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Correct Names, Synonyms, and Specimen Composition of Oleaceae in Chinese Herbarium Collections

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Abstract: This study analyzed the collection of Oleaceae plant specimens in Chinese Herbaria over the past 120 years. The results revealed that Chinese collections contain a total of 74,484 Oleaceae specimens, representing 346 taxa (including species, subspecies, varieties, forms, and hybrids). Among these, 52,427 specimens (70.39%) were correctly labeled, while 20,490 specimens (27.51%) were annotated with synonyms, involving 480 distinct synonyms—approximately 58.11% of the 826 record names. Additionally, 1,567 specimens (2.10%) were labeled solely with genus names without specific taxonomic ranks, and 460 specimens (0.61%) bore unverifiable Oleaceae taxon names, contributing to a purported total of 74,944 Oleaceae specimens. Constructing a high-quality herbarium information database by integrating existing herbarium records with DNA-based taxonomic research and other analytical techniques will expand the range of accurately identified taxa. This advancement supports AI-driven research, facilitates in-depth data mining, and fosters interdisciplinary innovation. This study holds significant implications for advancing taxonomic revision, conserving Oleaceae resource, and promoting their sustainable utilization.

Keywords: Oleaceae, Specimen, Chinese herbarium collection, Plant diversity identification

1. Introduction

Identifying plant genetic diversity remains challenging due to morphological traits that are affected by environmental factors and developmental stages, along with the confusing use of synonyms and homonyms. These issues have hindered relevant scientific research and industrial progress, rendering taxonomic identification relatively arduous [1,2]. A sampling survey of 4,500 specimens from 40 herbaria across 21 countries revealed that over 50% of tropical plant specimens have identification errors in their names[3]. To address this problem, we examined the correct names, synonyms, and specimen composition of Oleaceae plant specimens housed in Chinese herbaria. This study aims to establish a foundation for the conservation and sustainable use of Oleaceae plant resources, as well as for the advancement of related industries.

2. Materials and Methods

Taking the herbarium specimens of Oleaceae plants accumulated over the past 120-plus years in the Chinese Virtual Herbarium (<http://www.cvh.ac.cn/>) as the survey subject, we verified the correct names and synonyms of these plant specimens using the TNRS website (<https://tnrs.biendata.org/>).

3. Results

In plant taxonomy, a "correct name" refers to the currently accepted taxon name that has been validated in accordance with the International Code of Nomenclature for algae, fungi, and plants (Madrid Code), abbreviated as ICN. A "synonym" is a scientific name that refers to the same plant as the correct name but has not been adopted. Detailed terminology, usage, and regulations can be found in the International Code of Nomenclature for algae, fungi, and plants (Madrid Code) [4].

Data from the Chinese Virtual Herbarium (<http://www.cvh.ac.cn/>) shows that the earliest recorded collection date for Oleaceae plant specimens is 1900. After more than 120-plus years of accumulation, the total number of Oleaceae plant specimens, both from domestic and foreign sources, reaches 74,484, covering 346 species/subspecies/varieties/forms/hybrids. Among these, the number of specimens labeled with correct names is 52,427, accounting for 70.39% of the total number of Oleaceae plant specimens. The number of specimens labeled with synonyms is 20,490, representing 27.51% of the total. A total of 480 synonyms have been recorded, with synonym names making up 58.11% of the total number of names that have appeared (826). Correct names and synonyms are used interchangeably to record different specimens of the same taxon. The number of specimens with only genus names and no taxon names is 1,567, accounting for 2.10% of the total. Among these, there are 9 specimens without names in the genus *Chionanthus*, 5 in the genus *Fontanesia*, 26 in the genus *Forsythia*, 255 in the genus *Fraxinus*, 275 in the genus *Jasminum*, 418 in the genus *Ligustrum*, 4 in the genus *Nyctanthes*, 72 in the genus *Olea*, 159 in the genus *Osmanthus*, and 344 in the genus *Syringa*. Additionally, there are 460 specimens labeled with names of Oleaceae taxa, but the names cannot be verified, accounting for 0.61% of the total number of specimens claimed to be of Oleaceae (74,944). Currently, Chinese herbaria house specimens from 25 genera of Oleaceae, representing 86.21% of the total number of genera worldwide (29 genera). *Picricarya* Dennst. is a synonym of *Tetrapilus* Lour. The four correct genera for which no specimens have been collected are *Comoranthus* Knobl., *Dimetra* Kerr, *Hesperelaea* A. Gray, and *Priogymnanthus* P.S. Green.

