

## The Botanical Garden of Portici, Italy: a note from 1865 on its first botanical collections

RICCARDO MOTTI<sup>1</sup>

<sup>1</sup>Department of Agriculture, University of Naples Federico II, Via Università 100, 80055 Portici, Italy; motti@unina.it

---

Motti R. (2018): The Botanical Garden of Portici, Italy: a note from 1865 on its first botanical collections. – Thaiszia – J. Bot. 28 (2): 093-102. – ISSN 1210-0420.

Abstract: A document held at the State Archives in Naples entitled “Notamento dei vasi e piante esistenti nei vari giardini né due boschi Superiore ed Inferiore in Portici” dated June 3, 1865, contains a census of the botanical assets of the Royal Palace of Portici gardens and park. The list includes 118 identifiable species, 59 of which are still present in the Botanical Garden of Portici. This valuable document lists the plants present in the collections at that time, allowing us to trace the origin of some species currently grown in the Botanical Garden of Portici.

Keywords: botany, botanic garden, history, Bourbon, Naples

---

### Preface

The historical reconstruction of the plant collections grown in the oldest botanical gardens often presents major difficulties due to the lack of useful archival documents. In 1865 the Royal Palace of Portici and its gardens were sold by King Victor Emmanuel II as state property and on that occasion the solidity and nature of the assets were assessed. A document entitled *Notamento dei vasi e piante esistenti nei vari giardini né due boschi Superiore ed Inferiore in Portici* dated June 3, 1865, was found at the State Archives of Naples, in which a census of the botanical assets at the time of the sale is reported. This valuable document lists the plants present in the collections at that time, allowing us to trace the origin of some species currently grown in the Botanical Garden of Portici.

## Historical features

In 1738 Charles of Bourbon and his wife Maria Amalia of Saxony began work on building their residence in the grounds overlooking the bay of Granatello on the boundary between Portici and Resina, southeast of Naples. To construct the Palace and Royal Park several buildings and land parcels were purchased, some of which were covered with forest vegetation. Work on the palace was first directed by Antonio Medrano, who was replaced by Antonio Canevari in 1741. The park project was entrusted to Francesco Geri and subsequently to Francesco Vanvitelli and Ferdinando Fuga. At the beginning, the park included only the areas close to the Royal Highway to Calabria. As the park was intended for use as a hunting reserve, a large holm oak wood was planted. To create favourable conditions for plants to take root on the volcanic substrate, a topsoil layer had to be added (DEL PEZZO 1896) and, in some cases, explosives were used (MAZZOLENI 1990). Old holm oak plants from Sicily were used for the reafforestation. Since 1740, the Park has included the westernmost areas reaching down to the sea, extending from the slopes of Vesuvius to Granatello beach.

In 1871, the complex was purchased by the provincial government of Naples and housed the Royal Agricultural School, subsequently becoming the Faculty (now Department) of Agriculture of the University of Naples Federico II. In 1872 in the area of the upper gardens the Botanical Garden was founded by Nicola Antonio Pedicino, the School's first botany professor.

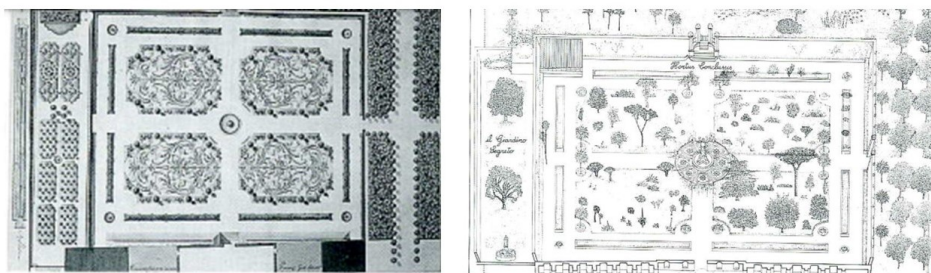


Fig. 1. Historical and modern maps of the botanical garden.

