



Botanická zahrada  
Praha

# Annual report (1996–2015)

20 years of work for visitors  
with special needs







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# Annual report (1996–2015)

20 years of work for visitors with special  
needs in the Prague Botanic Garden

with special focus on the visually impaired



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# A word from Milan Pešák, a long-term patron of the project

Exhibitions for all senses – a project that turned twenty this year. A nice age for a human being, a ripe age for an institution, impressive for one event. I am honoured to have been able to follow, even though from a distance, the development of the whole project with its beautiful and successful history.

In the year 1996, when the idea of a specialized exhibition for everyone originated in the botanic garden, I was at the head of the newly constituted United Organization of the Blind and Weak-sighted. I admit that at that time I worried about other things and did not really pay attention to one of the exhibitions that were also open to the blind. There were lots of such events at that time, but few, if any, started a series of twenty or more annual repetitions. Exhibitions for all senses in the Botanic Garden managed just that. And I am sure in the next years they will go on and on.

Time cannot be stopped, but its course gives us a chance to improve and master things that had been done before. The team around the project to make the Botanic Garden accessible to people with different needs kept changing. Its quality grew, together with the children who were born during that time and who were the main cause of the changes. By chance I got a bit closer to the team, which is the reason why I took on the challenge to write these introductory lines. I personally got to know Jarmila (Skružná), Iva (Vilhumová) and Lenka (Prokopová), as well as other great people who were involved in the displays and other specialized exhibitions in the Botanic Garden. And we became friends, which I consider the most valuable. I appreciate that. I am grateful for meeting Jarmila, who has been a real powerhouse since the very beginning of the project as regards all its aspects (exhibitions, workshops, and the orientation system). She is a specialist in the right place and I hope she will not ease up her keen interest and enthusiasm for at least further 20 years. I am happy to know the rocker lady and Indian grandmother Iva, the author of similar exhibitions in the Zoo Prague, which existed before those in the Botanic Garden but did not keep for so long. When exhibitions in the Zoo did not go on, then Iva went on in the Botanic Garden. I also got to know Lenka, a marvelous organizer and an incredibly helpful, kind and understanding woman. Last but not least I would like to extend my heartfelt thanks to the management of the Prague Botanic Garden for the long-lasting support of these activities. It is great and that is how things should be done.

It is true that for me the exhibitions for all senses and all the other activities included in the project are connected namely with the people who are now my friends. It is thanks to them and all those who will be mentioned later

that these exhibitions exist. It is only thanks to all of them that these events are at such high level. Just thanks to them they have been bringing so much joy. Just thanks to them... So thank you all and heaps of luck, prosperity and health for the next years!!!

Yours, Milan Pešák, senator



*Since the beginning of 90s, the blind senator Milan Pešák has been involved in integration of the visually impaired in the society. Originally, he was a programmer by profession. He helped the Prague Botanic Garden to extend the information system, which is not only meant for the visually impaired, by means of a specific increase of the Botanic Garden's running budgets at the time he was a councilor of Prague Municipal Council.*

# Botanic garden for everyone? Absolutely!

When visiting a botanic garden, everyone expects namely nice experiences, unwinding, relaxation and finally learning something. People with special needs, whether it is limited mobility or another impairment, are not an exception. It is something we must keep in mind when doing our job. And the Botanic Garden has succeeded in this.

The Botanic Garden in Prague opens its expositions to the public, taking heed of possible special needs of our visitors. If we do not want this sentence to stay a mere empty phrase and aim to make it reality, it represents lots of work. In the following Annual Report, mapping our activities in this field during the last twenty years, we would like to show the distance we have covered so far. And if our experience becomes inspiration for your future work in the way we, totally fascinated, walked in the year 1995 round the Prague exhibition of natural items, whose author was our colleague Wilfried Fauth, it will be a real pleasure and reward for us.

The botanic garden's original cooperation with the Institute for Visually Impaired at Prague FTVS and establishing close contacts with the education department of the Prague Zoo played an important role for shaping the principles of work with special needs visitors, namely those with visual impairment.

The project of making the Prague Botanic Garden accessible to visitors with specific needs has got three linchpins: we organize exhibitions for all senses, we established an easily accessible, free of charge collection of natural items, and moreover set a long-term goal for the Botanic Garden to create an orientation system which would enable visitors with special needs free access to various expositions. This mostly concerns wheelchair access to most premises of the garden and enabling the enjoyment of perceiving the world of plants through all senses, if possible.

The exhibitions for all senses, so called haptic ones, proved to be extremely popular with visitors, during years therefore becoming an irreplaceable feature in the calendar of the Botanic Garden events. We might have paid rather more attention to building the orientation and information system and the development of related activities, for instance training guides, receiving the certificate of Friendly places (see page 14) and provide access for wheelchair visitors. The whole premises of the garden were enhanced by special services, which are now a standard matter, but at the time of ten or twenty years ago they did not use to be. These are things like loaning wheelchairs at the South and North cash desks and the Fata Morgana greenhouse, the installation of



orientation beacons for visually impaired visitors at all the cash desks of the Botanic Garden, possibility of parking cars marked as disability transport at all parking areas including the places marked no entry, wheelchair access toilets, as well as discounted admission for visitors with severe health disability (ZTP) and severe disability requiring special assistance (ZTP/P).

Our original notion that the projects targeted at a specific group of visitors will be visited by minority groups of people started to gradually change and evolve right at the beginning of the project in 1996. Their impact turned out to be far greater. The methods of work with visitors with special needs, highlighting the effort to perceive the world around us not only through sight, but involve other senses in the detailed discovery our environment, truly enriched us all “normal” visitors and organizers. The former idea of creating something special for a part of the public evolved into a method of work impacting all visitors. The activities brought much more profound experiences and more detailed insight into the world of the impaired for virtually all visitors. In the course of years we gained more and more experience, gradually realizing that our projects significantly enrich all involved, whether they are organizers or visitors. They help namely adults to perceive nature and the world around through all senses, just like children can spontaneously.

Let's then try to be children, just for a moment! Let them be continuous inspiration in our further work!





# Those who help us

Our original experience in the field of working with visitors with special needs and the issues of making our botanic collection accessible for the visually impaired were published in the material “Touch please”. The book was published within the project called Museum Gate Open of the Open Society Fund ([www.osf.cz](http://www.osf.cz)) in Prague in the year 1998.

Individual parts of the project Making Botanic Garden Accessible were supported by the Committee of Good Will – Olga Havel Foundation ([www.vdv.cz](http://www.vdv.cz)), Foundation of Patrik to Children, senator Milan Pešák, and Prague City Hall ([www.prague-city.cz/cgi-bin/verze.cgi/mag.htm](http://www.prague-city.cz/cgi-bin/verze.cgi/mag.htm)). More detailed information about the project can be learnt in “Annual Report 1996–2006 – 10 years of working together for special needs visitors of the Prague Zoo and the Prague Botanic Garden with special focus on visually impaired persons”.

It was in January 2010 that the Botanic Garden was included in Human Friendly Places within the project of the Red Cross (see page 14). The project Making the Botanic Garden Accessible for Visitors with Special Needs was even presented in our Botanic Garden and at international forums:

14th April 2010 Prague Botanic Garden: Press Conference on the occasion of the opening of the information system with the participation of Prague Mayor P. Bém and other famous personalities

26th May 2010 Prague Botanic Garden: Opening Ceremony on the occasion of the wheelchair path to Fata Morgana greenhouse

28th May – 2nd June 2012 island of Chios, Greece: European conference Eurogard VI – European Botanic Gardens in a Changing World:

*J. Skružná, L. Prokopová, : Information systems for people with special needs in Prague Botanic Garden*

25th – 26th May 2013 Průhonice, Praha: Meeting of European Consortium of Botanic Gardens, workshop Communities in Nature – Growing the Social Role of Botanic Gardens, BGCI:

*L. Prokopová, J. Skružná: Project Garden – Activities at Prague Botanic Garden*

Our project was afterwards published among the selected Community Projects on Web pages of the world organization of Botanic Gardens BGCI and got an award as inspirational (<http://www.bgci.org/garden.php?id=359>).

9th – 10th September 2015 Košice: Education in botanical gardens and arboreta

*L. Prokopová, J. Skružná: Information systems for people with special needs in Prague Botanic Garden.*

In the year 2014 the project Making Botanic Garden Accessible was presented at the national conference Human Friendly Places After Five Years, held on 3th November 2014 in Prague.