For some Oleaceae plant specimens, searching with their correct names fails to reveal whether they are held in herbaria; they can only be located by using their synonyms. For example, there are 840 specimens of *Chengiodendron marginatum* (Champ. ex Benth.) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li held under 18 different synonyms. Using "*Chengiodendron*" as the keyword, only one specimen labeled with the correct name can be found (herbarium barcode: JXCM0006498) (see Table 1). Moreover, a small number of specimens can be found for species from two synonymous genera. For instance, *Parasyringa* W.W. Sm. is a synonym of *Ligustrum* L. By using "*Parasyringa*" as the keyword, four specimens were found, with the Latin botanical name on the specimens being *Parasyringa sempervirens* (Franch.) W.W. Sm. (herbarium barcodes: IBSC 0513819, LBG 00106320, N 135242037, and N 135242036), which are actually synonyms of *Ligustrum sempervirens* (Franch.) Lingelsh. There are eight specimens with the Latin botanical name *Siphonosmanthus delavayi* (Franch.) Stapf (herbarium barcodes: CAF00032740–CAF00032747), which are actually synonyms of *Osmanthus delavayi* Franch. Two specimens labeled as *Osmanthus dinggyensis* P.Y. Pai in the genus *Osmanthus* (herbarium barcodes: PE 02101792 and PE 02101795) [5], after verification using the TNRS name verification system, are actually

synonyms of *Ilex hookeri* King in the genus *Ilex* L. of the family Aquifoliaceae. Some evergreen or semi-evergreen plants in the Oleaceae family, due to their leathery leaves and red fruits, are often mistaken for plants of the Aquifoliaceae family. This naming confusion arises from early inaccuracies in plant taxonomy or intuitive associations with plant characteristics by the public. The correct names of specimens for each genus and taxon within the Oleaceae family, along with the corresponding number of specimens, are presented in Table 1.

In the Chinese Virtual Herbarium (<http://www.cvh.ac.cn/>), after verification with the TNRS name verification system, the corresponding relationships between the correct names of taxa (highlighted in bold blue text) and their synonyms are as follows:

[*Cartrema* Raf. (美洲木樨属)(Naturally distributed in the Americas and southeastern Asia, such as on Sumatra Island in western Indonesia and Malaysia)] ***Cartrema americana* (L.) G.L. Nesom** (1 synonym: *Osmanthus americanus* (L.) A. Gray); ***Cartrema floridana* (Chapm.) G.L. Nesom** (1 synonym: *Osmanthus floridanus* Chapm.).

[*Chengiodendron* C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li (万钧木属)(Naturally distributed across Southeast Asia, southern and southeastern China, Japan, and the Ryukyu Islands)] ***Chengiodendron marginatum* (Champ. ex Benth.) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li** (18 synonyms: *Olea marginata* Champ. ex Benth., *Osmanthus angustifolius* H.T. Chang, *Osmanthus apiculatus* H.T. Chang, *Osmanthus caudatus* H.T. Chang, *Osmanthus corymbosus* H.W. Li ex P.Y. Pai, *Osmanthus cylindricus* H.T. Chang, *Osmanthus longicarpus* H.T. Chang, *Osmanthus longispermus* H.T. Chang, *Osmanthus longissimus* H.T. Chang, *Osmanthus marginatus* (Champ. ex Benth.) Hemsl., *Osmanthus marginatus* var. *longissimus* (H.T. Chang) R.L. Lu, *Osmanthus marginatus* var. *pachyphyllus* (H.T. Chang) R.L. Lu, *Osmanthus nanchuanensis* H.T. Chang, *Osmanthus nudirhachis* H.T. Chang, *Osmanthus omeiensis* W.P. Fang ex H.T. Chang, *Osmanthus pachyphyllus* H.T. Chang, *Osmanthus sinensis* (Hand.-Mazz.) Hand.-Mazz., *Osmanthus triandrus* H.T. Chang). ***Chengiodendron matsumuranum* (Hayata) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li** (3 synonyms: *Osmanthus matsumuranus* Hayata, *Osmanthus maximus* H.T. Chang, *Osmanthus wilsonii* Nakai). ***Chengiodendron minor* (P.S. Green) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li** (1 synonym: *Osmanthus minor* P.S. Green).

[*Chionanthus* Royen (流苏树属)(Naturally distributed in tropical and subtropical regions across Asia, the Americas, Africa, and Oceania, with some species also found in temperate zones and introduced and cultivated in various places)] ***Chionanthus albidiflorus* Thwaites** (1 synonym: *Linociera albidiflora* (Thwaites) C.B. Clarke). ***Chionanthus cuspidatus* Blume** (1 synonym: *Linociera cuspidata* (Blume) Knobl.). ***Chionanthus domingensis* Lam.** (1 synonym: *Linociera domingensis* (Lam.) Knobl.). ***Chionanthus filiformis* (Vell.) P.S. Green** (1 synonym: *Linociera mandioccana* Eichler). ***Chionanthus guangxiensis* B.M. Miao** (1 synonym: *Linociera guangxiensis* (B.M. Miao) B.M. Miao). ***Chionanthus hainanensis* (Merr. & Chun) B.M. Miao** (2 synonyms: *Linociera hainanensis* Merr. & Chun, *Linociera ramiflora* form *caudatifolia* L.C. Chia). ***Chionanthus henryanus* P.S. Green** (1 synonym: *Linociera henryi* H.L. Li). ***Chionanthus longiflorus* (H.L. Li) B.M. Miao** (1 synonym: *Linociera longiflora* H.L. Li). ***Chionanthus macrocarpus* Blume** (1 synonym: *Linociera insignis* (Miq.) C.B. Clarke). ***Chionanthus mala-elengi* subsp. *linocieroides* (Wight) P.S. Green** (2 synonyms: *Linociera wightii* C.B. Clarke, *Olea linocieroides* Wight). ***Chionanthus mala-elengi* subsp. *mala-elengi*** (1 synonym: *Ligustrum microphyllum* (J. Graham) S.M. Almeida). ***Chionanthus mala-elengi* subsp. *terniflorus* (Wall. ex G. Don) P.S. Green** (1

