



The Eternal Beauty of Plants

Herbarium preparation

常龙啸 (Chang Longxiao)

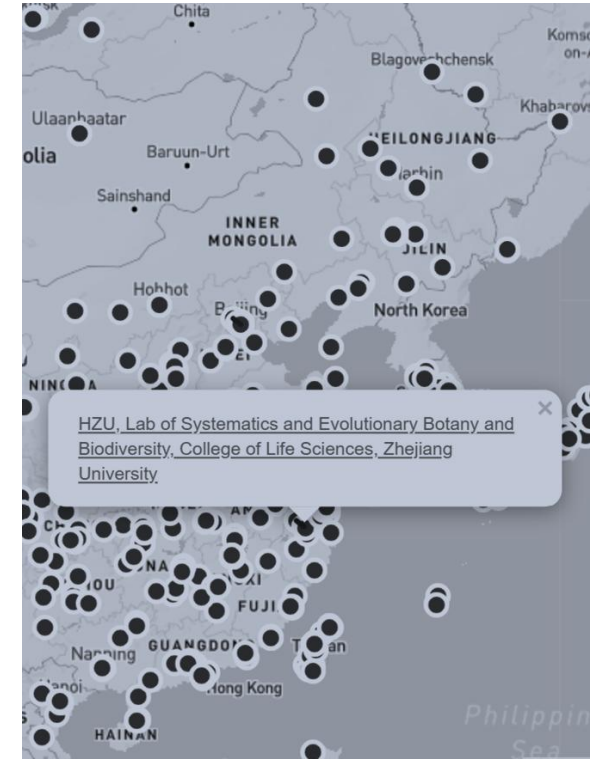
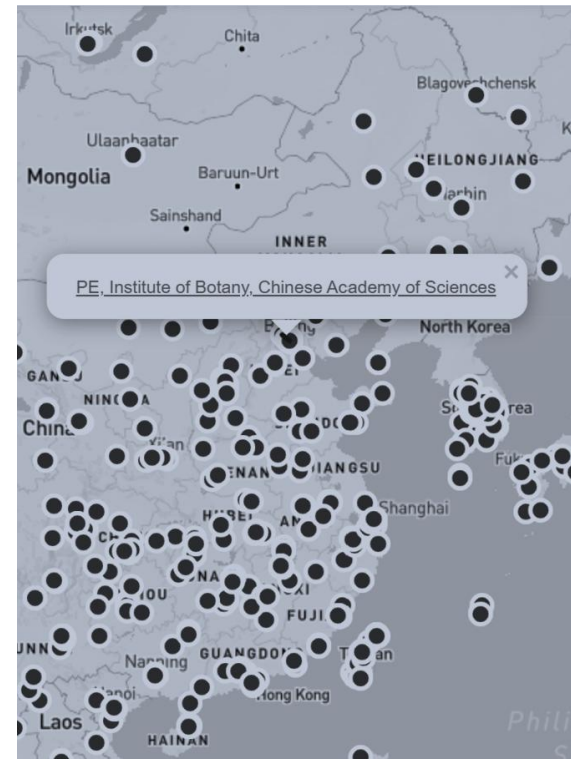
21/12/2023



Herbarium collections

—— a brief introduction ——

Collections and Herbarium code



Collections and Herbarium code



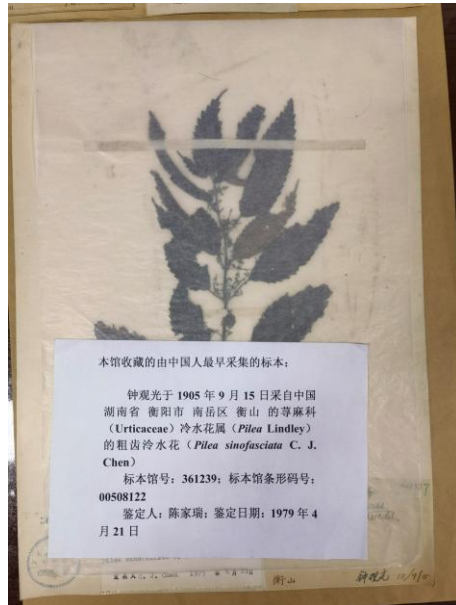
Collections and Herbarium code



Different types of specimen

- **Pressed and dried**

Vascular plant (flowering plants, conifers, ferns) specimens are pressed and dried plants that are mounted on herbarium sheets