## **Partners of the project**

Aroma Praha, a. s., Židovice 64, 411 83 Hrobce

DINASYS, Pod Vinicí 622/2, 140 00 Praha 4 Modřany

Geotrade Bohemia, a. s., Londýnská 55, 120 21 Praha 2, info@geosvet.cz

Humanitární sdružení PROTEBE, Jedličkův ústav a školy, V Pevnosti 4, 128 41 Praha 2 – Vyšehrad, (humanitarian association) protebe@seznam.cz

Jan Hošek, ilustrátor, Plynární 31, 170 00 Praha 7

Institut rehabilitace zrakově postižených FHS UK Praha, J, Martího 31, 162 52 Praha 6 (Institute for rehabilitation of the visually impaired)

Institut tropů a subtropů České zemědělské univerzity, Kamýcká 129, 165 21 Praha 6 Suchbátka V., tel. 234 381 111 (Institute of the tropics and subtropics of the Czech Agricultural University)

Katedra botaniky Přírodovědecké fakulty UK v Praze, Benátská 433/2, 128 00 Praha 2 (Botany department of Faculty of Science, Charles University, Prague)

Knihovna a tiskárna pro nevidomé K. E. Macana, Ve Smečkách 602/15, 110 00 Praha 1, tel. 296 326 121 (library and printing office for the visually impaired)

Knihovna pro nevidomé a těžce ZP, Box 294, Platněřská 2, 110 01 Praha 1 (library for the visually impaired and severely impaired)

Kooperativa pojišťovna, a. s., Vienna Insurance Group, Nuselská 363/71, 140 00 Praha – Michle

Magistrát hl. m. Prahy, Mariánské nám, 2/2, 110 00 Praha 1, tel. 236 003 401 (Prague Town hall)

Muzeum hlavního města Prahy – archeologické odd. a antropologické odd.  
Na Poříčí 52, 180 00 Praha 8 – Florenc (Prague museum – department of archaeology and anthropology)

Nadace Patrik dětem, 17. Listopadu 1790/5, 708 00 Ostrava- Poruba (children's foundation)

Nadace Quido Schwanka – Troja, město v zeleni, Trojská 191, 170 00 Praha 7 – Troja (foundation of Quido Schwank – Troja, town in greenery)

Nadační fond AVAST, Budějovická 1518/13A, 140 00 Praha 4 – Michle, tel. 274 007 067, (foundation fund) otevrenyfond@avast.com

Nadační fond Českého rozhlasu, Vinohradská 12, 120 99 Praha 2, tel. 221 551 215, (foundation fund of the Czech Radio) svetluska@rozhlas.cz

Náprstkovo museum asijských, afrických a amerických kultur, Betlémské nám. 269/1, 110 00 Praha 1 (museum of Asian, African and American cultures)

Občanské sdružení Experientia, Celetná 20, 110 00 Praha 1 (civic association)

PhDr. Milan Pešák, radní MHMP (2006 – 2010), Mariánské náměstí 2, Praha 1, od roku 2010 senátor ČR, Valdštejnské nám. 17/4, 118 01 Praha 1, pesakm@senat.cz, tel. 257 075 116

Občanské sdružení Planta-eko, Nádvorní 134, 171 00 Praha 7 (civic association)

Patronka projektu paní hraběnka Mathilda Nostitzová, Nadační fond Mathilda, (patron of the project, foundation fund Mathilda) Krakovská 22, 101 00 Praha 1, tel. 222 710 902, info@mathilda.cz

Polabské národopisné museum, Přerov nad Labem 289 16, tel. 325 565 272 (ethnographic museum)

Prátelská místa, Český červený kříž, (Human friendly places, Czech Red Cross) Oblastní spolek Českého červeného kříže Hradec Králové, Mostecká 290/3, 500 03 Hradec Králové, tel. 495 516 127, info@pratelskamista.cz, www.pratelskamista.cz

Sdružení Tereta at FJFI ČVUT Praha, nyní ELSA, Středisko pro podporu studentů se specifickými potřebami, (association for the support of students with special needs) Trojanova 13, 120 00 Praha 2 (katedra matematiky FJFI) stredisko@elsa.cvut.cz, www.elsa.cvut.cz, tel. 224 358 543

Sdružení zdravotně postižených, Ústředí pro ČR, Karlínské nám. 12, 186 03 Praha 8 – Karlín (union of impaired persons)

Sjednocená organizace nevidomých a slabozrakých ČR, Krakovská 1695/21, 110 00 Praha 1, tel. 221 462 146 (Union of the visually impaired and weak-sighted)

Středisko Diakonie ČCE pro zdravotně postižené, Klimentská 18, 110 15 Praha, tel. 222 316 306 (center for the impaired)

Textilní museum TIBA, Maloskalská 47, 552 03 Česká Skalice, tel. 491 451 285 (textile museum)

Tyfloservis o. p. s., Krakovská 1695/21, 110 00 Praha 1, tel. 221 462 365

Výbor dobré vůle – Nadace Olgy Havlové, P. O. Box 40, Senovážné nám. 994/2, 110 00 Praha 2 (Committee of Good Will – Olga Havel Foundation)

Výtvarnice BcA. Radka Josková, Bubenská 3, 170 00 Praha 7 (visual artist)

Výtvarník Lukáš Gavlovský, Výžerky 77, 281 63 Kostelec nad Černými lesy (visual artist)

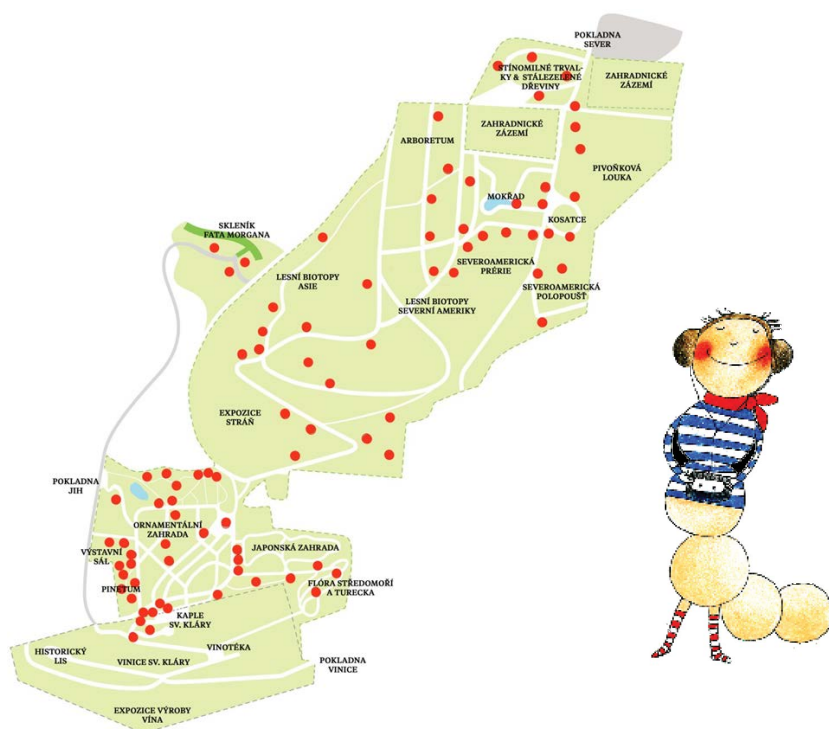
Zoologická zahrada hl. m. Prahy, U Trojského zámku 120/3, 171 00 Praha 7 – Troja, (zoo) [www.zoopraha.cz](http://www.zoopraha.cz)

Zora – časopis pro zrakově postižené, šéfredaktor J. Reichel, Krakovská 21, 115 17 Praha 1 [zora@brailnet.cz](mailto:zora@brailnet.cz), tel. 21 46 21 76 (magazine for the visually impaired)



# Garden without a compass and GPS

One of the great feats of the Botanic Garden was the installation of an information and orientation system for visually impaired visitors, the first 15 beacons them appearing on the premises in the year 2008. Since 2010 a new, technologically innovated and nicer looking system has been used. It is intended for both sighted and blind visitors. There are currently situated 87 beacons all year round all over the Botanic Garden, identifying and describing interesting natural items, namely plants, both in black print and Braille. From 1st April to 31st October the beacons are fitted with a sound system applying the Dynasis technology, providing commentary in Czech and English. To enjoy listening to the commentary you only need headphones which can be borrowed free of charge at all the cash desks of outdoor expositions. The returnable deposit is CZK 200.



Plan of the Prague Botanic Garden identifying the location of information beacons