synonym: *Linociera caudata* Collett & Hemsl.). ***Chionanthus microstigma* (Gagnep.) P.S. Green** (1 synonym: *Linociera microstigma* Gagnep.). ***Chionanthus montanus* Blume** (1 synonym: *Linociera montana* (Blume) G. Don). ***Chionanthus oliganthus* (Merr.) Kiew** (1 synonym: *Linociera oligantha* Merr.). ***Chionanthus parkinsonii* (Hutch.) Bennet & Raizada** (2 synonyms: *Linociera leucoclada* Merr. & Chun, *Linociera parkinsonii* Hutch.). ***Chionanthus purpureus* Lam.** (1 synonym: *Linociera purpurea* (Lam.) Vahl). ***Chionanthus ramiflorus* Roxb.** (11 synonyms: *Linociera ramiflora* (Roxb.) Wall., *Linociera ramiflora* form *pubisepala* L.C. Chia, *Linociera ramiflora* var. *grandiflora* (B.M. Miao) B.M. Miao, *Linociera pauciflora* (Wall. ex G. Don) C.B. Clarke, *Linociera ramiflora* form *pubisepala* L.C. Chia, *Linociera intermedia* Wight, *Linociera ramiflora* form *pubisepala* L.C. Chia, *Linociera cuminginna* S. Vidal, *Linociera macrophylla* var. *attenuata* (Wall. & G. Don) C.B. Clarke, *Linociera ramiflora* (Roxb.) Wall., *Chionanthus ramiflorus* var. *grandiflorus* B.M. Miao). ***Chionanthus retusus* Lindl. & Paxton** (3 synonyms: *Chionanthus chinensis* Maxim., *Chionanthus retusus* var. *serrulatus* (Hayata) Koidz., *Chionanthus serrulatus* Hayata). ***Chionanthus robinsonii* (Gagnep.) B.H. Quang** (1 synonym: *Linociera verticillata* Gagnep.). ***Chionanthus sleumeri* (C.T. White) Stearn** (1 synonym: *Linociera coriacea* C.T. White). ***Chionanthus spiciferus* (Ridl.) Kiew** (1 synonym: *Linociera spicifera* Ridl.). ***Chionanthus trichotomus* (Vell.) P.S. Green** (2 synonyms: *Linociera glaziovii* Gilg, *Linociera arborea* Eichler). ***Chionanthus zeylanicus* L.** (1 synonym: *Linociera zeylanica* (L.) Gamble).

[*Chrysojasminum* Banfi (探春花属)(Naturally distributed across central to western China, extending into India, Myanmar, and the surrounding Himalayan regions)]. ***Chrysojasminum floridum* (Bunge) Banfi** (4 synonyms: *Jasminum floridum* Bunge, *Jasminum floridum* subsp. *giraldii* (Diels) B.M. Miao, *Jasminum giraldii* Diels, *Jasminum humile* var. *kansuense* Kobuski). ***Chrysojasminum fruticans* (L.) Banfi** (3 synonyms: *Jasminum fruticans* L., *Jasminum heterophyllum* Moench, *Jasminum humile* Gueldenst.). ***Chrysojasminum humile* (L.) Banfi** (2 synonyms: *Jasminum humile* var. *humile*, *Jasminum humile* var. *revolutum* (Sims) Kobuski). ***Chrysojasminum humile* var. *humile*** (4 synonyms: *Jasminum humile* form *pubigerum* (D. Don) Grohmann, *Jasminum humile* form *wallichianum* (Lindl.) P.S. Green, *Jasminum humile* var. *pubigerum* (D. Don) Kitam., *Jasminum humile* var. *siderophyllum* (H. Lév.) Kobuski). ***Chrysojasminum humile* var. *microphyllum* (L.C. Chia) Banfi** (2 synonyms: *Jasminum humile* form *microphyllum* L.C. Chia, *Jasminum humile* var. *microphyllum* (L.C. Chia) P.S. Green). ***Chrysojasminum odoratissimum* (L.) Banfi** (1 synonym: *Jasminum odoratissimum* L.). ***Chrysojasminum subhumile* (W.W. Sm.) Banfi & Galasso** (6 synonyms: *Jasminum diversifolium* Kobuski, *Jasminum diversifolium* var. *glabricymosum* (W.W. Sm.) Kobuski, *Jasminum diversifolium* var. *subhumile* (W.W. Sm.) Kobuski, *Jasminum diversifolium* var. *tomentosum* L.C. Chia, *Jasminum subhumile* var. *glabricymosum* (W.W. Sm.) P.Y. Pai, *Jasminum subhumile* W.W. Sm.).