- **Dried**

Small bryophytes (mosses, hepatics or liverworts, and hornworts) are dried and placed loosely in folded packets.



- **Stored in fluid**

Preserved material can be kept in a glass jar filled with preservative fluid. By storing this way, the botanical specimens are maintained in a usable condition by inhibiting enzymatic and microbial attack



- **Microscope slides**
- **Desiccants and freeze-drying**

Dried and pressed plants

THE herbarium



plant collection

- **Collection tools**

spade, pocket knife, pruning shears, pole pruners

- **Container**

sealable plastic bags of various sizes, paper bags

- **Information recording**

field notebook, GPS, plant identification book, pencils and marking materials



plant collection

- **identical characteristic:**
Flowers, seeds, fruits, bud
- Herb: full plant
- Woody plant: branch with top bud
- Vines: middle part



plant collection

- **identical characteristic:**
Flowers, seeds, fruits, bud
- Herb: full plant
- Woody plant: branch with top bud
- Vines: middle part



plant collection

- **identical characteristic:**
Flowers, seeds, fruits, bud
- Herb: full plant
- Woody plant: branch with top bud
- Vines: middle part



Pressing and Drying

- The basic plant press (17" × 12" dimension)
- drying cabinet / air heater



But...

- Lay the specimen out so that there is minimum overlap between parts
- Try to retain the natural posture of the living plant
- Make a zigzag bend in the stems of tall plants
- If the plant specimen has a great number of leaves, snip off some of the leaves but always leave part of the and ensure some leaves from different areas of the stem are left since leaves may vary in form along the length of the stem
- Slice end of woody stems diagonally
- The back of at least one leaf should be visible on a pressed specimen
- If there are several flowers on a specimen, then vary positioning of the flowers with some face up and others face down or sideways
-

我与一座城

老城新风记南皮

[illegible]

无量山下的幸福

[illegible]

国家科学技术奖励条例

[illegible]

