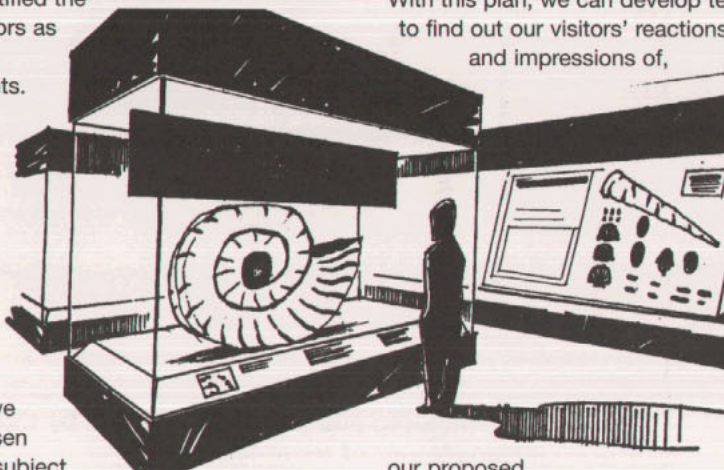
Manipulating and pacing the visitor by the arrangement of room plans

Front end evaluation

Creation of even the simplest exhibit or educational programme can become a long, complex process whose smooth passage is prone to upset by any number of contingencies. For example, budget estimates are not always accurate, optimistic production schedules fail to provide enough time and objects or even services are unavailable when needed. Curators may even feel that a subject has been oversimplified and needs to be expanded upon. While events like these often alter, or make impossible, the completion of a programme that is true to its original conception in every detail, deviations from a plan need not become a source of disappointment for developers and designers if the goals of the exhibit have been adhered to.

But how do we set these goals? Of course, as developers, we've already identified the visitors as our clients.

We've chosen the subject of our exhibit, and we know our budget and completion date. Through research and discussion, we establish content and begin to describe design criteria. This means that we are now ready to begin front-end evaluation;



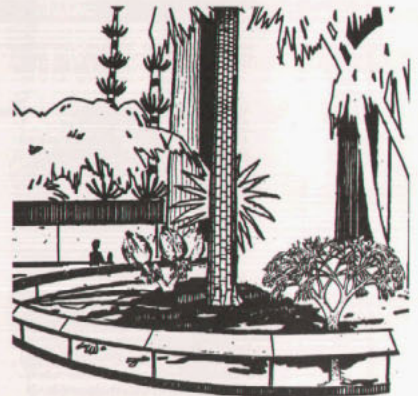
actual testing of the story-line of our programme on 'real' visitors.

The scope of this first evaluation should be fairly general. At this early stage, what we're after is affirmation, or correction, of the broad assumptions we've made about the means by which we've chosen to communicate our ideas, while making the exhibit interesting and enjoyable to our visitors. At the Field Museum in Chicago, USA, we produce a "bubble plan" for most exhibits early on in their development. This plan is a flow chart of the exhibit's content. It depicts the largest sections of an exhibit as separate, linked bubbles. The focus of each bubble can be a specimen, interactive model - whatever. The plan merely represents the largest internal divisions of content and visitor experience.

With this plan, we can develop tests to find out our visitors' reactions to, and impressions of,

our proposed exhibit's concepts and story-line. Keeping in mind that the most immediate experiences of visitors will be affective - emotional, visual, sensual - it is worthwhile creating a series of sketches that represent the

various units of the exhibit. These sketches will constitute the actual test material, along with a questionnaire that will help organise responses. The quality of the drawings is not particularly important. The examples shown here were each sketched, in



marker pen, in just a few minutes by a designer. It is important to give survey subjects a sense that they will be seeing and doing something in the exhibit, rather than reading and learning - two behaviours that are not universally regarded as interesting.