[*Fontanesia* Labill. (雪柳属)(Naturally distributed in East Asia and the Mediterranean region)] ***Fontanesia fortunei* Carrière** (2 synonyms: *Fontanesia chinensis* Hance, *Fontanesia philliraeoides* subsp. *fortunei* (Carrière) Yalt.).

[*Forestiera* Poir. (泽蜡树属)(Naturally distributed across the Americas)] ***Forestiera pubescens* var. *parvifolia* (A. Gray) G.L. Nesom** (1 synonym: *Forestiera neomexicana* A. Gray). ***Forestiera pubescens* var. *pubescens*** (1 synonym: *Forestiera pubescens* var. *glabrifolia* Shinnars).

[*Forsythia* Vahl (连翘属) (Naturally distributed from eastern Asia (including China, Japan, and North

Korea) to southeastern Europe (e.g., the Balkan Peninsula), with widespread introduced cultivation in various regions)] *Forsythia koreana* (Rehder) Nakai (1 synonym: *Forsythia viridissima* var. *koreana* Rehder). *Forsythia ovata* Nakai (1 synonym: *Forsythia saxatilis* (Nakai) Nakai). *Forsythia suspensa* (Thunb.) Vahl (6 synonyms: *Forsythia fortunei* Lindl., *Forsythia suspensa* form *atrocaulis* Rehder, *Forsythia suspensa* form *pubescens* Rehder, *Forsythia suspensa* var. *fortunei* (Lindl.) Rehder, *Forsythia suspensa* var. *latifolia* Rehder, *Forsythia suspensa* var. *pubescens* (Rehder) Lingelsh.). *Forsythia togashii* H. Hara (1 synonym: *Forsythia japonica* var. *subintegra* H. Hara).