# Places with the information columns

|   |  |  |
|---|--|--|
| Tarvine <i>Actinidia arguta</i>                       | Norway maple <i>Acer paltanoides</i> cul. <i>Dissectum</i> | Japanese pieris <i>Pieris japonica</i>               |
| Sweet gum <i>Liquidambar styraciflua</i>              | Spanish fir <i>Abies pinsapo</i>                           | Peony <i>Paeonia</i> sp.                             |
| Japanese angelica tree <i>Aralia elata</i>            | Service tree <i>Sorbus domestica</i>                       | Pacific madrone <i>Arbutus menziesii</i>             |
| Eucalyptus <i>Eucalyptus gunnii</i>                   | Ginkgo biloba <i>Ginkgo biloba</i>                         | London plane tree <i>Platanus acerifolia</i>         |
| Jeffrey pine <i>Pinus jeffreyi</i>                    | Horse chestnut <i>Aesculus hippocastanum</i>               | Hemiptelea davidii <i>Hemiptelea davidii</i>         |
| Scotch pine <i>Pinus sylvestris</i>                   | Yucca <i>Yucca filamentosa</i>                             | Prairie  |
| Rocky Mountain bristlecone pine <i>Pinus aristata</i> | Viburnum, Guelder-rose <i>Viburnum × burkwoodii</i>        | Peat bog   |
| Grey pine <i>Pinus sabiniana</i>                      | Viburnum <i>Viburnum rhytidophyllum</i>                    | Bamboo collection                                    |
| Paper mulberry <i>Broussonetia papyrifera</i>         | Sweet chestnut <i>Castanea sativa</i>                      | Giant sequoia <i>Sequoiadendron giganteum</i>        |
| Common buttonbush <i>Celtis reticulata</i>            | Magnolia vine <i>Schisandra chinensis</i>                  | Weeping spruce <i>Picea breweriana</i>               |
| Paper birch <i>Betula papyrifera</i>                  | Medicinal plants   | Norway spruce <i>Picea abies</i> 'Barryi'            |
| European beech <i>Fagus sylvatica</i>                 | Eastern wintergreen <i>Gaultheria procumbens</i>           | Serbian spruce <i>Picea omorica</i>                  |
| Lydites   | Small-leaved linden <i>Tilia cordata</i>                   | Evergreen woody plants                               |
| Atlas cedar <i>Cedrus atlantica</i>                   | Magnolia <i>Magnolia</i> sp.                               | Japanesese stewartia <i>Stewartia pseudocamellia</i> |
| Arizona cypress <i>Cupressus arizonica</i>            | Maclura <i>Maclura pomifera</i>                            | Dinosaur footsteps                                   |
| Mediterranean cypress <i>Cupressus sempervivens</i>   | Dawn redwood <i>Metasequoia glyptostroboides</i>           | Gravels and sands                                    |
| Coast Douglas-fir <i>Pseudotsuga menziesii</i>        | Common medlar <i>Mespilus germanica</i>                    | Longhorn beetle's oak                                |
| Sandstone   | Japanese larch <i>Larix kaempferi</i>                      | English yew <i>Taxus baccata</i>                     |
| Honey locust <i>Gleiditsia triacanthos</i>            | European larch <i>Larix decidua</i>                        | American persimmon <i>Diosypros virginiana</i>       |
| Silky dogwood <i>Cornus mas</i>                       | Common pawpaw <i>Asimina triloba</i>                       | California nutmeg <i>Torreya californica</i>         |
| English oak <i>Quercus robur</i>                      | Desert prickly pear <i>Opuntia phaeacantha</i>             | Grasses <i>Poaceae</i>                               |
| Sessile oak <i>Quercus petraea</i>                    | Pignut hickory <i>Carya glabra</i>                         | Giant reed <i>Arundo donax</i>                       |
| Eucommia <i>Eucommia ulmoides</i>                     | Manshurian walnut <i>Juglans mandshurica</i>               | Trumpet vine <i>Campsis radicans</i>                 |
| Japanese plum yew <i>Cephalotaxus harringtonia</i>    | Empress tree <i>Paulownia tomentosa</i>                    | Honeybee <i>Apis mellifera</i>                       |
| Common hawthorn <i>Crataegus monogyna</i>             | Incense cedar <i>Calocedrus deccurens</i>                  | Witch hazel <i>Hamamelis</i> sp.                     |
| Hydrangea <i>Hydrangea</i> sp.                        | Ostrich fern <i>Matteuccia struthiopteris</i>              | Grape vine <i>Vitis vinifera</i>                     |
| Ephedra <i>Ephedra</i> sp.                            |  | White willow <i>Salix alba</i>                       |
| Eastern red cedar <i>Juniperus virginiana</i>         |  | Heathland plants                                     |
| Hedge maple <i>Acer campestre</i>                     |  | Petrified wood                                       |
|   |  | Judas tree <i>Cercis siliquastrum</i>                |
|   |  | Prickly ash <i>Zanthoxyllum</i> sp.                  |





Opening the sound system of the information beacons in Prague Botanic Garden on 1st April 2012. From the left: P. Gregor, M. Pešák, M. Turpin, countess M. Nostitzová, L. Krapka, M. Javorník in the background



Metal stand of the former information system.



Listening to the sound system at the beacon in St. Claire's vineyard

# Nature in boxes: Collection of natural items

In the year 1996 the Botanic Garden started a collection of natural items, the aim of which was to provide special schools and other interested members of public with an opportunity to borrow, free of charge, interesting natural items for school lessons and extracurricular activities. The only condition of this offer was to return the collection in the condition in which it was borrowed. The interested parties pick up the collection personally in the Botanic Garden for an arranged period and then return it to the Botanic Garden.

The scope and size of the collection enables transporting it by car. Its basis are natural items of botanic origin acquired at expeditions, purchased or gathered. The collection is also enhanced by natural items originally acquired for exhibitions. Another part consists of exhibits of animal origin as the topics of our exhibitions are not purely botanic but cover also other fields of both animate and non-animate nature. The collection is complemented by original illustrative models.

Each exhibit is stored in a cardboard box, numbered and containing the description of the given natural item or a model both in black print and Braille. To enable easier orientation and choice of concrete natural items, there is also a list of exhibited items and a list of Latin names.

The collection is loaned by the Botanic Garden on average 3 times during a school year. It is further made use of namely by education methodologists when they work as guides for school outings. The collection consists of 100 natural items and models. We are currently planning its extension.



Collection of natural items – samples of some exhibits

# The list of items (31st December 2015)

## Plants

Menzies banksia  
Beechnut  
*Delonix decaryi*  
Woody fruit of Sterculia  
Woody pod  
Common alder catkins  
Cork oak bark  
Banksia flower  
Linden bast  
Entada seedpod  
Enterolobium seedpod  
Honey locust seedpod  
English oak bast  
Model of white birch seed  
Loofah tissue  
Baobab fruit  
Magnolia fruit  
Crescentia alata plant fruit  
Sterculia fruit  
Albinia purpurea fruits  
Common pomegranate fruits  
Sweet chestnut fruits  
Lagenaria fruits  
*Lilium philipiense* fruits  
Indian lotus fruits  
London plane tree fruits  
Gourd fruits  
Rhythmic sticks set  
Dried cinnamon bark  
Noble fir cone  
Giant sequoia cone  
Armand pine cone  
Black pine cone  
Japanese black pine cone  
Japanese white pine cone  
Jeffrey pine cone  
Scotch pine cone  
Alpine stone pine cone  
Limber pine cone

Bristlecone pine cone  
Table Mountain pine cone  
Western white pine cone  
Lodgepole pine cone  
Macedonian pine cone  
White pine cone  
Atlas cedar cone  
Subalpine fir cone  
Dwarf pine cone  
European larch cones  
Weeping spruce cones  
Serbian spruce cones  
Blue spruce cones  
Sitka spruce cones  
Wilson spruce cones  
Common spruce cones  
Proboscidea louisianica pod  
Upland cotton boll  
Southern catalpa pods  
Ginkgo branch  
Branches with cork formation

## Animals

*Favosites* – dead coral  
African elephant skin  
Shells  
Nandu ostrich feathers  
Scutelloid trilobites  
Deer antlers  
Bactarian camel hair  
Emu ostrich egg  
Wasp nest  
Sepia bone  
Common cockle

## Other

Amethyst (Slavkovský les)  
Calamites – stone  
Garnet  
Hyalite – glass opal

Calcite (Norway)  
Calcite (Prachovsko)  
Rock crystal  
Soapstone  
Clam – fossil (North Bohemia)  
Undefined stone  
Obsidian  
Orthoclase (Chomutov)  
Flint (Germany)  
Pumice stone  
Pyrrhotite  
Pyrite (Soběslav)  
Rose quartz  
Striated mineral (Dobruška)  
Rock salt (Austria)  
Tremolite (Norway)  
Smokestone (Norway)  
Petrified wood (Rakovník)  
Petrified gastropods (North Bohemia)  
Fossil – shell  
Trilobite fossil  
Ferrous igneous rock  
Iron ore



# Human friendly places

Human Friendly Places is a project of the Czech Red Cross. Its goal is to create a national network of certified providers of services (namely in the field of accommodation, culture, entertainment, sport, catering and others), where a client (customer, visitor...) with various kinds of limitations would have a guarantee of professional attitude and usable services.

The project offers a survey of facilities, where the operators will understand specific needs and will be prepared to react in a suitable way. A certified facility can sort out even non-standard needs and situations safely, maximally heeding justified demands of a client. A client is guaranteed maximum safety, a higher quality of services and partly or totally barrier-free environment. There is also an expectation of a higher professionalism of the staff. According to current statistics, there are up to 3.5 million persons with health impairment and seniors living in the Czech Republic. For that reason, it is desirable for the number of such helpful places to grow.

The Prague Botanic Garden received the certificate Human Friendly Place in the year 2010, meeting the requirements imposed on service providers. Besides ensuring accessibility of the premises for visitors with special needs, as those with limited mobility, persons with sensory impairments or seniors, it meant continuously improving the qualification of the staff who come into direct contact with visitors. The personnel thus acquired not only useful theoretical information, but namely practical skills. Therefore, our workers are able to offer high-quality services to visitors with various types of impairments or special needs. This prevents the rise of concerns, problems or obstacles the side of both the provider (the botanic Garden) and the client (visitor).

An integral part of the certification is the Human Friendly Places logo, conspicuously situated near the entrances to facilities. According to the number of red crosses a client (visitor) can determine the scope of offered services. The red crosses are awarded according to the level of barrier-free accessibility and the number of trained staff.

The Prague Botanic Garden can boast a full number of red crosses. It has trained staff (cashiers, guides and workers from the department of production of public events), who meet the visitors with special needs most frequently (the situation as of 17th November 2015).