Front-end evaluation for The Field Museum's 'Life Over Time', a 2,000 square metre, \$6 million exhibit, began as soon as we had a bubble plan of basic concepts to help the designer begin sketching. With fossils, taxidermy specimens, live plants and animals and multimedia installations, this exhibit tells the story of evolution over life's 3.8 billion year history. Our story-line test took randomly selected museum visitors on a 15 minute "walk-through" tour using sketches and standardised verbal descriptions of each planned section. After showing visitors sketches of each of the ten sections of the exhibit



and explaining what each drawing represented, we asked visitors about their overall impressions of the exhibit. Did they perceive a passage of time from the beginning to the end of the exhibit? What did they think was the main idea of the exhibit? Did sections, even in sketches, appear distinct from one another? In what sections would they spend the most, and least, amount of time?

We were interested in finding out if visitors would understand the overall message of the exhibit - how evolution works, and what its effects have been. Would they perceive distinctions among spaces and installations that were thematically related? Would each section send a clear message? These findings are important to any exhibit, no matter what its size. Our evaluations showed us that our intuitions had not misled us: people were able to distinguish sections that told them how evolution worked from areas that described its effects; visitors knew they were observing a scientific discussion of evolution; they felt that time was an important element of

evolution. With these assumptions about the utility of our plan verified, we were able to go ahead and begin the next, more detailed phase of planning. We used an independent evaluator as a consultant throughout the development process, but if your project is smaller you may be able to create and administer surveys yourself. One advantage of using an independent person is the addition of a perspective uninfluenced by a vested interest in particular content elements. Experienced evaluators also have a wealth of anecdotal information that can be as helpful as survey results.

Front-end studies need not be particularly rigorous, or detailed. The most important thing is that the developers use the study results to inform themselves of the visitors' expectations. When we are creating exhibits, it is very easy to become wedded to a concept, or hobbled by fears about budget or schedule. Testing even the broadest content outline, and making adjustments in response to those findings, reminds us of who these exhibits are intended for.

▲ résumé

Evaluation "Front-end"

Le Field Museum de Chicago (USA) utilise des évaluations préliminaires "front-end" dans ses expositions. Il trouve que ces évaluations "front-end" (tester les connaissances et l'intérêt du visiteur pour le sujet d'une exposition à venir) sont un des outils les plus utiles pour le concepteur d'expositions. Les résultats de ce type d'évaluation sont aussi valables que certaines études statistiques afin de définir des objectifs au contenu effectif et cognitif.

Ces évaluations ont besoin d'être larges et rigoureuses. Ce qui est le plus important est que le concepteur se rappelle les vues du visiteur par rapport au sujet et essaie de répondre à certaines de ses attentes. Ce type d'évaluation préliminaire sur la nouvelle présentation évolutive du Field Museum, "Life Over Time", est présentée dans l'article comme un modèle.

● resumen

Evaluación preliminar

El Field Museum de Chicago (EE.UU.) usa la evaluación preliminar en la planificación de sus exposiciones. Han descubierto que esta evaluación (conocer el interés de visitante con miras a futuras exposiciones) es una de las herramientas disponibles más útil para el desarrollo de exposiciones. Los resultados de la evaluación preliminar son valiosos y estadísticos, estableciendo unas pautas para dar un contenido real y cognitivo.

Estas evaluaciones no necesitan ser particularmente largas ni rigurosas. Lo más importante es que lo esencial del contenido sea recordado por el visitante e intentar reunir algunas de sus sugerencias. En este artículo se debaten si la evaluación preliminar de la exposición evolutiva "Life Over Time" del Field Museum debe tomarse como modelo.

Stephen Borysewicz, Exhibit Developer, The Field Museum, Roosevelt Road at Lakeshore Drive, Chicago, Illinois 60605, USA. Fax: 312 922 6973.

Sex, drogue et botanique

Sexo, drogas y botanica

Sex, drugs, & botanical fulfilment

"Plants are one of the foundation stones of civilisation. They provide us with shelter, clothing, medicine and food amongst many other things and yet the subject of botany is often given short shrift within secondary school education."