[*Fraxinus* Tourn. ex L. (栲属)(Distributed in the warm temperate regions of the Northern Hemisphere and at the fringes of tropical forests, spanning Asia, Europe, and North America)] *Fraxinus albicans* Buckley (1 synonym: *Fraxinus texensis* (A. Gray) Sarg.). *Fraxinus americana* L. (5 synonyms: *Fraxinus alba* Marshall, *Fraxinus americana* form *iodocarpa* Fernald, *Fraxinus americana* var. *biltmoreana* (Beadle) J.W. Wright ex Fernald, *Fraxinus americana* var. *juglandifolia* (Lam.) K. Koch, *Fraxinus biltmoreana* Beadle). *Fraxinus angustifolia* subsp. *oxycarpa* (M. Bieb. ex Willd.) Franco & Rocha Afonso (1 synonym: *Fraxinus oxycarpa* M. Bieb. ex Willd.). *Fraxinus bungeana* A. DC. (1 synonym: *Fraxinus parvifolia* (Wenz.) Lingelsh.). *Fraxinus chinensis* subsp. *chinensis* (5 synonyms: *Fraxinus lingelsheimii* Rehder, *Fraxinus medicinalis* S.S. Sun, *Fraxinus sargentiana* Lingelsh., *Fraxinus szaboana* Lingelsh., *Fraxinus yunnanensis* Lingelsh.). *Fraxinus chinensis* subsp. *rhynchophylla* (Hance) A.E. Murray (7 synonyms: *Fraxinus chinensis* var. *rhynchophylla* (Hance) Hemsl., *Fraxinus hopeiensis* Tang, *Fraxinus japonica* Blume ex K. Koch, *Fraxinus japonica* form *intermedia* (Nakai) Hara, *Fraxinus japonica* var. *stenocarpa* (Koidz.) Ohwi, *Fraxinus chinensis* var. *tomentosa* Lingelsh., *Fraxinus rhynchophylla* Hance). *Fraxinus dipetala* Hook. & Arn. (2 synonyms: *Fraxinus dipetala* var. *trifoliolata* Torr., *Fraxinus jonesii* Lingelsh.). *Fraxinus excelsior* subsp. *coriariifolia* (Scheele) A.E. Murray (1 synonym: *Fraxinus obliqua* Tausch). *Fraxinus excelsior* subsp. *excelsior* (2 synonyms: *Fraxinus excelsior* var. *diversifolia* Aiton, *Fraxinus excelsior* var. *simplicifolia* (Willd.) Pers.). *Fraxinus griffithii* C.B. Clarke (4 synonyms: *Fraxinus bracteata* Hemsl., *Fraxinus formosana* Hayata, *Fraxinus guilinensis* S.K. Lee & F.N. Wei, *Ligustrum vaniotii* H. Lévl.). *Fraxinus hubeiensis* S.Z. Qu, C.B. Shang & P.L. Su (1 synonym: *Fraxinus hupehensis* S.Z. Qu, C.B. Shang & P.L. Su). *Fraxinus insularis* Hemsl. (8 synonyms: *Fraxinus championii* Little, *Fraxinus floribunda* subsp. *insularis* (Hemsl.) S.S. Sun, *Fraxinus insularis* var. *henryana* (Oliv.) Z. Wei, *Fraxinus insularis* var. *insularis*, *Fraxinus retusa* Champ. ex Benth., *Fraxinus retusa* var. *calicicola* C.Y. Wu, *Fraxinus retusa* var. *henryana* Oliv., *Fraxinus retusa* var. *integra* Lingelsh.). *Fraxinus lanuginosa* Koidz. (3 synonyms: *Fraxinus lanuginosa* form *serrata* (Nakai) Murata, *Fraxinus lanuginosa* var. *serrata* (Nakai) H. Hara, *Fraxinus sieboldiana* var. *serrata* Nakai). *Fraxinus latifolia* Benth. (1 synonym: *Fraxinus oregona* Nutt.). *Fraxinus longicuspis* Siebold & Zucc. (4 synonyms: *Fraxinus caudata* J.L. Wu, *Fraxinus chinensis* var. *acuminata* Lingelsh., *Fraxinus kantoensis* Koidz., *Fraxinus pubinervis* Blume). *Fraxinus malacophylla* Hemsl. (1 synonym: *Fraxinus retusifoliolata* K.M. Feng ex P.Y. Pai). *Fraxinus mandshurica* Rupr. (2 synonyms: *Fraxinus excelsa* Thunb., *Fraxinus mandshurica* var. *japonica* Maxim.). *Fraxinus odontocalyx* Hand.-Mazz. ex E. Peter (1 synonym: *Fraxinus huangshanensis* S.S. Sun). *Fraxinus pallisiae* Wilmott (1 synonym: *Fraxinus holotricha* Koehne). *Fraxinus pennsylvanica* Marshall (5 synonyms: *Fraxinus lanceolata* Borkh., *Fraxinus pennsylvanica* var. *lanceolata* (Borkh.) Sarg., *Fraxinus pennsylvanica* var. *pubescens* (Lam.) Lingelsh., *Fraxinus pennsylvanica* var. *subintegerrima* (Vahl) Fernald, *Fraxinus pubescens* Lam.). *Fraxinus platypoda* Oliv. (3 synonyms: *Fraxinus inopinata* Lingelsh., *Fraxinus spaethiana* Lingelsh., *Fraxinus spaethiana* var. *nipponica* (Koidz.) H. Hara). *Fraxinus profunda* (Bush) Bush (1 synonym: *Fraxinus tomentosa* F. Michx.). *Fraxinus sieboldiana* Blume (2

synonyms:*Fraxinus longicuspis* var. *sieboldiana* (Blume) Lingelsh., *Fraxinus mariesii* Hook. f.). ***Fraxinus stylosa* Lingelsh.** (2 synonyms:*Fraxinus fallax* Lingelsh., *Fraxinus fallax* var. *stylosa* (Lingelsh.) C.D. Chu & J.L. Wu). ***Fraxinus suaveolens* W.W. Sm.** (2 synonyms: *Fraxinus paxiana* var. *sikkimensis* Lingelsh., *Fraxinus sikkimensis* (Lingelsh.) Hand.-Mazz.). ***Fraxinus velutina* Torr.** (4 synonyms:*Fraxinus attenuata* M.E. Jones, *Fraxinus velutina* var. *coriacea* (S. Watson) Rehder, *Fraxinus velutina* var. *glabra* Rehder, *Fraxinus velutina* var. *toumeyii* (Britton) Rehder).

[***Haenianthus* Griseb.** (鳞瓣榄属)(Concentrated in Central America and the Caribbean region)]
***Haenianthus salicifolius* Griseb.** (1 synonym: *Haenianthus salicifolius* var. *obovatus* (Krug & Urb.) Knobl.).