与您携手

泥土芥芳

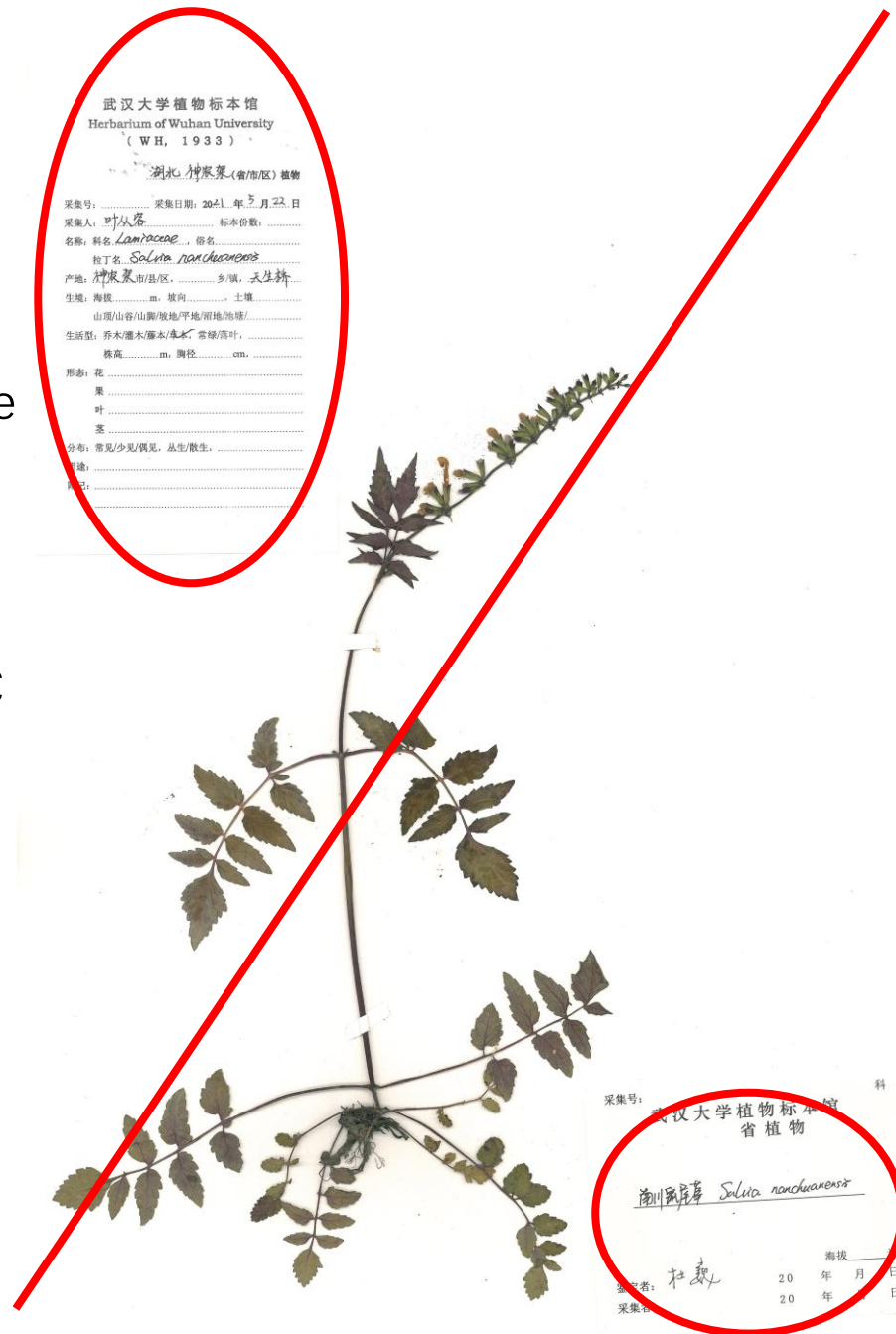
图 1 大叶地 大叶地 (Adiantum sp.) 的干燥根茎。根茎粗壮，呈木质化，表面有细密的纵纹。根茎上生有大量的不定根。根茎的顶端有未展开的幼叶。根茎的基部有枯萎的叶柄。根茎的横切面显示木质部、韧皮部和维管束。根茎的纵切面显示木质部、韧皮部和维管束。根茎的显微特征：根茎的表皮细胞呈长方形，排列紧密。皮层细胞呈长方形，排列疏松。维管束呈环状排列，由木质部和韧皮部组成。木质部细胞呈长方形，排列紧密。韧皮部细胞呈长方形，排列疏松。维管束的周围有薄壁细胞。根茎的显微特征：根茎的表皮细胞呈长方形，排列紧密。皮层细胞呈长方形，排列疏松。维管束呈环状排列，由木质部和韧皮部组成。木质部细胞呈长方形，排列紧密。韧皮部细胞呈长方形，排列疏松。维管束的周围有薄壁细胞。

予 薤 白

Show as much information as possible

Identification and attachment

- Do identification with reference books (flora of the region, field guide, illustrated botanical glossary or dictionary) or ~~taxonomist you know well~~
- Attached to herbarium sheets with glue, plastic strapping, or linen tape
- Filed data label
place, time, species, family, collector, environment, life form and other information
- Annotation label
Species name, identifier, institute/university



武汉大学植物标本馆
Herbarium of Wuhan University
(W.H. 1933)