This opening first paragraph very much explains the thinking behind the design of the exhibition "Sex, Drugs and Botanical Fulfilment". Our experience of the average secondary school pupils' perception of the plant kingdom is one of boring green plants usually found on the kitchen window-sill. We wanted to make "Sex, Drugs and Botanical Fulfilment" anything but that. Working with a designer, we were able to

display system. The display panels are divided into three main sections. The first two concentrate on the uses of plants in sex and drugs while the third looks at what we can offer schools. The exhibition has been displayed at teacher training events in the Garden, education conferences, teacher centres, teacher training colleges and school staff rooms.

Strong graphic images have been used in the design of the exhibition. Bright fluorescent letters, short, sharp captions and photographs which people can relate to, have all contributed to making the exhibition very eye-catching. Although blocks of text have been included, the exhibition can be understood by only looking at the photographic images and captions.

painkilling rather than 'pleasurable' drugs. *Taxus baccata*, the common yew from which we extract taxol for use in cancer treatment and *Digitalis purpurea*, the foxglove used in treatment of heart disease, are illustrated along with *Papaver somniferum*, the opium poppy. The opium poppy is highlighted as the source of both painkilling and 'pleasurable' drugs. Morphine, codeine and heroin are all derived from *Papaver somniferum*.

The National Curriculum

Botanic Gardens are a living resource which can enhance the teaching of the National Curriculum for England and Wales. The third section of the display, which takes up one third of the exhibition, shows how the Garden can help with the teaching of the National Curriculum (or how students can be botanically fulfilled).

A number of key areas are highlighted including Conservation, Diversity and Habitats, Economic Uses of Plants, Parts and Functions of Plants and Plant Classification. Once again short bright captions accompany the photographs which are easy for people to relate to.

Although the exhibition was primarily designed for teachers the display is now regularly used within the Garden with our general visitors. We find that people quickly relate to the importance of plants after seeing this brightly coloured exhibition - perhaps quicker than they would to endless statistics about endangered species. The exhibition is also used with sixth form groups who visit the Garden.



Strong graphic images have been used in the design of the exhibition

convert our idea into reality and achieve our aim of encouraging secondary school teachers to bring their pupils to visit the garden.

The exhibition has been designed to be totally portable. It is made up of a series of display panels and a clip

Sex

Over 4000 different plant species have been recorded by western scientists as containing human anti-fertility compounds (more than half are found in rainforests). Two of our most important forms of contraception - the pill and condom - were, or are still, derived from plants. Strong images of the plants and products are used to emphasise this message.

Drugs

Both painkilling and pleasurable drugs are often derived from plants. The emphasis in this section is towards

A leaflet and a poster have been produced for teachers, to outline what the Garden can offer secondary school groups. The poster will be distributed to schools for use in staff rooms and sixth form common rooms. It will also be available to the general public. We also hope next year to use the exhibition outside the Garden much more.

As a follow up to the exhibition we have designed an education programme entitled "Sex, Drugs and Botanical Fulfillment" specifically for Advanced Level students. The programme looks at the ways in which we interact with the plant world and how we have successfully exploited plants to provide the basic requirements and luxuries of life.

The final message of the programme focuses on the issue of conservation: "Plants lie at the foundation stone of civilization. We are here only as long as the plants are".

▲ **résumé**

Sexe, drogues et botanique

"Sexe, drogues et botanique" est le titre d'une exposition itinérante réalisée pour attirer l'attention des

enseignants des degrés secondaires. Développé par le Jardin botanique de l'Université d'Oxford, l'exposition est présentée lors de réunion d'enseignants. Elle a pour but de montrer l'intérêt que peuvent présenter les plantes pour des élèves plus âgés et de mettre en évidence ce que peut offrir un jardin botanique en matière d'éducation.

L'exposition est divisée en trois sections principales. Les deux premières se concentrent sur les usages de plantes dans les domaines du sexe et de la drogue, alors que le troisième met l'accent sur la manière dont on peut utiliser un jardin botanique et ses ressources dans le cadre du Curriculum National. Un prospectus et un poster accompagne l'exposition.