[***Jasminum* L.** (素馨属)(Distributed across Africa, Asia, Australia, the southern islands of the Pacific Ocean, and South America)] ***Jasminum annamense* subsp. *glabrescens* P.S. Green** (1 synonym: *Jasminum longisetum* Gagnep.). ***Jasminum arborescens* Roxb.** (1 synonym: *Jasminum roxburghianum* Wall.). ***Jasminum attenuatum* Roxb. ex G. Don** (2 synonyms: *Jasminum banlanense* P.Y. Pai, *Jasminum robustifolium* Kobuski). ***Jasminum beesianum* Forrest & Diels** (1 synonym: *Jasminum beesianum* var. *ulotrichum* Hand.-Mazz.). ***Jasminum coarctatum* var. *coarctatum*** (1 synonym: *Jasminum latifolium* Buch.-Ham. ex Wall.). ***Jasminum coffeinum* Hand.-Mazz.** (2 synonyms: *Jasminum gardeniiflorum* L.C. Chia, *Jasminum lang* Gagnep.). ***Jasminum craibianum* Kerr** (1 synonym: *Jasminum pilosicalyx* Kobuski). ***Jasminum cuspidatum* Rottler** (1 synonym: *Jasminum rigidum* Zenker). ***Jasminum didymum* subsp. *lineare* (R. Br.) P.S. Green** (1 synonym: *Jasminum lineare* R.Br.). ***Jasminum didymum* subsp. *racemosum* (F. Muell.) P.S. Green** (1 synonym: *Jasminum racemosum* F. Muell.). ***Jasminum dispernum* subsp. *forrestianum* (Kobuski) P.S. Green** (1 synonym: *Jasminum forrestianum* Kobuski). ***Jasminum elongatum* (P.J. Bergius) Willd.** (6 synonyms: *Jasminum amplexicaule* Buch.-Ham. ex G. Don, *Jasminum bifarium* Wall. ex G. Don, *Jasminum coarctatum* var. *caudatifolium* P.Y. Pai, *Jasminum coarctatum* var. *caudatifolium* P.Y. Pai, *Jasminum ligustroides* L.C. Chia, *Jasminum tonkinense* Gagnep.). ***Jasminum extensum* Wall. ex G. Don** (3 synonyms: *Jasminum seguinii* H. Lév., *Jasminum seguinii* var. *latilobum* Hand.-Mazz., *Jasminum taliense* W.W. Sm.). ***Jasminum flexile* Vahl** (1 synonym: *Jasminum yingjiangense* P.Y. Pai). ***Jasminum grandiflorum* L.** (2 synonyms: *Jasminum officinale* form *grandiflorum* (L.) Kobuski, *Jasminum officinale* var. *grandiflorum* (L.) Stokes). ***Jasminum grandiflorum* subsp. *floribundum* (R. Br. ex Fresen.) P.S. Green** (1 synonym: *Jasminum floribundum* R. Br. ex Fresen.). ***Jasminum lanceolaria* subsp. *lanceolaria*** (3 synonyms: *Jasminum lanceolaria* var. *puberulum* Hemsl., *Jasminum pachyphyllum* Hemsl., *Jasminum paniculatum* Roxb.). ***Jasminum lanceolarium* Roxb.** (1 synonym: *Jasminum lanceolarium* var. *puberulum* Hemsl.). ***Jasminum mesnyi* Hance** (1 synonym: *Jasminum primulinum* Hemsl. ex Baker). ***Jasminum microcalyx* Hance** (1 synonym: *Jasminum inornatum* Hemsl.). ***Jasminum multiflorum* (Burm.f.) Andrews** (2 synonyms: *Jasminum gracillimum* Hook.f., *Jasminum pubescens* (Retz.) Willd.). ***Jasminum nepalense* Spreng.** (1 synonym: *Jasminum glandulosum* Wall. ex G. Don). ***Jasminum nervosum* Lour.** (5 synonyms: *Jasminum cinnamomifolium* var. *axillare* Kobuski, *Jasminum hemsleyi* Yamam., *Jasminum nervosum* var. *elegans* (Hemsl.) L.C. Chia, *Jasminum nervosum* var. *villosum* (H. Lév.) L.C. Chia, *Jasminum subtriplinerve* Blume). ***Jasminum nudiflorum* form *pulvinatum* (W.W. Sm.) P.S. Green** (2 synonyms: *Jasminum nudiflorum* var. *pulvinatum* (W.W. Sm.) Kobuski, *Jasminum pulvinatum* W.W. Sm.). ***Jasminum nudiflorum* Lindl.** (1 synonym: *Jasminum nudiflorum* var. *nudiflorum*). ***Jasminum officinale* L.** (4 synonyms: *Jasminum officinale* form *affine* (Royle ex Lindl.) Rehder, *Jasminum officinale* var. *officinale*, *Jasminum officinale* var. *piliferum* P.Y. Pai, *Jasminum officinale* var. *tibeticum* C.Y. Wu).