Duben 9–16 h  
 Květen–září 9–20 h

denně kromě pondělí

Botanická zahrada N. M. Prahy, Trávníč 800/196, 171 00 Praha 7, Řež, IČ: 00664372  
 Úspěšná osobní nebo telefonická rezervace, telefon: +420 234 834 111, e-mail: info@botanika.cz

**Opening hours  
 of Fata Morgana greenhouse**

November–February 9–16 hrs  
 March, October 9–17 hrs  
 April 9–18 hrs  
 May–September 9–20 hrs

**Tuesday till Sunday**



Wheelchair accessibility: + partly barrier-free, ++ fully barrier-free  
 Staff training: + 30%, ++ 60%, +++ 100% of trained staff



The training of guides in outdoor exhibitions and in the Fata Morgana greenhouse

## First-hand experience: Workshops and seminars

We tried to apply the method of perceiving nature with all the senses when organizing further activities for public, including visitors with special needs. Namely the participants of seminars and workshops had an opportunity to enjoy first-hand experience, engaging all their senses in exploring not only the unique world of plants, but other topics as well. These were: Sound in nature, quiet and music in us, Light and fragrance of tea in Japanese gardens, Inspiration by the life of our ancestors. The seminars and workshops in the period 1996 to 2006 were conducted by the staff of our Botanic Garden and W. Fauth, who is the inspiration as for activities for visitors with special needs from German Stuttgart and were supported by the Committee of Good Will – Olga Havel Foundation. In the following period we developed these methods further. Let us mention just a couple out of dozens of events targeted at the public: A week of communication with hearing impaired persons (21st – 29th September 2013), exhibition project Autumn fruits (1st – 30th November 2011), Touch prehistory or Days of prehistoric crafts (27th and 28th September 2012) and Creating with nonprofit organizations (10th and 11th August 2013).



Our guide with a group of visitors during the Week with hearing impaired visitors in the Fata Morgana greenhouse



# Discover nature with all your senses: Less is more

Twenty years of experience with organizing exhibitions for all the senses might be simply summarized under the headline Less is more! The preparation of each exhibition proceeds in the following steps:

## Choice of the topic

Careful attention must be paid to the choice of the topic, which should be considered well beforehand. We also tried to select attractive topics, different in each year as for the selection of exhibits and namely thanks to their general focus.

The topics of our exhibitions are selected from a wide range of ideas, practically defined just by the limits of our imagination.


Since the year 1996 we have moved from the mere presentation of botanical and zoological curiosities to cross-section exhibitions including ecological and historical connections on the one hand, and detailed insights into specialized botanic issues on the other. Our events are supposed to spark an active interest in the visitors, and a desire to ask further questions. We are interested in their opinions and observations, that is why they can make use of the visitor book, write their comments using a special braille typewriter, or they can convey their comments to us personally. Their feedback is greatly appreciated, and it is a source of inspiration for us.

## Choice of exhibition space and its arrangement

The lay-out of our exhibitions follows the rules and demands on haptic expositions designated for visually impaired visitors. It is necessary to take heed of clear lay-out, safety, amount, size and placement of the exhibits. Special attention should be paid to independence and comfort of the visitors passing round the space.

Orientation in an unknown environment is problematic namely for visually impaired visitors. It is best to choose an exhibition space which is wheelchair accessible, with a simple ground-plan, without obstacles, clearly arranged. Our modest exhibition hall is actually an ideal venue for exhibitions of this type.

The exhibits are placed on tables of maximum height 75 cm. It is best if the tables form an uninterrupted leading line around the perimeter of the room. They must in no way hinder the visitors' movement. The surfaces of the ta-



bles are a contrasting colour (a mat of contrasting colour is placed under the exhibit) and there is a front bar with a description in both braille and black print. Side bars prevent the exhibits falling off the table. The front bar is at the height which enables non-problematic reading. The exhibits are within a comfortable reach of the visitors. The objects or plants that are not meant to be touched because of safety are placed behind the tables or on the walls.

The movement of the visitors is one-way only, going on a route marked beforehand.

## **Choice and description of exhibits**

If the visitors are not only to walk round the exhibition, but truly to enjoy and perceive it with all their senses, they should not be overwhelmed. It is necessary to remember that some visitors are not able to use all their senses in exploring the world around them in detail, which naturally includes the exhibits. So it is necessary to ensure their safety, namely when using living animals.

The ideal number of exhibits is thirty. We always try to choose objects not only interesting to touch, but also those with specific sound, smell or taste. If we encourage the visitors to taste something, we must take care of hygienic principles! The exhibition space always includes a washbasin with water and soap, paper towels and a wastepaper basket.

The exhibits are described both in black print and in braille. Their description is concise, simple and clear.

## **Scenario**

A scenario plays a crucial role in the preparation and realization of exhibitions. It specifies the exact number, size and placement of tables, determines what will be on each table and in what sequence. When creating a scenario, we make sure the exhibits are varied and attractive for the visitors.

A scenario also contains the black print texts which complement the exhibition, providing details and making the chosen topic more understandable. The texts are meant both for regular visitors and for the weak sighted ones, whose reading is made easier because of the size and contrast of the print. The selected print is simple, bold, Gothic type. The texts must not be too

lengthy, but also not misleading or distorting. Complying with these two requirements is sometimes a hard nut to crack.

Another part of the scenario are captions. These are more detailed in black print, while in Braille they must be limited to brief, concise information (the braille is wider than normal print).

The scenario of the audio guide is just as important. There are specific requirements for the text. To be pleasant to listen to, the sentences must be short, concise and the commentary has to sound really natural.

## **Audio guide**

Our audio guide is a professionally created aid for all the visitors of the exhibition. It applies modern technology (MP 3 players with headphones) and represents an attractive complement of the event by means of a commentary, interesting illustrative sounds a music suitable for the given topic. It is recorded by professionals. Maximum length of the recording should not exceed 20 minutes.

The audio guide also contains orientation directions (in front of you, on your right-hand side, under the table on the left and others), as well as information about overall layout of the space.

Since the year 2000, our audio guides have been made by Jiří Litoš, a sound designer of the Czech Radio. The tasks required of him in the scenario are not always easy. Lots of the sounds have to be “tailor made”, for instance various rustling in bushes, in a bamboo thicket, or in a growth of rushes. There were other challenges like various household chores or sounds of crafts, like hoeing, harvesting tobacco leaves, removing corn from the cob... Some of the sounds were created authentically – to simulate steps in a bog, a forest swamp works best, planting rice in flooded fields was enacted in a garden lake. The recording of the sounds of a bear enjoying honey was especially nice, but these were naturally human voices, just as the sounds of a carnivorous plant which has just caught a fly. The most difficult part is to invent the sound, basing it on a witty notion.

## **Our staff during exhibitions**

Our guides, who are trained not only about the special topic, but namely as for communicating and working with visitors with special needs, are always

present in the exhibition hall. They are either students of pedagogical and science branches or the staff of our Botanic Garden. In some years one of them was a visually impaired guide. The guides offer the visitors MP3 players with the audio guide, provide information about the most interesting exhibits, take heed of the visitors' safety and last but not least can guide a blind visitor through the whole exhibition. They act as a link between the visitors and us, the authors of the exhibitions. They are our invaluable helpers.

## Invitation cards

Already in the first decade of our haptic exhibitions we concentrated on invitation cards with braille texts, which moreover contained a simple playful or tactile element. Thus the workshop of Adriana Skálová created a box, an invitation with a fibre of wool or a little bag of fragrant herbs. Invitation cards for the following exhibitions were prepared by the artist Lucie Preiningerová (Martišková), who came with further ideas, like cut-through window, which can be opened, transparent paper evoking a feeling of a visual handicap, an Indian bead necklace or a real stone of a plum.

## Openings of exhibitions

Before each exhibition it is a good idea to invite guests and naturally also everybody who participated in the preparation of the event to the opening ceremony. And just as we try to make each invitation card special, our opening ceremonies are original as well. There are not only guests and musical production, but also home-made cakes and salads are served. The food is always connected with the current topic.



Left: A photo from the exhibition Reserved for bees, the captions are in black print and braille.

Right: The audio guide at the exhibition Stones in the spotlight was popular with all the visitors.

# Looking back at the first decade

As the Annual Report 1996–2006, in which the individual exhibitions of the first decade of the project are described in detail, is not at everybody's disposal, we would like to present their summary and characteristics.

## **Touch of Nature (1996), Prague Botanic Garden (just PBG henceforth)**

Nature of different continents

The most interesting exhibits: nest of emu, whole fruit of coconut palm, seed pod of Entada.

Number of visitors: 987 persons

## **Transformations of the forest (1997), PBG**

Changes of the forest from the spring of the river in the mountains down to riparian forest in the lowlands

The most interesting exhibits: giant puffball mushroom, bear garlic, nest of penduline tit, hedgehog

Number of visitors: 1918 persons

## **Around the world or Nature is and orchestra (1998), PBG**

Sound and music in the broadest sense of the word, besides sight, also hearing was engaged

The most interesting exhibits: rhythm sticks, bamboo xylophone, Indian rattles

Number of visitors: 1495 persons

## **Four elements or Even plants can move (2000), Prague Zoo**

Dissemination a propagation of plants by means of wind, water, fire and animals

The most interesting exhibits: the largest seed in the world – so-called coco de mer

Models were used for the first time: seeds of celandine and dandelion, the demonstration of the effects of elements

The exhibition complemented with an audio guide for the first time

Number of visitors: 1071 persons

## **Nature full of smells (2001), PBG**

Olfactory perceptions, human fancy for scents

The most interesting exhibits: the scent of musk, amber, sniffing riddle

Number of visitors: 845 persons

**From rope to lace or  
Natural fibres in the life  
of Man (2002), PBG**

Variety of natural fibres and their properties

The most interesting exhibits: live plant of hemp, cotton boll, visitors had an opportunity to weave a bit of cloth with their own hands

Number of visitors: 1125 persons

**One eats this and the  
other one eats that or  
What food do animals  
enjoy (2003), PBG**

Tasting and the taste

The most interesting exhibits: the menus of gorilla, parrots and giraffe

Number of visitors: 2083 persons

**Thorns, hooks and suckers  
or Shapes and their function  
in the plant and animal  
kingdom (2004), PBG**

The infinite world of animal and plant shapes

The most interesting exhibits: shapes of flowers attracting pollination by insects, graphic comparison of natural shapes with objects of daily use

Number of visitors: 964 persons

**In the footsteps of explorers  
of Indonesia or Through the  
mangroves in to the deep  
jungle (2005), Prague Zoo**

A journey through Indonesia's nature (Opening of the pavilion Indonesian jungle)

The most interesting exhibits: a wooden statue of dragon lizard, models of mudskippers, rattan palm, model of Rafflesia flower

Number of visitors: 1894 persons

**Wanders around the Troja  
Basin or Nature is just round  
the corner (1997), PBG**

Nature right around us is also interesting

The most interesting exhibits: live green toad, grapes

Connected with a nature walk in the surroundings of the Botanic Garden

Number of visitors: 987 persons



# Comments from visitors

I loved the exhibition, it was super to pretend being blind.