Utilisant des images graphiques fortes, l'exposition a encouragé avec succès de nombreux groupes de l'enseignement secondaire à visiter le Jardin, avec comme résultante la création d'un programme d'éducation adapté pour des élèves de ces degrés avancés.

● **resumen**

Sexo, drogas y botánica

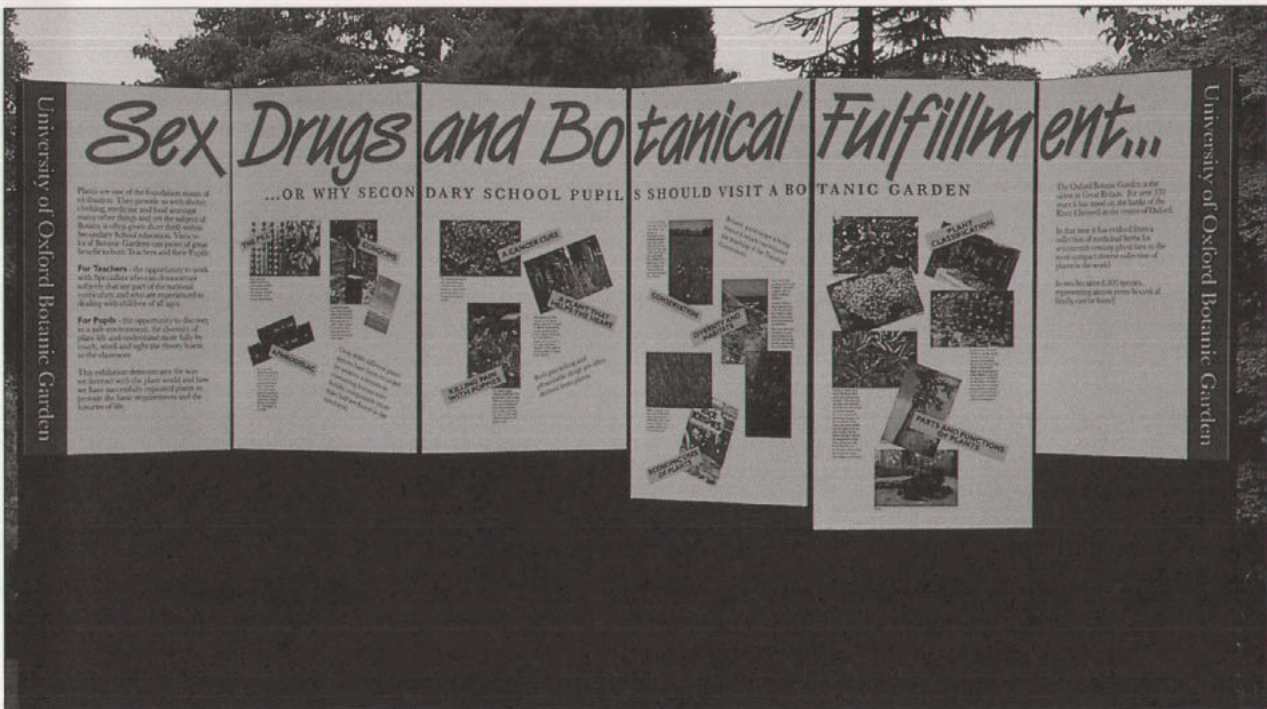
"Sexo, drogas y botánica" es el título de una exposición itinerante diseñada

para llamar la atención de profesores de secundaria. Esta exposición desarrollada por el Oxford University Botanic Garden de Reino Unido está abierta a varias actividades del profesorado y al mismo tiempo muestra lo interesante que pueden ser las plantas para los estudiantes de niveles avanzados así como lo que puede ofrecer un jardín botánico en materia de educación.

La exposición está dividida en tres secciones: las dos primeras se concentran en el uso de las plantas para el sexo y las drogas, mientras que la tercera nos muestra como los recursos del jardín pueden usarse para la enseñanza del Currículo Nacional. Está exposición va acompañada de un folleto y un poster.