湖北 神农架(省/市区)植物

采集号: 采集日期: 2021 年 5 月 22 日
采集人: 张尧灯 标本份数: 1
名称: 科名: 别名: 拉丁名: *Cornus Rosa ssp. chinensis*
产地: 神农架市/县/区: 乡/镇: 天生桥
生境: 海拔: m. 坡向: 土壤:
山溪/山谷/山坡/平地/湿地/沼泽/
生活型: 乔木/灌木/草本: 常绿/落叶:
株高: m. 胸径: cm.
形态: 花:
果:
叶:
茎:
分布: 常见/少见/偶见. 丛生/散生.
用途:
附记:



采集号: 科
武汉大学植物标本馆
省植物

Cornus Rosa ssp. chinensis *rebut*

鉴定者: 杜森 海拔: 米
20 年 月 日
采集者: 20 年 月 日

武汉大学植物标本馆
Herbarium of Wuhan University
(W.H. 1933)

湖北 神农架(省/市区)植物

采集号: 20211111 采集日期: 2021 年 5 月 22 日
采集人: 肖欣 标本份数: 1
名称: 科名: *Juglandaceae* 别名: 胡桃科
拉丁名: *Juglans mandshurica*
产地: 神农架市/县/区: 乡/镇: 天生桥
生境: 海拔: m. 坡向: 土壤:
山溪/山谷/山坡/平地/湿地/沼泽/
生活型: 乔木/灌木/草本: 常绿/落叶:
株高: m. 胸径: cm.
形态: 花:
果:
叶:
茎:
分布: 常见/少见/偶见. 丛生/散生.
用途:
附记:



采集号: 科
武汉大学植物标本馆
省植物

Juglans mandshurica

鉴定者: 杜森 海拔: 米
20 年 月 日
采集者: 20 年 月 日

武汉大学植物标本馆
Herbarium of Wuhan University
(W.H. 1933)

湖北 神农架(省/市区)植物

采集号: 采集日期: 2021 年 5 月 22 日
采集人: 郭博宇 标本份数: 2
名称: 科名: *Delphiniumaceae* 别名: 翠雀科
拉丁名: *Delphinium constrictifolium* var. *major*
产地: 神农架市/县/区: 乡/镇: 天生桥
生境: 海拔: m. 坡向: 土壤:
山溪/山谷/山坡/平地/湿地/沼泽/
生活型: 乔木/灌木/草本: 常绿/落叶:
株高: m. 胸径: cm.
形态: 花:
果:
叶:
茎:
分布: 常见/少见/偶见. 丛生/散生.
用途:
附记:



采集号: 科
武汉大学植物标本馆
省植物

Delphinium constrictifolium var. *major*

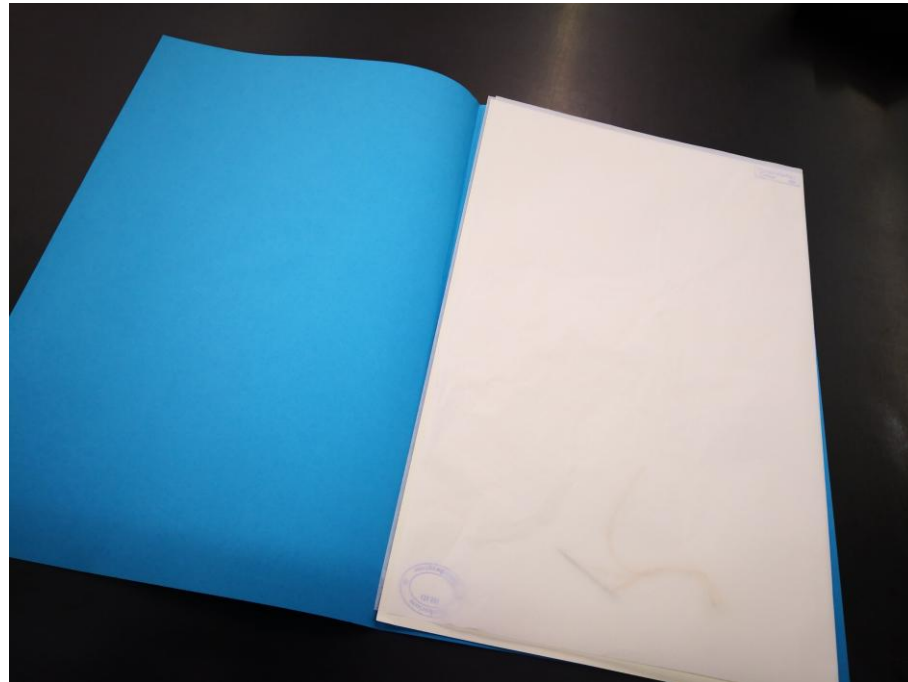
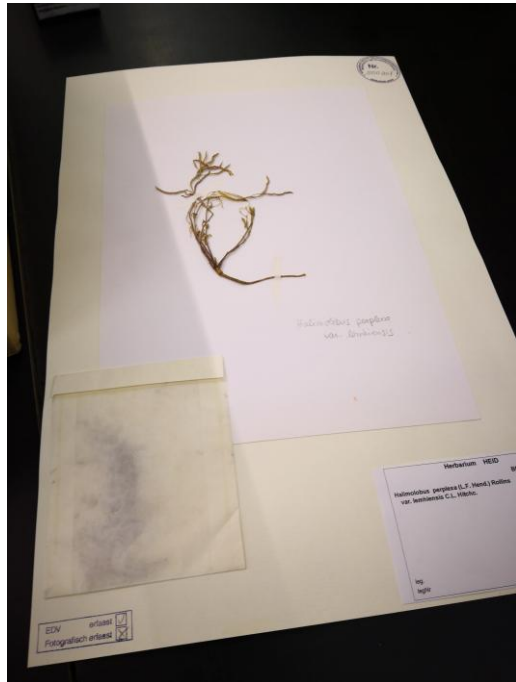
鉴定者: 杜森 海拔: 米
20 年 月 日
采集者: 20 年 月 日