Robert

Stones in the spotlight is great both for children and for adults. We tried out how the blind “see”, and I can recommend it. Thank you so much and see you some time again.

The Nováks, Znojmo

The exhibition is very interesting – when we close our eyes, a new world opens to us. A very nice idea – thank you for it!

Martin and Veronika, Lanškroun

IN ENGLISH: Interesting for children, but what a shame there are no translation in English. We can't understand what's explained. Well it's a beautiful place.

French visitors

Thank you for the interesting and educational exhibition.

Basic school Na Smetance

Thank you for the wonderful exhibition and the interesting commentary,  
The Pokornýs

Exhibition conceived in an interesting way, namely for the blind super!  
Klímová Jarmila

Super exhibition – going through it blind gives it a totally different dimension.

The exhibition is very interesting, like all the others, for that matter. It is amazing!

Thank you for the wonderful guided tour. We got to know things with our touch, taste and smell. Our guide was awesome!

Clients and staff of the Palata Home

We loved it here. Connection with tactile perception was very interesting.  
Thank you.

The Horas from Děčín

Thank you, it was very interesting to look at the world using touch.

Pavel, Radmila a Tom

Thank you for the amazing tour and the perfect explanations of our guide

Kačka

Thank you awesome guide Johanka for your kind individual care, it was very interesting.

Pavčina

Thank you, but there might have been more tasting and Péta deserves ovation and also a medal, because he is simply the greatest, most talented narrator of stone stories.

Miss Štěpánka

Thanks for the care we got here. It was great the girls could touch and taste everything,

Martin + Ráchel + Rút Řeháčkovi

I really liked it and I touched a millipede with my eyes covered.

Bára



Visually impaired visitors can write about their experiences on a special typewriter

# The new decade

After ten exhibitions it might seem that we had exhausted all topics. However, the following years showed that there was no lack of ideas. During the realization of each exhibition, interesting plans and topics for the next years emerged. And the new topics concerned not only discovering nature around us, but also really crucial issues. Gradually, we visited history, far-away countries, looked into the life of animals and unveiled the secrets of interesting plants.

We tried to make good use of the findings from the first decade of exhibitions for all senses in the scenarios, texts, audio guides and namely as regards the choice of the exhibits. We tried harder and harder to make sure the visitors employ really all their senses, especially hearing, smell and taste. Touch, however, was still the dominant sense.

One thing is to find a topic, but it is quite a different problem to translate it into an actual shape and mainly simplify it in such a way that the number of exhibits meet the principles of haptic exhibitions and the topic would still be understandable. For each exhibition, a topic (theme) would have to be found first, then it was necessary to make up a story and motivation. Then followed the processing of the proposal of the exhibition (separate units, exhibits) and scenarios (actual lay-out of the area of the exhibition hall). Then came the work on the texts, captions under the exhibits and last but not least the audio guide.

We always divide the exhibits into larger units, so that the visitors could logically follow the storyline. The floor plan has served us very well for this purpose. We founded a tradition of a “zero” table, which was nicknamed “rummage place”. There was a heap of several unlabeled exhibits. When listening to the introduction of the audio guide, the visitor could go through them and get to know them.

In the course of time our exhibitions for all senses kept attracting not only visitors with special needs, but also the general public. Number of visitors in the years 2007 – 2014 grew significantly.

The following part of the Annual Report will cover the exhibitions for all senses in their chronological order. Here comes a survey:

- 2007 Water of life or There can be life in the Swamp as well
- 2008 To the mountain tops or Life from the sea-level to the top of the world
- 2009 In the land of the wizard Consumerism or Nature calls SOS
- 2010 What they wear or Plants and animals are dressed too
- 2010 The scent of pine needles or Discover conifers with all your senses
- 2011 Mysterious orchids and life around them
- 2012 Reserved for bees or We cannot do without honey
- 2013 From sunrise to sunset or Plants in the life of Native Americans
- 2014 Plants that changed the world
- 2015 Stones in the spotlight



Top: The authors of Exhibitions for all senses: from the left L. Prokopová, J. Skružná, I. Vilhumová

Bottom: Several exhibitions also included live animals



BOTANICKÁ ZAHRADA HL. M. PRAHY  
 VE SPOLUPRÁCI S HUMANITÁRNÍ  
 SPRÁVOU, PROTEBE, VÝSEKADNÍM VĚLÁNÍKŮ A  
 VÝZKUMNÝM VĚLÁNĚSKÝM ÚSTAVEM A  
 VÁS ZVOU NA VYSTAVU PRO VŠECHNY SMYSLY  
**ZADÁNO PRO VCELY  
 ANEB  
 BEZ MEDU TO NEJDE**  
 2. - 17. ČERVENA 2012 VE VYSTAVNÍM  
 SÁLE BOTANICKÉ ZAHRADY HL. M. PRAHY  
 (DENNĚ OD 9 DO 19 HODIN)  
 VERNISAŽ: PÁTEK  
 4. ČERVENA V 16 HODIN

BOTANICKÁ ZAHRADA HL. M. PRAHY, ZOOLOGICKÁ ZAHRADA HL. M. PRAHY,  
 A INSTITUT BIOMIMETIKS ZEMNĚ POUZÍVANÝCH ŽIVOČIŠŮ  
 SI VÁS DOVOLUJÍ PŘEVZÍT NA  
 HMATOVOU VYSTAVU  
**V ZEMI ČARODĚJE KONZUMA  
 ANEB PRIRUČKA VODA, SOB**  
 VYSTAVNA SE KONÁ  
 OD 21. ÚNĚVA DO 28. SRPNA 2012  
 VE VELEKONNĚM SÁLE  
 BOTANICKÉ ZAHRADY  
 HL. M. PRAHY  
 (DENNĚ 9 - 18 HOD.)  
 PŘED ÚVODEM  
 ROZHOVORU  
 S VOJČEKEM VEŽELNÍKEM  
 VE VEČERNÍM STANĚ,  
 JE TŘEBA SE PŘIHLÁSIT  
 TELEFONICKĚ NEBO LIVOVE  
 NA TEL. ČÍSLE: 603 582 191  
 (VĚSTVNÍKA TEMATICKÉ - BZ)

BOTANICKÁ ZAHRADA HL. M. PRAHY  
 A  
 ZOOLOGICKÁ ZAHRADA HL. M. PRAHY  
 VÁS ZVOU  
 NA HMATOVOU VYSTAVU  
**CO NOSÍ NA SOBĚ ANEB  
 ROSTLINY A ŽIVOTIČOVÉ SE OBLEKÁJÍ**  
 VE VYSTAVNÍM SÁLE BZ (AREÁL JIM)  
 DENNĚ 9 - 14 HODIN  
 VERNISAŽ: PÁTEK 9. DUBNA V 15:30 HODIN  
 VE VYSTAVNÍM SÁLE BZ

BOTANICKÁ ZAHRADA HL. M. PRAHY  
 ZOOLOGICKÁ ZAHRADA HL. M. PRAHY  
 VÁS ZVOU NA 13. HMATOVOU VYSTAVU  
**NA VĚCHYLKY BOK  
 ANEB  
 CO HLAVNĚ PĚŘEŽÍ AŽ PO STŘEŠKY SVĚTA**  
 VYSTAVNA SE KONÁ OD 18. DO 26. BŘEZNA 2012  
 VE VYSTAVNÍM SÁLE BZ OD 9 DO 19 HOD.  
 PŘED ÚVODEM ROZHOVORU S VOJČEKEM VEŽELNÍKEM  
 VE VEČERNÍM STANĚ, JE TŘEBA SE PŘIHLÁSIT  
 TELEFONICKĚ NEBO LIVOVE NA TEL. ČÍSLE:  
 603 582 191 - BZ VĚSTVNÍK (BZ)  
 WWW.BOTANICKA.CZ

BOTANICKÁ ZAHRADA HL. M. PRAHY  
 VÁS ZVE NA HMATOVOU VYSTAVU  
**OD SLUNCE VÝCHODU DO SLUNCE ZÁPADU  
 ANEB ROSTLINY V ŽIVOTĚ INDIANŮ**  
 17. 5. - 2. 6. 2013  
 DENNĚ OD 9 DO 19 HODIN  
 VENKOVNÍ EXPOZICE, VYSTAVNÍ SÁL