Jasminum pedunculatum Gagnep. (1 synonym: *Jasminum albicalyx* Kobuski). *Jasminum pierreanum* Gagnep. (1 synonym: *Jasminum cordatum* (Merr. & Chun ex L.C. Chia) L.C. Chia). *Jasminum polyanthum* Franch. (1 synonym: *Jasminum blinii* H. Lév.). *Jasminum rufohirtum* Gagnep. (1 synonym: *Jasminum yunnanense* Z.P. Jien ex P.Y. Pai). *Jasminum sambac* (L.) Aiton (1 synonym: *Jasminum undulatum* (L.) Willd.). *Jasminum simplicifolium* subsp. *australiense* P.S. Green (2 synonyms: *Jasminum aculeatum* (Blanco) Walp. ex Hassk., *Jasminum geniculatum* Vent.). *Jasminum simplicifolium* subsp. *funale* (Decne.) Kiew (1 synonym: *Jasminum funale* Decne.). *Jasminum simplicifolium* subsp. *leratii* (Schltr.) P.S. Green (1 synonym: *Jasminum linearifolium* Guillaumin). *Jasminum subglandulosum* Kurz (1 synonym: *Jasminum wangii* Kobuski). *Jasminum* × *stephanense* É. Lemoine (1 synonym: *Jasminum xizangense* B.M. Miao). *Jasminum urophyllum* Hemsl. (5 synonyms: *Jasminum brevidentatum* L.C. Chia, *Jasminum brevidentatum* var. *ferrugineum* L.C. Chia, *Jasminum cathayense* Chun ex L.C. Chia, *Jasminum urophyllum* var. *henryi* Rehder, *Jasminum urophyllum* var. *wilsonii* Rehder). *Jasminum wengeri* C.E.C. Fisch. (1 synonym: *Jasminum anisophyllum* Kobuski).

[*Ligustrum* L. (女贞属) (Distributed in warm regions of Asia, northwestern Europe, Malaysia, New Guinea, and Australia, with introduced cultivation in various locations)] *Ligustrum compactum* var. *compactum* (1 synonym: *Ligustrum compactum* form *tubiflorum* Mansf.). *Ligustrum compactum* var. *velutinum* P.S. Green (1 synonym: *Ligustrum yunnanense* L. Henry). *Ligustrum delavayanum* Har. (2 synonyms: *Ligustrum ionandrum* Diels, *Ligustrum prattii* Koehne). *Ligustrum expansum* Rehder (3 synonyms: *Ligustrum purpurascens* Y.C. Yang, *Ligustrum robustum* subsp. *chinense* P.S. Green, *Ligustrum thibeticum* Decne.). *Ligustrum glomeratum* Blume (1 synonym: *Ligustrum pubinerve* Blume). *Ligustrum gracile* Rehder (2 synonyms: *Ligustrum compactum* var. *glabrum* (Mansf.) Hand.-Mazz., *Ligustrum quihoui* var. *glabrum* Mansf.). *Ligustrum ibota* Siebold (1 synonym: *Ligustrum ciliatum* Siebold ex Blume). *Ligustrum japonicum* Thunb. (3 synonyms: *Ligustrum amamianum* Koidz., *Ligustrum japonicum* var. *pubescens* Koidz., *Ligustrum japonicum* var. *rotundifolium* Blume). *Ligustrum leucanthum* (S. Moore) P.S. Green (5 synonyms: *Ligustrum acutissimum* Koehne, *Ligustrum ibota* form *subcoriaceum* Koehne, *Ligustrum longitubum* (P.S. Hsu) P.S. Hsu, *Ligustrum molliculum* Hance, *Ligustrum subsessile* S.Y. Hu). *Ligustrum lianum* P.S. Hsu (2 synonyms: *Ligustrum longipedicellatum* H.T. Chang, *Ligustrum yunguiense* B.M. Miao). *Ligustrum lindleyi* (Wall. ex G. Don) P.S. Green (1 synonym: *Ligustrum massalongianum* Vis.). *Ligustrum lucidum* W.T. Aiton (1 synonym: *Ligustrum lucidum* form *latifolium* (W.C. Cheng) P.S. Hsu). *Ligustrum nepalense* Wall. (1 synonym: *Ligustrum gyirongense* P.Y. Pai). *Ligustrum obtusifolium* subsp. *microphyllum* (Nakai) P.S. Green (1 synonym: *Ligustrum ibota* var. *microphyllum* Nakai). *Ligustrum obtusifolium* subsp. *obtusifolium* (6 synonyms: *Ligustrum amurense* Carrière, *Ligustrum ibota* var. *angustifolium* Blume, *Ligustrum obtusifolium* subsp. *suave* (Kitag.) Kitag., *Ligustrum obtusifolium* var. *leiocalyx* (Nakai) H. Hara, *Ligustrum obtusifolium* var. *regelianum* (Koehne) Rehder, *Ligustrum suave* (Kitag.) Kitag.). *Ligustrum ovalifolium* Hassk. (1 synonym: *Ligustrum japonicum* var. *ovalifolium* (Hassk.) Blume). *Ligustrum ovalifolium* var. *hisauchii* (Makino) Noshiro (1 synonym: *Ligustrum hisauchii* Makino). *Ligustrum pricei* Hayata (2 synonyms: *Ligustrum formosanum* Rehder, *Ligustrum pedunculare* Rehder). *Ligustrum quihoui* Carrière (3 synonyms: *Ligustrum brachystachyum* Decne., *Ligustrum quihoui* var. *brachystachyum* (Decne.) Hand.-Mazz., *Ligustrum quihoui* var. *trichopodium* Y.C. Yang). *Ligustrum robustum* subsp. *robustum* (1 synonym: *Ligustrum pubescens* Wall.). *Ligustrum robustum* subsp. *walkerii* (Decne.) P.S. Green (1 synonym: *Ligustrum walkerii* Decne.). *Ligustrum sempervirens* (Franch.) Lingelsh. (2 synonyms: *Parasyringa sempervirens* (Franch.) W.W. Sm., *Syringa sempervirens* Franch.). *Ligustrum sinense* Lour. (1 synonym: *Ligustrum nokoensis* Masam. & K. Mori). *Ligustrum sinense* var. *chayuense*