La exposición ha sido un éxito porque, al utilizar imágenes fuertes, se ha estimulado a que visiten el jardín más grupos de secundaria y, como resultado, se ha creado un programa de educación para estudiantes de niveles avanzados.

Louise Allen, Education Officer, University of Oxford Botanic Garden, Rose Lane, Oxford, OX1 4AX, UK. Tel. 0865 27620



The exhibition has been designed to be totally portable

Intercambio de exposiciones

Como todos sabemos, la puesta a punto, organización y desarrollo de exposiciones es algo muy costoso tanto económicamente como en esfuerzo. Una posibilidad para suavizar este efecto es la de compartir exposiciones entre distintos jardines botánicos o instituciones afines. de esta forma, se pueden aprovechar los desarrollos de unos y otros y, aligerar los costes económicos.

En el Jardín Botánico de Córdoba, España hemos intentado algunas experiencias de intercambio de exposiciones pero, en la mayoría de los casos, los proyectos abortan por problemas o económicos o

administrativos. Sin embargo, una primera experiencia ha podido concluirse en el caso de la exposición sobre Etnobotánica en el Chaco (comarca interior del centro de Sur América que pertenece a Argentina, Paraguay, Bolivia y Brazil).

Esta exposición fue traída a Córdoba y montada por su creador, Pastor Arenas, miembro del Centro de Estudios Farmacológicos y Botánicos (CEYBO) de Buenos Aires y financiada como parte del programa de Etnobotánica 92.

Durante su exhibición en Córdoba, diversas instituciones de otras

localidades españolas mostraron su interés por acogerla al terminar el periodo previsto de exposición en nuestro Jardín. Finalmente las diversas trabas burocráticas y físicas pudieron solventarse y la colección pudo instalarse en la Ciudad de Murcia. Por supuesto, todo ello gracias al empeño organizativo de su Universidad y a la financiación de la Caja de Ahorros de Murcia.

Los pasos que hubo que andar para poder llegar a la exposición en otra ciudad y a cargo de otra institución pueden resumirse de la forma siguiente. Por una parte se ha de contar con un permiso expreso del



Esta exposición fue traída a Córdoba, España de Buenos Aires, Argentina como parte del programa de Etnobotánica 92

autor o propietario de la exposición. Esta permiso está siempre condicionado al cumplimiento de determinadas cláusulas y sujeto a unas limitaciones de uso. Por ello, el titular de la exhibición debe confeccionar un pliego de condiciones lo más exhaustivo posible. De esta forma, una vez aceptadas por la entidad tomadora, se puede tener claro lo que se puede y no se puede hacer con el material en préstamo, la forma de tratar la propiedad intelectual del autor o de la institución original, los plazos temporales máximos o mínimos y todas las consideraciones que el titular estime conveniente. Desde el punto de vista técnico es igualmente necesario la

contratación de un seguro que cubra los riesgos de deterioro o pérdida del material durante todo el tiempo en el que la exhibición corre a cargo de la segunda entidad. Por supuesto, la institución tomadora debe correr con estos gastos así como con los derivados del traslado en ambas direcciones.

Pero en el traslado de algo tan complejo existe otro aspecto importante a considerar. El gran número de piezas de tamaños muy diversos exigen de una clasificación y etiquetado previo a cualquier embalado. Estas tareas suponen un tratamiento adecuado para su eficaz

reestructuración en el lugar de destino. Una vez allí, la ubicación en un espacio físico diferente supone una reestructuración que, sin embargo, debe seguir siendo fiel al contenido y al mensaje que sustenta toda colección. En una exhibición la información reside tanto en los elementos individuales como en la adecuada agrupación de los mismos. Todas estas consideraciones son las que nos llevaron a determinar la necesidad de contemplar como gastos necesarios la contratación, por parte de la entidad tomadora, de una

persona con un alto conocimiento de la complejidad de lo que se traslada. Esta persona puede ser tanto el propio autor, como cualquier persona de la confianza de éste. Este aspecto resultó al final uno de los más esenciales en todo el proceso.