BOTANICKÁ ZAHRADA HL. M. PRAHY  
 ZOOLOGICKÁ ZAHRADA HL. M. PRAHY  
 VÁS ZVOU NA 13. HMATOVOU VYSTAVU  
**NA VĚCHYLKY BOK  
 ANEB  
 CO HLAVNĚ PĚŘEŽÍ AŽ PO STŘEŠKY SVĚTA**  
 VYSTAVNA SE KONÁ OD 18. DO 26. BŘEZNA 2012  
 VE VYSTAVNÍM SÁLE BZ OD 9 DO 19 HOD.  
 PŘED ÚVODEM ROZHOVORU S VOJČEKEM VEŽELNÍKEM  
 VE VEČERNÍM STANĚ, JE TŘEBA SE PŘIHLÁSIT  
 TELEFONICKĚ NEBO LIVOVE NA TEL. ČÍSLE:  
 603 582 191 - BZ VĚSTVNÍK (BZ)  
 WWW.BOTANICKA.CZ

ÚSTAVEM KVALITNĚ AŽ DO PAMĚTI PŘENÁŠEJÍCÍ ZAHRADU VĚKŮ ŽIVOTÍ  
 VE HROTECH A CHOCIMĚKOVĚ NEJAKO ŽIVOTNÝM ŽIVOTÍ  
**ZIŽVA VODA**  
 ANEB  
**J I V BAHNĚ NŮŽE BYT ŽIVĚ**  
 VERNISAŽ: 11. ČERVENA 2012  
 VE 16 HODIN  
 VYSTAVNA SE KONÁ OD 18. DO 21. PROSNA 2013  
 VE VYSTAVNÍM SÁLE ROZVOJNĚ ZAMĚŘENÉM (SPOUDĚNÝM PRŮMYSLU)  
 ŽIVOTNĚ ZORIENTOVANĚ PROMĚNĚNÝM VE VEČERNÍM STANĚ  
 JE TŘEBA SE PŘIHLÁSIT TELEFONICKĚ NEBO LIVOVE NA  
 (VĚSTVNÍKA TEMATICKÉ - BZ)

BOTANICKÁ ZAHRADA HL. M. PRAHY  
 A  
 ZOOLOGICKÁ ZAHRADA HL. M. PRAHY  
 VÁS ZVOU NA HMATOVOU VYSTAVU  
**TAJEMNÉ ORCHIDEJE A ŽIVOT KOLEM NICH**  
 VYSTAVNA SE KONÁ OD 19. - 27. BŘEZNA 2011  
 VE VYSTAVNÍM SÁLE (BĚHUŮV PROMĚNĚNÝM)  
 OD 9 DO 19 HODIN  
 PŘED ÚVODEM ROZHOVORU S VOJČEKEM VEŽELNÍKEM  
 VE VEČERNÍM STANĚ, JE TŘEBA SE PŘIHLÁSIT  
 TELEFONICKĚ NEBO LIVOVE NA TEL. ČÍSLE 603 582 191 -  
 BZ VĚSTVNÍK  
 VERNISAŽ:  
 18. BŘEZNA 2011 V 16 HODIN  
 POTRAVÍ SPOLČENÍ:  
 METRO TRAVA C.  
 VYKAZUJÍ ROZLOŽENÍ  
 BZ A Z TEL. DO STANICE ZOOLOGICKÉ ZAHRADY  
 NEBO BOTANICKÉ ZAHRADA TRAVIA, DALE PODLE ZNAČENÍ  
 VÍCE NA WWW.BOTANICKA.CZ

BOTANICKÁ ZAHRADA PRAHA  
 VÁS SKŘEČNĚ ZVE NA VYSTAVU  
 PRO VŠECHNY SMYSLY  
**TO JE PEČKA!**  
 18. 2. - 3. 5. 2015  
 DENNĚ OD 9 DO 19 H (HODIN)  
 A OD 12 H (HODIN)  
 VE VYSTAVNÍM SÁLE

# In the land of the wizard Consumerism or Nature calls SOS

**Date:** 21st – 29th April 2007

**Authors:** L. Preiningerová, L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 2585 persons

## **Motto**

The exhibition showed the serious topic of the growth of consumerism resulting in the increase of the amount of waste, which gradually suffocates nature. It also pointed out the difference between nature which is “live” and that which is artificially created. We treated the topic as a fairytale story, in which the wizard Consumerism is keeping the princess Naturette in prison. To free her, a single brave prince is not enough, we all have to help.

Problems of the environment are best illustrated by numbers. We had to depict the individual examples in a very clear, illustrative, tactile and sometimes even olfactory way.

## **Several examples**

Consumption of water for a bath (over 200 liters) versus a shower (50–70 liters) – 10 twenty liter barrels versus 33 one-and-a-half liter PET bottles.

50 kg of recycled paper will save 1 tree – a packet of old paper to be recycled versus logs of wood

Uniformity of spruce culture versus richness of mixed forest

What can be done for the imprisoned Naturette – what is made from recycled waste material?

## **List of some exhibits**

Garlic, containers with two kinds of water – “live” and “dead”, hazelnut twigs, model depicting clean air, air in the city (diesel smell), English lawn, flowering meadow, PET bottles with water, barrels with water, ferns (coal), 50 kg of recycling paper, logs of wood, PET bottles, fleece jacket, beverage packaging, biological waste

## **The following took part in the realization of the exhibition**

Johanka Fajtová, Jiří Litoš, Centrum Tereza, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden and the Zoo





Perceiving the exhibits through touch



Guide's instruction at the beginning of the tour



A monotonous spruce culture compares to a mixed forest in a nutshell

# Water of life or There can be life in the swamp as well

**Date:** 19th – 27th April 2008

**Authors:** L. Prokopová, I. Vilhumová

**Number of visitors:** 418 persons

## **Motto**

Water covers about 70 % of the Earth's surface. It is necessary not only for the life of human beings, but all living organisms. Without water, life would cease to exist.

The exhibition introduced individual continents with the plants and animals whose life is either closely linked to a large amount of water, or on the contrary they need just minimum moisture. Asia was represented by rice, which is an important source of food for the whole world and its growing requires plenty of water. The continent of Africa was characterized by the plants from the river catchment of the Nile – waterlilies, lotuses and papyrus. As for animals, there were African clawed frogs. Typical European environment linked to water was the exhibit of a peat bog and the flora and fauna of ponds. One of the most interesting exhibits was probably the carnivorous plant sundew. America was represented by a tropical forest with plants which grow only absorbing air moisture and the substances it contains – the so-called epiphytes. There was a very interesting sample of a “micro-world” – a bromeliad with little arrow frogs living in its rosette.

A new idea was to include a relatively large element. It was a pool with water in which water and wetland plants were planted in such a way to evoke the impression of a pond biotope with its shore growth.

## **List of exhibits**

Bowl of mud, dragonfly, frog, rice, skull of water buffalo, aquarium with a clawed frog, staghorn fern, orchid, dragon lizard, peat moss, peat, waterlily, lotus, sundew, grouse (thermoplastic model), reed mace, yellow iris, green tree frog (model), pool with plants, grass snake (model), white willow, bromeliad, arrow frog (model), tillandsia, rainbow lorikeet (dermoplastic preparation)

## **The following took part in the realization of the exhibition**

Johanka Fajtová, Jiří Litoš, Lucie Martišková, Centrum Tereza, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden and the Zoo



Peat bog in the north part of the Prague Botanic Garden



An introductory explanation is convenient for a group of blind visitors

# To the mountain tops or Life from the sea-level to the top of the world

**Date:** 18th – 26th April 2009

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 1451 persons

## **Motto**

How does flora and fauna change according to altitude? Can the changes be observed in the highest mountains and lower mountain ranges as well?

To illustrate these changes, we chose one of the highest mountain ranges in the world – the Andes, compared to a Czech mountain range – the Giant Mountains (Krkonoše).

The Andes rise almost vertically from the Pacific Ocean, stretching for almost 7 500 km along the whole of South America. There are various types of landscape on the east slopes, whereas the west slopes are poor, but still very interesting. In their imagination, the visitors ascended from the Pacific Ocean level, where they looked at tiny seaside flora – land bromeliads and spiky cactuses (safely touching them with a long straw). There was also a model of penguin eggs, as these birds nest on the Pacific shore.

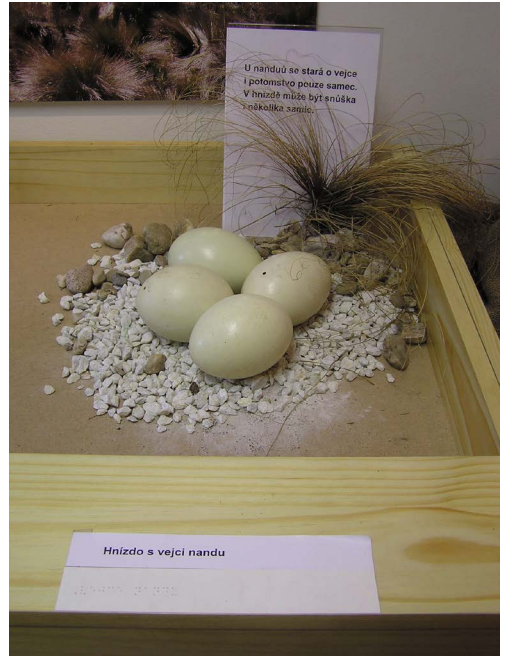
Then the visitors could taste the fruit of opuntia (prickly pears) which grow at the higher elevations. There was also the tasting of pineapples and bananas, grown in the high mountain fields. Farmers keep llamas in these regions too to use their warm wool. Still higher up are grown other crops (corn, amaranth, millet and potatoes).