Storage of herbarium specimen

——— “collection” ———



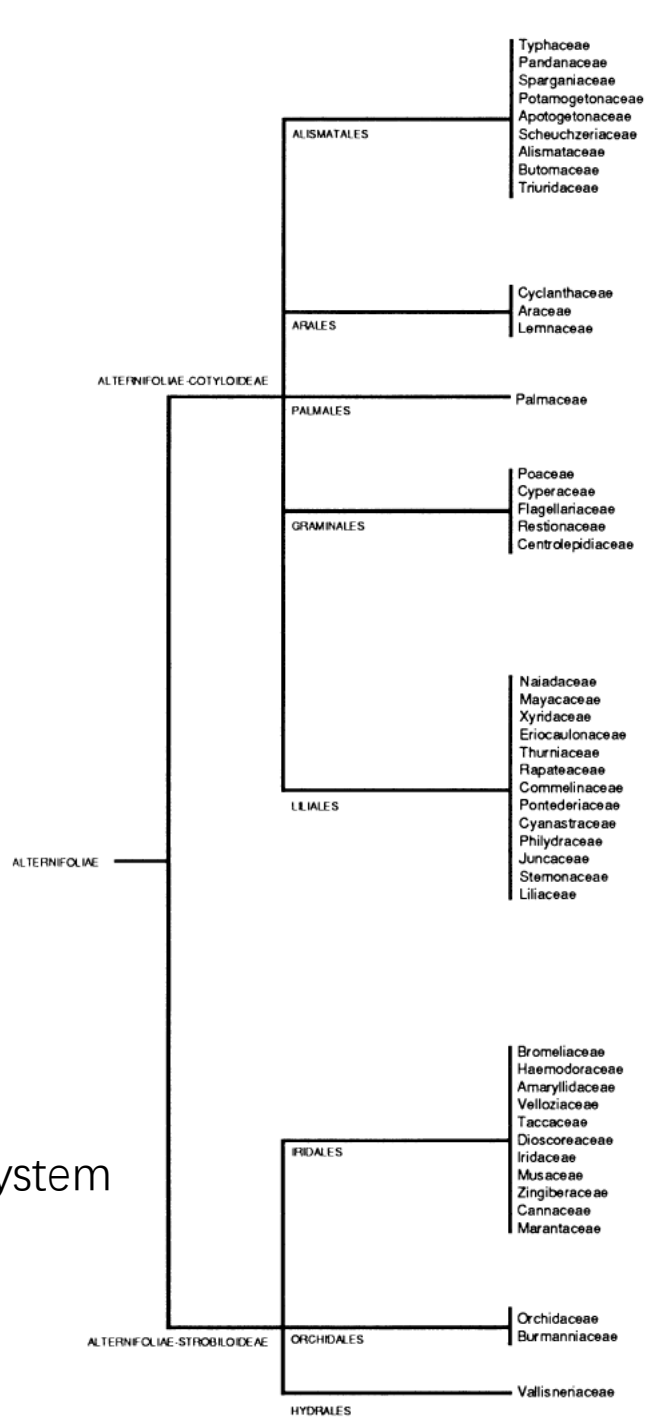
Collection



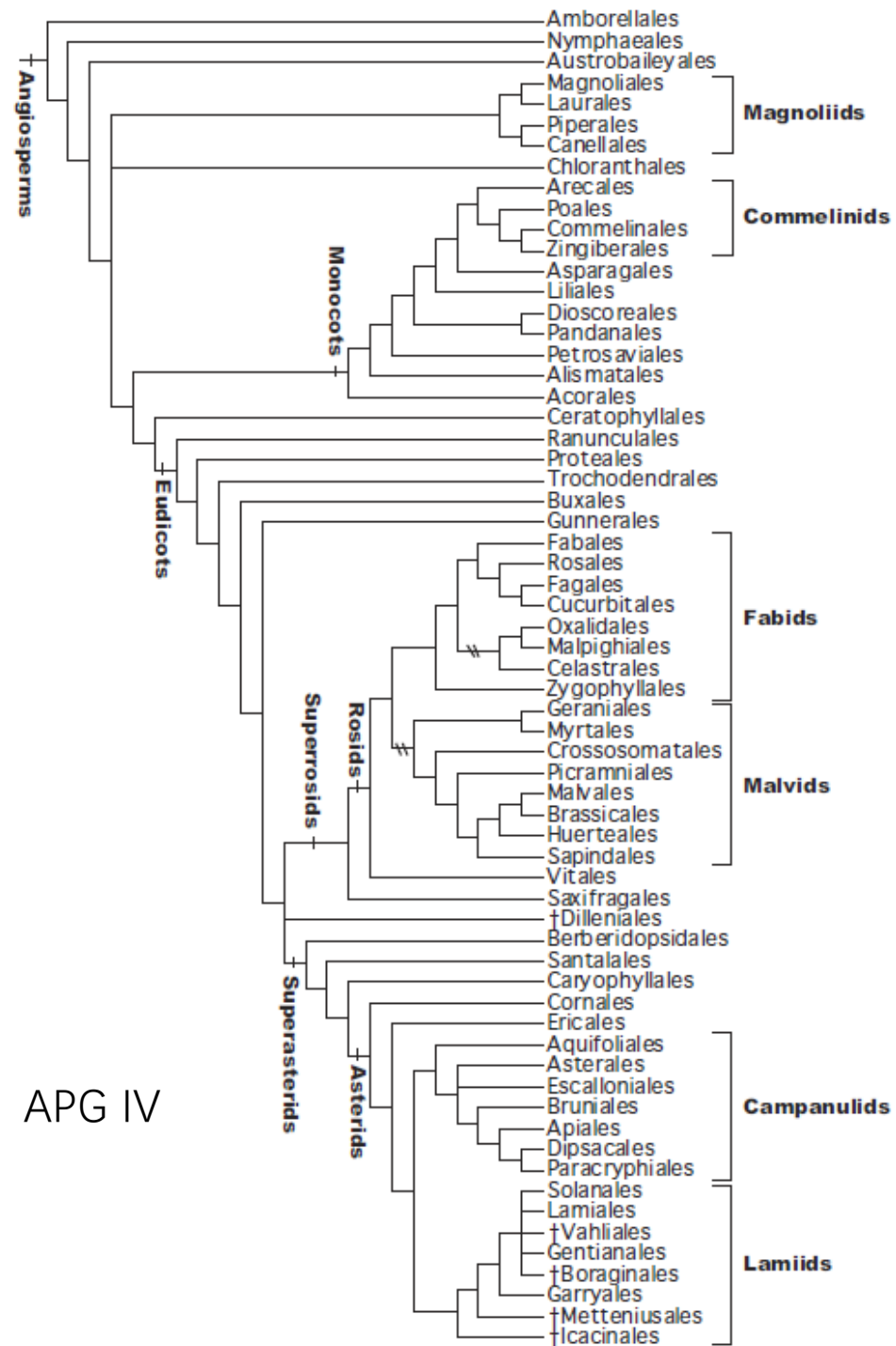
Protection & Taxonomy



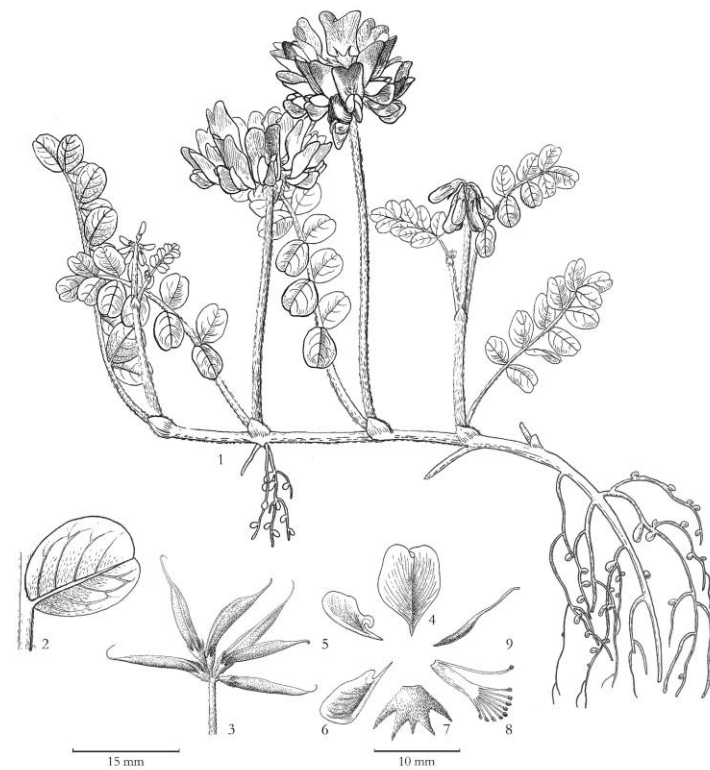
Engler's system



APG IV



Special “herbarium” collection



1—4. *Astragalus sinicus* Linnaeus 紫云英, zi yun ying. —1. Habit. —2. Abaxial view of leaflet. —3. Legumes. —4. Standard. —5. Wing. —6. Keel. —7. Calyx, flattened. —8. Androecium. —9. pistil.



1—4. *Cerasus serrulata* (Lindl.) G. Don ex London, 山櫻花 shan ying hua. —1. Flowering branch. —2. Flower longitudinal section. —3. Leaf abaxial surface. —4. Drupe.

Collecting is human nature, then classifying

21/12/2023