■ in brief

Exhibition exchange

This article looks at the positive and negative aspects of sharing and exchanging exhibitions among botanic gardens and/or similar institutions. The Cordoba Botanic Garden, Spain, has made several attempts to exchange exhibitions but due to

administrative and economic problems, has not had much success. Nevertheless, with the conclusion of its first exhibition exchange, the Garden is able to share with us its experience of how it organised the exchange of an Argentinian exhibition with the city of Murcia in Spain.

▲ résumé

Echange d'expositions

Cet article met en exergue les aspects positifs et négatifs inhérents au partage et à l'échange d'expositions entre jardins botaniques ou institutions similaires. Le Jardin botanique de Cordoba en Espagne a essayé à plusieurs reprises d'échanger des expositions, mais, à cause de problèmes administratifs et économiques, n'a pas eu beaucoup de succès dans son entreprise. Néanmoins, à la conclusion d'une, le Jardin peut partager avec nous son expérience dans l'organisation de l'échange d'une exposition argentine avec la ville de Murcie en Espagne.

Dr F. Villamandos, Jardín Botánico de Córdoba, Avda de Linneo, s/n Apdo 3048, 14080-Cordoba, Spain. Tel: 20 03 55. Fax 957+29 53 33.



La ubicación en un espacio físico diferente supone una reestructuración que debe seguir siendo fiel al contenido y al mensaje que sustenta toda colección

Contact board

BGCI is in the process of planning for future issues of Roots. The theme of Roots 11 will be Teacher Training, and for Roots 12 it will be Science.

Subsequent issues will deal with individual curriculum subject areas such as art, environmental education, geography, etc.

If you would like to write an article for either Roots 11 or Roots 12, or for forthcoming curriculum subject areas, please contact BGCI as soon as possible. We are anxious to hear from gardens who have not contributed before, as well as from regular contributors.

The Kirstenbosch Education Programme in Cape Town, South Africa, is keen to support the development of school gardens. It is also seeking information from other gardens involved in permaculture. If you have experience in either of these areas please contact: Ally Ashwell, NBI Private Bag X7, 7735 Claremont, South Africa.

Thank you to all members who have returned an Education Pack Questionnaire. As a result of the survey, future BGCI Education Packs will focus on the following subjects:

1. Plants in Festivals
2. Plants in Environmental Education

If you have information to contribute, please send it to BGCI as soon as possible.

El II Taller Latinoamericano y del Caribe de Educación para Jardines Botánicos el cual espero se celerará en Mexico en el Jardín Botánico del Instituto de Biología, U.N.A.M. del 29 de mayo al 2 junio de 1995.

Para mayor información dirigirse a: Edelmira Linares, Jardín Botánico, Instituto Biología, de la U.N.A.M., Cd. Universitaria, Apdo. Postal 70-614, C. P. 04510, Mexico, D. F. Mexico. Fax (525) 6 22 90 46, Teléfono (525) 622-90 47/ 48/ 49/50.

The Assisi Nature Council, whose primary concern is environmental education and ethics, has developed a town garden to conserve Mediterranean species of aromatic plants grown for medical purposes in the Middle Ages.

The council wishes to build up a reservoir of competence and expertise and would like to join a network of similar thematic gardens for exchange of programmes, visits, inspiration, publications etc. If you can help please contact: Maria-Luisa Cohen, President, Assisi Nature Council, Casella Postale 107, 06081 Assisi (Pe), Italy.

The East-West Centre wants to minimise the amount of research time taken up in proof-reading scientific names. Does anyone know of a special spell-check program that has all, or most of the scientific names of the plant world?

Please contact Deanna Donovan, Visiting Fellow, Renewable Resources Program, East-West Centre, 1777 East-West Road, Honolulu, Hawaii 96848.

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