In the other part, the visitors started descending the slopes of the Giant Mountains down to the valley, passing boulders with lichens, a dwarf mountain pine, dried blueberries, prunes, flax seeds, stalks of grape vine, a pasque flower.

## **The following took part in the preparation of the exhibition**

Johanka Fajtová, Jiří Litoš, Lucie Martišková, Centrum Tereza, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden and the Zoo.





Samples of the exhibits from the exhibition To the mountain tops



A model of shore vegetation on the coast of the Pacific Ocean

# What they wear or Plants and animals are dressed too

**Date:** 10th – 18th April 2010

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 1475 persons

## **Motto**

It is easy for people to protect themselves against cold and heat. But what about plants and animals? They grow and live in places where they are exposed to cold, frost, heat, scorching conditions, sometimes even fires. And they cannot undress and then dress again. So how do they go about it?

This year's topic was the protection of plants and animals against cold or by contrast against high temperatures. There were samples of plants able to survive even a fire, or those which just need fire for their survival. A strong rhytidome protecting plants from drying out, and strong shells or carapaces have the same function. A similar mechanism protects both plants and animals against cold – it is white colour as well as a thick “fur coat”. The visitors had an opportunity to compare various surfaces and adaptation to extreme conditions.

## **List of exhibits**

Pasque flower, skin of tahr (Himalayan even-toed ungulate), grass tree, eucalyptus trunk, turtle shell, succulent “live stones”, lemming (soft toy), rhytidome of douglas fir, skin of addax (desert antelope), rhytidome of storax, testudinaria plant (elephant leg) camel (model), cactus skeleton, sea sponge, bamboo, willow bark, polar bear skin, hedge maple bark, uromastyx lizard (live), honey locust, porcupine (dermoplastic preparation), trap-door spider skin, rhytidome of cork oak, corks, elephant skin, lotus leaf, common eider (dermoplastic preparation), river otter skin

## **The following took part in the realization of the exhibition**

Johanka Fajtová, Jiří Litoš, Lucie Martišková, Centrum Tereza, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden and the Zoo





Touch a live *Uromastyx* lizard!



Elephant skin in the hands of a blind visitor



Tahr skin and a pasque flower – an example of adaptation to mountain conditions

# The scent of pine needles or Discover conifers with all your senses

**Date:** 15th – 24th October 2010

**Authors:** L. Prokopová, J. Skružná

**Number of visitors:** 724 persons

## Motto

Conifers have existed on Earth for millions of years. They are some of the oldest living organisms, amazing us with their beauty as well as their height and mightiness. Coniferous trees are able to resist extreme conditions of arid deserts or snow-covered alpine mountains. The only thing they cannot cope with is pollution caused by humans. Extensive forest growths die out because of acid rain.

There are about 550 different species of conifer trees growing in the world now.

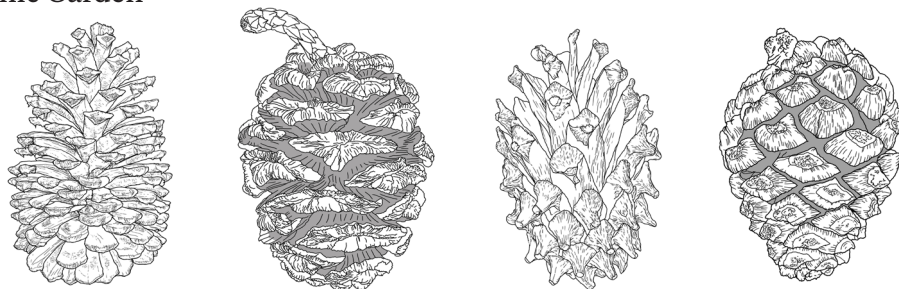
Besides getting to know various shapes of cones and pine needles, fragrances and barks, visitors could actively engage in two little competitions. The first task was to arrange selected cones according to their sizes, the second one was to recognize which cone belongs to which conifer tree, or identify which of the cones does not come from a conifer. The exhibition extended into outdoor expositions of the Botanic Garden.

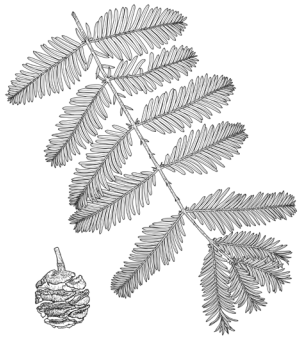
## List of exhibits

Plants (all or parts) and cones of these conifers: common spruce, Scots pine, dwarf mountain pine, *Pinus uncinata* subsp. *uliginosa*, Jeffrey pine, bristlecone pine, Lambert pine, umbrella pine, white fir, European larch, common juniper, common yew, evergreen cypress, giant sequoia, Lebanon cedar, atlas cedar, evergreen sequoia, dawn redwood, western thuja, ginkgo biloba

## The following took part in the realization of the exhibition

Jiří Litoš, Centrum Tereza, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden





Ink drawings by P. Horáček



Giant redwood in Prague Botanic Garden

# Mysterious orchids and life around them

**Date:** 19th – 27th March 2011

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 1110 persons

**Motto:** Orchids with their attractive flowers have been admired and pampered for centuries. They have been collected by passionate enthusiasts, but also most strictly protected. They comprise one of the most specialized groups of plants, having close relationships with other plants, fungi and many species of animals. All of them are distinguished by the same flower structure, where one of the three petals is transformed into a “lip” which is something like a “heliport” for pollinating insects.

The exhibition led the visitors into the colourful world of orchids, acquainting them with interesting facts concerning pollination and propagation. They had an opportunity to imagine the diverse world of tropical forests including some animals. They compared orchids with the smallest and the biggest flowers, they could also see an orchid growing and flowering underground. They learnt that to see orchids they do not need to travel far to the tropics because they can also be found on temperate meadows. Throughout the whole exhibition, they were accompanied by the exotic fragrance of the amazing flowers.

## List of exhibits

Globe with orchid incidence marked on it, tree trunk planted with tropical plants, arrow frog (model), toucan (dermoplastic preparate), orchid with the smallest flowers (model), orchid with the largest flowers, plant and seedpod of vanilla, sugar bowl with vanilla, vanillin sugar, underground orchid, tubers of our orchids (models), *Phalaneopsis* orchid, air roots, *Myrmecophila* orchid, staghorn fern, *Tillandsia*, *Vanda* orchid, model of an orchid flower with a sticky pollinium (model of pollinium),

*Ludisia* orchid, model of a hummingbird with extensible tongue, blue-streaked lory (dermoplastic model of a parrot), bowl with a salep sample, orchid seeds, young orchid plants, *Cattleya* orchid, nosegay for a ball.

## The following took part in the realization of the exhibition

Centrum Tereza, Johanka Fajtová, Jiří Litoš, Lucie Martišková, Terra Koruna – Luco Verdick, Marie Urbanová, Pavel Wiener and the staff of the Botanic Garden and the Zoo

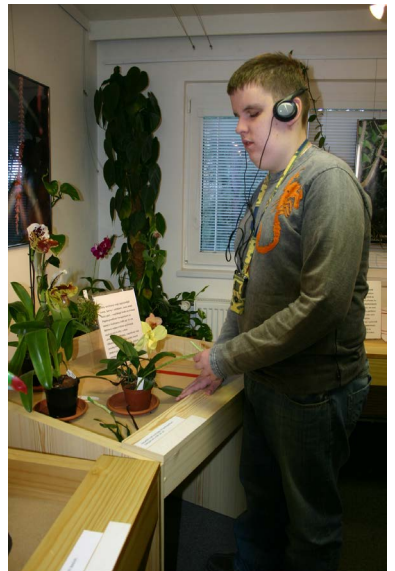




The guide explains where in the world orchids grow



Model of hummingbird with extensible tongue and blue-streaked lory



# Reserved for bees or We cannot do without honey

**Date:** 2nd – 17th June 2012

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 1513 persons

## **Motto**

As many as 85 %, i. e. more than 40 000 species of flowering plants in the world are pollinated by bees. Without bees and naturally other insect pollinators there would be no apples, pears, peppers, seeds of sunflowers, pepper, poppy or corn, not mentioning a number of other fruits.

By means of touch, smell and taste, the exhibition described the interesting life of bees. The visitors had an opportunity to explore the oldest kinds of beehives made of hollow tree trunk as well as other historical ones. They learned about the social structure of the bee colony and tasted different kinds of honey and products made from it. There were also exhibited interesting tools used by beekeepers.