## Materials and methods

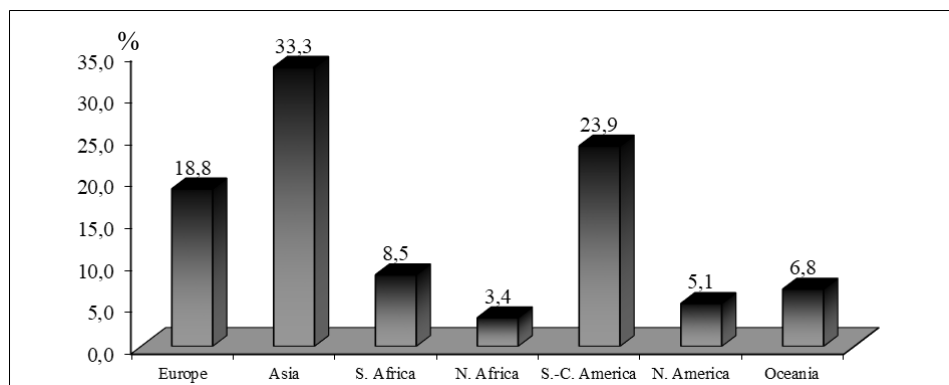
In the floristic list, drawn up on the basis of the '*Notamento*', we attempted, where possible, to apply the current nomenclature to the names occurring in the original document. The original terms are shown in brackets and are preceded by *sub* when they differ from the modern nomenclature. Any misspellings are faithfully reported, and in this case the term is written in Roman capitals; vernacular names are also written in Roman capitals.

The nomenclature follows European Garden Flora (CULLEN et al., 1984-2000), MOTTI (2001) and ERHARDT et al., (2002), while for clarification of synonymy

problems we referred to FIORI & PAOLETTI (1896-1908), TRAVERSO (1926), FIORI (1923-29), the Index Kewensis (HOOKER & JACKSON 1997) and The Plant List (2016). Families are organised based on APG IV (CHASE et al., 2016) for angiosperms. For each species, in addition to its complete name, information concerning the native habitat is provided. Species preceded by an asterisk (\*) are still present in the Botanical Garden.

## Results

In 1865, the entire botanical heritage of ornamental species grown in the Royal Palace Complex in Portici included 118 identifiable species belonging to 77 families. Analysis of the chorological spectrum in Fig. 2 shows that there was a prevalence of exotic species from tropical and temperate-warm climates of Asia and Central and Southern America (57 %). A total of 15 % of the species came from the southern hemisphere (South Africa, New Zealand and Australia). Among the European species (18.8 %) a large number were grown for food production (*Olea europaea* L., *Prunus domestica* L., *Pyrus communis* L), while others grew wild in the area surrounding the royal site (*Aegilops geniculata* Roth, *Matricaria chamomilla* L., *Viburnum tinus* L., etc.), and were thus plants of limited ornamental or phytogeographical interest.



**Fig. 2** Chorological spectrum of the species grown in the royal site of Portici in 1865.

It should also be emphasised that, despite the relatively small number of plants listed, analysis of the ornamental plants grown at that time is extremely interesting due to the presence of many species which in the latter half of the nineteenth century had only recently been introduced into Europe. The list includes several species which are very rarely cultivated in Italy today, such as *Plumbago zeylanica* L., *Porlieria hygrometra* Ruiz et Pav., *Callicarpa tomentosa* (L.) L. and *Pyrolirion arvense* (F. Dietr.) Erhardt, Goetz et Seybold.

Of considerable interest is the presence of *Pinus roxburghii* Sarg. This species is uncommonly cultivated outside India and Pakistan, and in Italy is known only from the Botanical Garden of Rome and the English Garden of the Royal Palace

of Caserta. A magnificent specimen of *P. roxburghii* (Fig. 3) is still found in the Botanical Garden of Portici and because in the *Notamento* the plant is referred to as being pot-grown, the current pine may well be the same specimen.

