

PHILADELPHIA ZOO PLANT INFORMATION DATABASE

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Abstract

Nutritionists and veterinarians in the zoological field are increasingly tasked with ensuring that the diets of captive animals are wholesome and natural. While this is a welcomed and positive trend, it is often difficult to achieve due to a lack of scientifically backed information. This difficulty also applies to the plants that are offered to captive animals as browse and enrichment.

At the Philadelphia Zoo (PZ) a database was initiated to consolidate the various collections of plant data from different departments - primarily nutrition, veterinary, and horticulture - to create one searchable document. The database has expanded tremendously and now has two main components. The first is a vast excel sheet that includes things such as basic plant information and links to innumerable resources. The second component is a series of detailed reports consisting of in-depth literature reviews which focus on safety, edibility, and toxicity. These reports reflect the PZ's needs. In this capacity, the database has been utilized for exhibit plantings, keeper training, and approving plants for the browse program.

The database is now at a stage where participation from other zoos, especially those conducting similar research, will expand and enhance the database. Our long-term goal is to identify funding to turn the database into a user-friendly app that can be utilized on the go and specific to the needs of zoos, sanctuaries, and wildlife rehabilitation centers.

This presentation will cover the following:

1. How the database and reports are set-up and utilized by the Philadelphia Zoo.
2. Difficulties inherently exist in researching plants.
3. Significant errors discovered within the most trusted resources, and the perpetuation of misinformation on commonly used websites.
4. Anticipated impact of a handheld database in the form of a phone app.
5. Next Steps
 1. app funding
 2. collaboration
 3. species-specific browse

Nomenclature		Quick Facts				Guides / Information Sheets/ Profiles										Safe & Toxic				
Genus	Species / Common name	Full Scientific Name / Latin	Other Common Name	The Plant List	Native To?	Identification/ Flower	Phytochemical	Wiki page	wiki to Inaturalist	USDA PLANTS	North Carolina	Plants of the World	Missouri botanical	ASPCA	ASPCA	ASPCA	ASPCA	ASPCA		
A																				
Abelmoschus	Okra	Abelmoschus Abelmoschus esculentus	ladies' fingers	Abelmoschus	E. Tropical Africa Cultivated			https://en.wikipedia.org/wiki/Okra	https://www.inaturalist.org/spec/Abelmoschus	https://plants.usda.gov/npage.do?plant=Abelmoschus	https://plants.ces.ncsu.edu/plants/Abelmoschus/	http://www.plantlife.org/Abelmoschus	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abelmoschus							
Abies	Balsam Fir	Abies Abies balsamea	Balsam	Abies	Temp. Eurasia Central & E. Europe			https://en.wikipedia.org/wiki/Abies_balsamea	https://www.inaturalist.org/spec/Abies	https://plants.usda.gov/npage.do?plant=Abies	https://plants.ces.ncsu.edu/plants/Abies/	http://www.plantlife.org/Abies	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abies							
Abronia (Sand Verbena)		Abronia	wild lantanas	Abronia	W. Canada to Mexico Wyoming to Nevada			https://en.wikipedia.org/wiki/Abronia	https://www.inaturalist.org/spec/Abronia	https://plants.usda.gov/npage.do?plant=Abronia	https://plants.ces.ncsu.edu/plants/Abronia/	http://www.plantlife.org/Abronia	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abronia							
	Fragrant White Sand	Abronia elliptica		Abronia elliptica	W. Central & C			https://en.wikipedia.org/wiki/Abronia_elliptica	https://www.inaturalist.org/spec/Abronia_elliptica	https://plants.usda.gov/npage.do?plant=Abronia_elliptica	https://plants.ces.ncsu.edu/plants/Abronia_elliptica/	http://www.plantlife.org/Abronia_elliptica	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abronia_elliptica							
	Snowball Sand Verbena	Abronia fragrans	sweet sand-verbena	Abronia fragrans	S. Nevada to N			https://en.wikipedia.org/wiki/Abronia_fragrans	https://www.inaturalist.org/spec/Abronia_fragrans	https://plants.usda.gov/npage.do?plant=Abronia_fragrans	https://plants.ces.ncsu.edu/plants/Abronia_fragrans/	http://www.plantlife.org/Abronia_fragrans	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abronia_fragrans	Wild Lantana	Non-Toxic to Dogs, Non-Toxic to Cats, Non-Toxic to Horses					
	Desert Sand Verbena	Abronia villosa	Chaparral sand verbena	Abronia villosa	n/a			https://en.wikipedia.org/wiki/Abronia_villosa	https://www.inaturalist.org/spec/Abronia_villosa	https://plants.usda.gov/npage.do?plant=Abronia_villosa	https://plants.ces.ncsu.edu/plants/Abronia_villosa/	http://www.plantlife.org/Abronia_villosa	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abronia_villosa							
Abrus	Rosary pea / Jequirity Bean	Abrus Abrus precatorius	Jequirity Bean	Abrus	Tropical & Subtropical Tropical & Subtropical			https://en.wikipedia.org/wiki/Abrus_precatorius	https://www.inaturalist.org/spec/Abrus	https://plants.usda.gov/npage.do?plant=Abrus	https://plants.ces.ncsu.edu/plants/Abrus/	http://www.plantlife.org/Abrus	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abrus	Prayer Bean	Toxic to Dogs, Abrin (lectin or protein)				Severe vomiting	YES
Abutilon	Velvetleaf	Abutilon Abutilon theophrasti	room maple, poplar velvetleaf	Abutilon	Tropics & Subtropics Central Asia to Australia			https://en.wikipedia.org/wiki/Abutilon	https://www.inaturalist.org/spec/Abutilon	https://plants.usda.gov/npage.do?plant=Abutilon	https://plants.ces.ncsu.edu/plants/Abutilon/	http://www.plantlife.org/Abutilon	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Abutilon							
Acacia	Earpod Acacia / Silver Wattle	Acacia Acacia auriculiformis Acacia dealbata	auri, earleaf acacia / silver wattle, b	Acacia	W. Indian Ocean SE. Maluku to SE. Australia			https://en.wikipedia.org/wiki/Acacia	https://www.inaturalist.org/spec/Acacia	https://plants.usda.gov/npage.do?plant=Acacia	https://plants.ces.ncsu.edu/plants/Acacia/	http://www.plantlife.org/Acacia	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Acacia							
Acalypha	Chenille Plant / Copperleaf	Acalypha Acalypha chamaedrifolia Acalypha hispida Acalypha wilkesiana	three-seeded chenille plant	Acalypha	Tropical & Subtropical S. Florida to Central America Cultivated Bismarck Archipelago			https://en.wikipedia.org/wiki/Acalypha	https://www.inaturalist.org/spec/Acalypha	https://plants.usda.gov/npage.do?plant=Acalypha	https://plants.ces.ncsu.edu/plants/Acalypha/	http://www.plantlife.org/Acalypha	http://www.missouribotanicalgarden.org/PlantInfo/Plant.aspx?genus=Acalypha	Chenille Plant Copperleaf	Non-Toxic to Dogs, Non-Toxic to Cats, Non-Toxic to Horses					Mild Yes