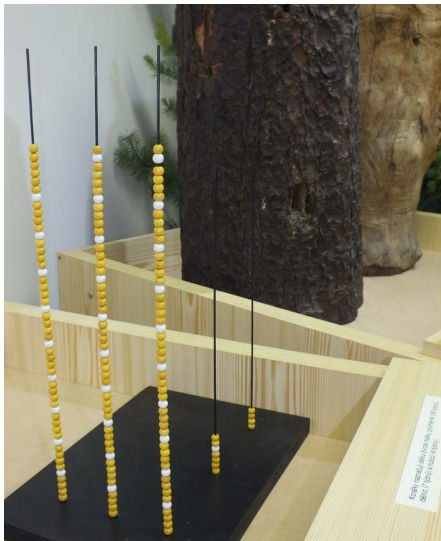
## **List of exhibits**

Model of a bee, hierarchy of bee colony, depiction of the length of bee life, bee dances, their half-day work (number of visited flowers), hollow tree trunk, bear skin, beehive of wicker, straw beehive, straw beehive with a lid, wooden beehive, cages for the mother, drone catcher, walls with beginning cells, branch of flowering linden, oregano, pimpernel, flower honey, honeydew honey, paste honey, sunflower flowers, piece of wax, propolis, bottle of mead, honeyjam, honey gingerbreads

## **The following took part in the realization of the exhibition**

Jiří Cafourek, Centrum Tereza, Jana Jelínková (donor of gingerbreads), Jiří Litoš, Lucie Martišková, National Agricultural Museum Kačina (lending of exhibits), Dalibor Titěra, Rudolf Peleška (Czech Union of Beekeepers), Milan Pešák, senator, Jan Stejskal, Medovka company, Těchtovice Honeyjam company (donor of honeyjam), Marie Urbanová, Augustin Uváčik, Zoo Ohrada (loaning of bearskin)





Depiction of the length of bee life



Model of the hierarchy of bee colony (mother, drones, workers)



Even media were interested in the exhibition

# From sunrise to sunset or Plants in the life of Native Americans

**Date:** 17th May – 2nd June 2013

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 1665 persons

**Motto:** Just like other indigenous peoples, Native Americans were able to live in a harsh environment and make use of all the gifts of nature – plants, animals and mineral materials. Plants accompanied their lives at almost every turn. They were a source of food, there were drinks made from them, as well as various tools, containers, bows, mats, paints, musical instruments...

The exhibition encouraged the visitors to spend one day in an Indian camp and get to know at least some plants used by Native Americans. There were plants suitable for the preparation of food and drinks, for personal hygiene, for colouring cloth and porcupine quills, for production of various objects. The visitors could look at bows and arrows, tomahawk handles, containers and musical instruments. They could also try to make fire by rubbing sticks. The haptic exhibition was complemented with various Indian buildings located on the premises of the Botanic Garden.

## List of exhibits

Wintergreen, drink made from wintergreen leaves, Indian rice, rice, dried cranberries, moccasins, seedpods of Kentucky coffeetree, buds of cottonwood, wooden model of sugar maple leaf, trunk with a tube and a container for collecting the sap, maple syrup, ash branch for making a bow, bow made from ash wood and arrows from spruce wood, dried meat, corn cob, seeds of beans, rubbing sticks to make fire, weathered elm tree bark, tinderbox – flint and steel, paper birch bark, model of birch bark canoe, pale purple coneflower (Echinacea), model of sweat lodge, sage leaves, herb mixture for pipes, Indian pipe and pipe pouch, rattle with seeds, Lacrosse stick, game stones in a wooden bowl, Canadian collinsonia, Indian flute

## The following took part in the realization of the exhibition

AB Facility – partner of the exhibition, Indian objects loaned by: Jan Bejčej, Pavel Čech, Jan Křístek, Martin Kupka, Radka Skoupilová, photographs: Petr Hanzelka, Eduard Chvosta, Kamila Lunerová, Jiří Cafourek, ELSA, Jiří Litoš, Petr Majer, Lucie Martišková, Jana Morávková, Marie Urbanová, Lan Ullrich, Dalibor Titěra, staff of the Botanic Garden, members of Woodcraft League – Ája, Toby, Aki



There is always a lot of exhibits heaped on the introductory table, called the "rummage table"



Interesting exhibits pleased namely children



Cloth and porcupine quills for embroidering are dyed with plants

# Plants that changed the world

**Date:** 11th – 27th April 2014

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 3530 persons

## **Motto**

There are several plants on the continents whose discovery and the following growing might have influenced the life of people all around the world. Some of them managed to prevent famines, cure serious diseases, others brought doom. The best-known are corn, tobacco, wheat, coca plant, rice, potatoes, tea, poppy

Some plants (we selected potato, quinine tree, sugar cane cotton, cocoa and spices) have influenced people's life all over the world more than it might seem at the first sight. Potatoes saved Europe from famine. The discovery of the effects of quinine helped to cure malaria. Sugar cane changed the world in rather a bad way. Due to increased use of sugar people's health got worse. In the 18th century, growing and processing cotton became the main economic activity of the colonists in the New World. Cocoa, known as a drink of gods, spread from Central and South America in 17th century. There is no doubt that spices changed the world.

## **List of exhibits**

Potato plant, "Keřkovské rohlíčky" (potato cultivar), potato dough, pitchfork for potatoes, planting spade, quinine tonic in a glass, pharmacy stand, storage container, mortars, pill maker, part of a sugar cane, cane sugar, molasses, beet sugar, sugarcane juice, lump of sugar, bottle of Cuban rum, cotton stalk with open bolls, cotton plant, bale of cotton, wheelbarrow for transporting cotton bales, cassette with recording of processing cotton from fluff to thread of various thickness, cocoa beans, cocoa seeds, cocoa powder, cocoa butter, chocolate hearts (tasting), various seeds of pepper, star anise, nutmeg, nutmeg grater, cinnamon bark, cloves

## **Exhibits loaned or dedicated by**

Antonín Cvrček, Josef Čermák, Czech Agricultural University, Czech Pharmaceutical Museum Kuks, Ladislava Valášková, Jan Babica, Přemysl Fiala, Karel Hamouz, Kateřina Jeřábková, Polabské Ethnographic Museum Přerov n. L., Jana Hrabětová, Textile Museum Česká Skalice, Vlastimil Havlík, Václava Pekárková, Dušan Swalens, the Vančatas, TEREOS TTD, a. s., Mělník



## Authors of photographs

Martin Dvořák, Karel Hamouz, Romana Rybková, Eva Smržová, Students for Living Amazon – Ludvík Bortl

## Further cooperation

Jiří Litoš, Lukáš Tremel, Marie Urbanová and the staff and guides of the Botanic Garden



Exhibit of cotton plant and cotton processing



Visitors could try the "pill-maker" from an old pharmacy



Exhibit dedicated to cane sugar



Plow and potato cultivar Keřkovský rohlíček



# Stones in the spotlight



**Date:** 18th April – 3rd May 2015

**Authors:** L. Prokopová, J. Skružná, I. Vilhumová

**Number of visitors:** 2852 persons

**Motto:** What is actually a stone?! What does a stone fruit look like and what does the group include?

In the beginning the questions seemed simple. But a worm named Frantík, the guide through the exhibition, explained to the visitors that it was not that simple. In the botanical introduction they learned what a drupe (stone fruit), a fruit, a stone and a seed actually is. And that some stone fruits have one stone and others have more. There was a number of surprises lurking at the exhibition.

It was the first time we chose a comic book guide. He appeared in the audio guide and all the texts as well. First he led the visitors to see the Mediterranean, and then even oversees. In the second part of the exhibition the worm showed them the smallest and the largest stones. And then he returned home. And he could not resist showing off – explaining that some palms and other exotic plants also have stones.

## List of exhibits

Date palm, date stone, almond stone, pistachio stones (so-called nuts), pistachio kernels, olive plant, olive stones, coffee fruits, coffee kernels, roasting coffee-mill, lychee fruit, whole fruit of coconut palm, cross-section of the fruit, stones of European elder, 50× enlarged model of elderberry stone, blackberry seeds, apricot kernels, various kinds of peach stones, cherry stones, cherry kernels, cherry stone remover, nutcracker, hawfinch (dermo-plastic model), horsehair sieve, wooden strainer, cradle press, fruit and stone of avocado, mango stone, stone of Lodoices palm, stone of Latania palm, fruit of *Hyphaene* palm

**Exhibits loaned by:** Jana Hrabětová from Polabské Ethnographic Museum Přerov n. L. and Petr Herynek

## Authors of photographs

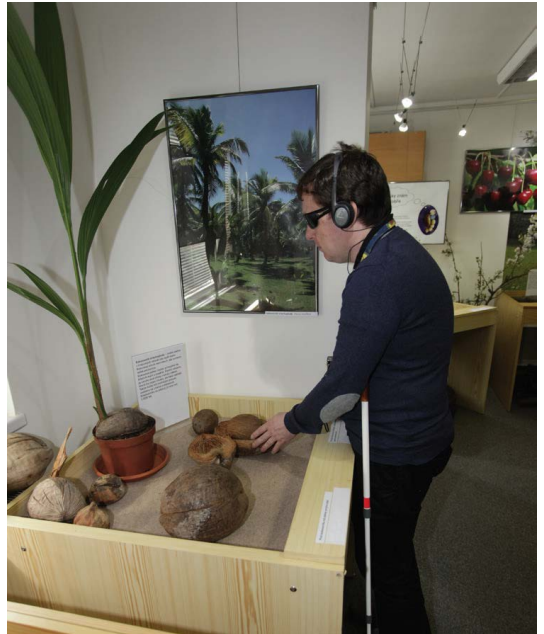
Eduard Chvist, Klára Lorencová, Romana Rybková, Eva Smržová, Josef Sus

## Further cooperation

ELSA, Jiří Litoš, Lucie Martišková, Marie Urbanová and the staff and guides of the Botanic Garden



Original drawings by L. Martišková



The whole coconuts were a big surprise for many people



Cherries as hawfinch food as well as popular fruit

# Notes



Annual report (1996–2015)  
20 years of work for visitors with special needs  
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