Fifty-nine of the species listed in the historical document are still present in the Botanical Garden. Although it was not possible to ascertain the occurrence of some plants due to the lack of documentation regarding the history of the plants in the Botanical Garden and in the entire Royal Palace grounds after 1865, it is conceivable that the accession of some of these specimens can be traced to the period preceding the document found at the State Archives of Naples.



**Fig. 3. The specimen of *Pinus roxburghii* Sarg. growing in the Botanical garden and its strobile.**

### **Compliance with Ethical Standards**

The authors declare that they have no conflict of interest.

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

### **References**

- CHASE, M.W., CHRISTENHUSZ, M.J.M., FAY, M.F., BYNG, J.W., JUDD, W.S., SOLTIS, (...), WEBER, A. (2016): An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG IV. – *Botanical Journal of the Linnean Society* 181(1): 1–20.
- CULLEN J. et al. (eds.) (1984–2000): *The European Garden Flora*. Vols. 1-6, Cambridge University Press.
- DEL PEZZO N. (1986): Siti Reali: il Palazzo Reale di Portici. In: *Napoli nobilissima* 5, fasc. 11.
- ERHARDT W., GÖTZ E., BÖDEKER N., SEYBOLD S. (2002): *Zander - Handwörterbuch der Pflanzennamen*. Ulmer, Stuttgart.

- FIORI A. & PAOLETTI G. (1896-1908): Flora Analitica d'Italia. 1-4 Tipografia del Seminario, Padova.
- HOOKE J.D. & JACKSON B.D. (1997): Index Kewensis Plantarum Phanerogarum 2.0 © Oxford University Press.
- MAZZOLENI S. (1990): Una fonte inedita sui lavori per l'allestimento dei giardini e dei parchi della Villa Reale di Portici. Tipografia C. S. L., Naples.
- MOTTI R. (2001): Guida al riconoscimento degli arbusti ornamentali. Liguori, Naples.
- THE PLANT LIST 2013. Version 1.1. Published on the Internet: <http://www.theplantlist.org> (accessed 1<sup>st</sup> January).
- TRAVERSO O. (1926): Botanica orticola. Tip. Mario Ponzio, Pavia.

#### Appendix 1. The annotated floristic list.

##### ACANTHACEAE

- Eranthemum pulchellum*** Andrews (sub *Ruellia varians*) - Asia  
 \**Justicia carnea* Lind. (sub *J. carnea* superba) - Brazil  
***Justicia*** sp. (sub *Cyrtantera*)

##### ACORACEAE

- Acorus calamus*** L. - Asia

##### ADOXACEAE

- \****Viburnum opulus*** L. - Europe, northern Africa and central Asia  
 \****Viburnum tinus*** L. - Mediterranean region

##### AGAVACEAE

- Polygonum tuberosum*** L. (sub *Polygonum tuberosum*) - Mexico

##### AMARYLLIDACEAE

- Hippeastrum miniatum*** Herb. (sub *Amaryllis atamasco*) - Peru  
*Narcissus* spp. (sub *Giunghiglie*)  
***Pyrolirion arvense*** (F. Dietr.) Erhardt, Goetz et Seybold (sub *Amaryllis aurea*) - Peru  
***Sprekelia formosissima*** (L.) Herb. (sub *Amaryllis formosissima*) – Mexico, Guatemala

##### ANACARDIACEAE

- \****Schinus molle*** L. – South America

##### APOCYNACEAE

- Tabernaemontana divaricata*** (L.) R. Br. ex Roemer et Schultes (sub *Tabernaemontanum coronarium*) - India  
***Catharanthus roseus*** (L.) G. Don (sub *Vinca rosea*) - Madagascar

##### ARACEAE

- Colocasia esculenta*** (L.) Schott (sub *Arum colocasia*) – Malaysia (uncertain)

##### ARECACEAE

- \****Phoenix dactylifera*** L. (sub *Foenix dactylifera*) – North Africa (uncertain)

##### ASCLEPIADACEAE

- Hoya carnosa*** (L. fil.) R. Br. - Australia

##### ASPARAGACEAE

- \****Convallaria majalis*** L. – Europe, Asia  
***Eucomis comosa*** (Houtt.) Wehrh. (sub *Eucomis punctata*) - Asia

ASTERACEAE

***Ageratum corymbosum*** Zucc. - Mexico

***Artemisia alba*** Turra (sub *A. camphorata*) - Europe

***Aster*** sp.

***Bidens sambucifolia*** Cav. - Mexico

***Helichrysum orientale*** (L.) Gaertn. (sub *Gnaphalium orientale*) – North Africa

***Jurinea mollis*** (L.) Reichenb. (sub *Acarna mollis*) - Europe

***Matricaria chamomilla*** L. (sub *Matricaria*) - Europe and temperate Asia

***Senecio*** sp. (sub *Senecium* sp.)

BEGONIACEAE

***Begonia*** sp.

BERBERIDACEAE

\****Berberis vulgaris*** L. - Central and southern Europe, northwest Africa and western Asia

\****Mahonia aquifolium*** (Pursh) Nutt. (sub *Mahonia fascicularis*) – Western North America

BIGNONIACEAE

\****Tecomaria capensis*** (Thunb.) Spach (sub *Bignonia capensis* and sub *Tecoma capensis*) . Southern Africa

BORAGINACEAE

\****Heliotropium arborescens*** L. (sub *Eliotropium peruvianum*) - Peru

BRASSICACEAE

\****Iberis semperflorens*** L. – Southern Europe

***Malcolmia chia*** (L.) DC. Central and eastern Mediterranean region

BROMELIACEAE

***Pitcairnia*** sp.

BUDDLEJACEAE

***Buddleja globosa*** Hope – Chile, Argentina

BUXACEAE

\****Buxus balearica*** Lam. (sub *Bux balearica*) Mediterranean region

CACTACEAE

\****Cereus peruvianus*** (L.) Mill. (sub *Cereus cilindricus*) – South America

CALYCANTHACEAE

***Calycanthus floridus*** L. - Eastern United States

CAMPANULACEAE

\****Lobelia laxiflora*** Humb., Bonpl. et Kunth (sub *Siphocampylus bicolor*) - South, Central, and North America

CAPRIFOLIACEAE

***Lonicera*** sp.

\****Lonicera tatarica*** L. - Siberia

CARYOPHYLLACEAE

***Dianthus caryophyllus*** L. (sub *Dianthus caryophyllus*) - Mediterranean region (uncertain)

\****Dianthus*** sp.

***Lychnis chalcedonica*** L. - Asia

COMMELINACEAE

\**Tradescantia zebrina* Bosse (sub *Tradescantia tricolor*) Mexico

CUPRESSACEAE

*Thuja occidentalis* L. 'Pyramidalis' (sub *Thuja pyramidalis*)

DRACAENACEAE

*Dracaena fontanesiana* Schult. & Schult. fil. - Madagascar

ERICACEAE

*Erica* sp.

ESCALLONIAACEAE

\**Escallonia* sp.

EUPHORBIACEAE

*Euphorbia pulcherrima* Willd. ex Klotzsch (sub *Poinsettia p.*) - Mexico

FABACEAE

*Pachyrhizus* sp. (sub *Pocorriza*)

\**Wisteria sinensis* (Sims) Sweet (sub *Clycine*) - China

GERANIACEAE

*Pelargonium* spp. (sub *Geranium* varietas)

*Pelargonium triste* (L.) L'Hér ex Aiton – South Africa

HOSTACEAE

\**Hosta* spp. (sub *Hoste* varietas)

HYACINTHACEAE

\**Hyacinthus orientalis* L. (sub *Giacinti doppi e semidoppi*) - Asia

HYDRANGEACEAE

\**Hydrangea macrophylla* (Thunb. ex Murray) Ser. (sub *H. japonica* and sub *H. hortensis*) - Japan

LAMIACEAE

*Lavandula dentata* L. - Europe

*Mentha* sp. (sub *Menta vulgaris*)

*Clinopodium vimineum* (L.) Kuntze. (sub *Xenoprosma obovata*) – C. America

*Origanum* sp. (sub *Origanum*)

*Salvia africana-lutea* L. (sub *S. aurea*) – South Africa

*Salvia involucrata* Cav. - Mexico

\**Salvia leucantha* Cav. - Mexico

*Salvia* sp. (sub *Salvia*)

\**Teucrium fruticans* L. - Europe, N.

LAURACEAE

*Lindera benzoin* (L.) Blume (sub *Laurus bensoin*) – N. America

LILIACEAE

*Tulipa* sp. (sub *Tulipani*)

LYTHRACEAE

\**Lagerstroemia indica* L. - Asia

*Punica granatum* L. 'Nana' (sub *Punica nana*)

MAGNOLIACEAE

\**Magnolia grandiflora* L. – N. America

MALVACEAE

*Abutilon grandifolium* (Willd.) Sweet (sub *Sida mollis*) - S. America, S. Africa

*Abutilon* sp.

*Hibiscus mutabilis* L. - China

\**Hibiscus rosa sinensis* L. - Asia

*Hibiscus* spp. (sub *Hibiscus* var.)

MIMOSACEAE

*Acacia dealbata* Link -

*Acacia farnesiana* (L.) Willd. - Mexico

*Acacia* sp. (sub *Mimosa*)

MORACEAE

*Ficus benjamina* L. (sub *F. benjamina*) – Asia, Australia

\**Ficus carica* L.

\**Ficus elastica* Roxb - Asia

MUSACEAE

\**Musa x paradisiaca* L. (sub *Musa speciosa*)

MYRTACEAE

\**Eucalyptus* sp.

*Melaleuca decussata* R. Br. ex W. T. Aiton - Australia

\**Melaleuca ericifolia* Sm. - Australia

\**Metrosideros* sp.

*Psidium guajava* L. (sub *P. pyrifera*) – C. and S. America

OLEACEAE

*Jasminum azoricum* L. Portugal

*Jasminum* sp.

\**Ligustrum japonicum* Thunb. - Japan

\**Olea europaea* L. subsp. *europaea* (sub *Ullivo*) – Europe (Uncertain)

\**Osmanthus fragrans* (Thunb.) Lour. (sub *Olea fragrans*) - Asia

ONAGRACEAE

*Fuchsia coccinea* Aiton - S. America

PAEONIACEAE

*Paeonia* spp. (sub *Paeonie*)

PAUWLONIACEAE

*Paulownia tomentosa* (Thunb. ex Murray) Steud. (sub *P. imperialis*) - China

PHORMIACEAE

\**Phormium tenax* J. R. Forst. et G. Forst. – New Zealand

PINACEAE

\**Pinus roxburghii* Sarg. (sub *P. longifolia*) - Asia

*Pinus* spp. (sub *Pinus* spp. pl.)

PITTOSPORACEAE

\**Pittosporum tobira* (Thunb. ex Murray) W. T. Aiton (sub *P. sinensis*) - Asia



PLANTAGINACEAE

**Globularia salicina** Lam. (sub *G. longifolia*) – Madeira, Canary Islands

\***Russelia equisetiformis** Schltdl. et Charm. (sub *R. juncea*) - Mexico

**Hebe speciosa** Andersen (sub *Veronica speciosa*) - New Zealand

PLUMBAGINACEAE

**Limonium** sp. (sub *Statice*)

**Plumbago auriculata** Lam. (sub *P. capensis*) South Africa

**Plumbago zeylanica** L. - Pantropical

POACEAE

\***Aegilops geniculata** Roth (sub *Triticum ovarium*) – Europe, W Asia

**Cymbopogon schoenanthus** (L.) Sprengel (sub *Cymbopogon schoenanthus*) – Asia, N Africa

POLEMONIACEAE

**Phlox paniculata** L. – N America

PRIMULACEAE

**Primula veris** L. s. l. - Europe, Asia

**Primula** sp.

PROTEACEAE

**Hakea suaveolens** R. Br. (sub *H. pectinata*) - Australia.

RANUNCULACEAE

**Ranunculus** spp. (sub *Ranuncoli* and sub *ranuncoli d'Olanda*).

ROSACEAE

**Chaenomeles japonica** (Thunb.) Lindl. ex Spach (sub *Pyrus japonica*) - Japan

\***Eriobotrya japonica** (Thunb.) Lind. (sub *Mespilus japonica*) - China

\***Prunus domestica** L. (sub *Prugne*) - Europe

\***Prunus lusitanica** L. - Europe

\***Prunus persica** L. (sub *Pesche*) - China

**Prunus** spp.

\***Pyrus communis** L. (sub *Pera*) - Eastern Europe and southwest Asia

**Rhaphiolepis indica** (L.) Lindl. – China, Japan

\***Rosa** spp. (sub *Rose*).

**Spiraea** sp.

RUBIACEAE

\***Serissa foetida** (L. fil.) Lam. - Asia

RUTACEAE

\***Citrus aurantium** L. (sub *Aranci amari*) - Asia

\***Citrus limon** (L.) Burm. fil. (sub *Limoni*) - Asia

\***Citrus x sinensis** (L.) Osbeck (sub *C. chinense*) - Asia

**Citrus** spp. (sub *Cytrus di semi, aranci, mandarini, margotte di agrumi*).

**Triphasia trifolia** (Burm fil.) P. Wilson (sub *Limonia trifoliata*) - Asia

SCROPHULARIACEAE

**Veronica** sp.

SOLANACEAE

\***Brugmansia arborea** (L.) Lagerh. (sub *Datura flore albo*) – South America (now extinct in the wild)

**Cestrum elegans** (Brongn. ex Neuman) Schltld. (sub *Abrotamnus elegans*) - Mexico

**Cestrum** sp. (sub *Cestrum*)

**Petunia** sp. (sub *Petunia*)

STRELITZIACEAE

\***Strelitzia reginae** Banks – South Africa

TAXACEAE

\***Taxus baccata** L. – Europe, Asia and northwest Africa

TAXODIACEAE

**Cunninghamia lanceolata** (Lamb.) Hook. (sub *Belis jaculifolia*) - China, Vietnam and Laos

THEACEAE

**Camellia** spp. (sub *Camellie simplicis*)

TILIACEAE

\***Sparmannia africana** L. fil. South Africa, Madagascar

URTICACEAE

**Boehmeria nivea** (L.) Gaudich. (sub *Urtica nivea*) - Asia

VERBENACEAE

**Aloysia chamaedryfolia** Cham. (sub *Lippia cametrifolia*) - South America

**Aloysia citriodora** Palau - South America

**Callicarpa americana** L. - Southern United States

**Callicarpa tomentosa** (L.) L. (sub *C. tomentosum*) – India, Sri Lanka

\***Duranta erecta** L. (sub *Duranta ellisii*) – Mexico, Argentina, Brazil

\***Lantana camara** L. - Central and South America

VIOLACEAE

**Viola tricolor** L. Europe

VITACEAE

**Cissus antarctica** Vent. - Australia

**Vitis vinifera** L. s. l. (sub *Vite*) - Mediterranean region, central Europe, and southwestern Asia

XANTHORRHOEACEAE

\***Aloe plicatilis** (L.) Mill.

ZINGIBERACEAE

**Alpinia nutans** (L.) Roscoe - Asia

\***Hedychium coronarium** J. König (sub *Edichium coronaria*) - Asia

ZYGOPHYLLACEAE

**Porlieria hygrometra** Ruiz et Pav. (sub *P. hygrometrica*) – Bolivia, Chile and Peru

Received: January 28<sup>th</sup> 2018

Revised: October 31<sup>st</sup> 2018

Accepted: October 31<sup>st</sup> 2018