(P.Y. Pai) Y.F. Deng & B.Q. Xu (3 synonyms:*Ligustrum robustum* var. *chayuense* P.Y. Pai, *Ligustrum rugosulum* W.W. Sm., *Ligustrum sinense* var. *rugosulum* (W.W. Sm.) M.C. Chang). *Ligustrum sinense* var. *coryanum* (W.W. Sm.) Hand.-Mazz. (1 synonym:*Ligustrum coryanum* W.W. Sm.). *Ligustrum sinense* var. *myrianthum* (Diels) Hoefker (3 synonyms:*Ligustrum bodinieri* H. Lév., *Ligustrum groffiae* Merr., *Ligustrum myrianthum* Diels). *Ligustrum sinense* var. *sinense* (7 synonyms:*Ligustrum calleryanum* Decne., *Ligustrum deciduum* Hemsl., *Ligustrum indicum* (Lour.) Merr., *Ligustrum matsudae* Kaneh. ex T. Shimizu & M.T. Kao, *Ligustrum microcarpum* Kaneh. & Sasaki, *Ligustrum sinense* var. *nitidum* Rehder, *Ligustrum sinense* var. *stauntonii* (DC.) Rehder). *Ligustrum tschonoskii* Decne. (7 synonyms: *Ligustrum acuminatum* Koehne, *Ligustrum macrocarpum* Koehne, *Ligustrum medium* Dieck, *Ligustrum tschonoskii* var. *glabrescens* Koidz., *Ligustrum tschonoskii* var. *kiyozumianum* (Nakai) Ohwi, *Ligustrum tschonoskii* var. *macrocarpum* (Koehne) Rehder, *Ligustrum yesoense* Nakai).

[*Menodora* Bonpl. (惜春花属)(Distributed in the temperate regions of the Americas, the arid and semi-arid areas of southern Africa, and adjacent regions)]. *Menodora scabra* Engelm. ex A. Gray (1 synonym:*Menodora scoparia* Engelm. ex A. Gray).

[*Myxopyrum* Bl. (胶核木属)(Distributed in the tropical and subtropical regions of Asia and Oceania)]. *Myxopyrum pierrei* Gagnep. (1 synonym:*Myxopyrum hainanense* L.C. Chia). *Myxopyrum smilacifolium* subsp. *smilacifolium* (1 synonym:*Myxopyrum ellipticilimbum* H.T. Chang).

[*Nestegis* Raf. (岛蜡树属)(Distributed across islands in the southwestern Pacific Ocean, particularly in parts of New Zealand and Australia)]. *Nestegis cunninghamii* (Hook.f.) L.A.S. Johnson (1 synonym:*Olea cunninghamii* Hook.f.). *Nestegis montana* (Hook.f.) L.A.S. Johnson (1 synonym:*Olea montana* Hook.f.).

[*Noronhia* Stadman ex Thouars (冠花榄属)(Distributed on the island of Madagascar and its surrounding areas, as well as in some parts of the eastern coast of the African continent)]. *Noronhia congesta* (Baker) Jongkind (1 synonym:*Chionanthus mannii* subsp. *congestus* (Baker) Stearn). *Noronhia macrophylla* (Baker) Hong-Wa & Callm. (2 synonyms: *Linociera macrophylla* (Baker) H. Perrier, *Olea macrophylla* Baker).

[*Olea* L. (木樨榄属)(Distributed across southern Asia, Oceania, the islands of the South Pacific, tropical Africa, and the Mediterranean region)]. *Olea europaea* subsp. *cuspidata* (Wall. & G. Don) Cif. (3 synonyms:*Olea chrysophylla* Lam., *Olea cuspidata* Wall. ex G. Don, *Olea europaea* subsp. *africana* (Mill.) P.S. Green). *Olea europaea* subsp. *europaea* (3 synonyms:*Olea europaea* subsp. *sativa* (Weston) Arcang., *Olea europaea* var. *oleaster* (Hoffmanns. & Link) A.DC., *Olea europaea* var. *sylvestris* (Mill.) Lehr). *Olea europaea* subsp. *maroccana* (Greuter & Burdet) P. Vargas, J. Hess, Muñoz Garm. & Kadereit (1 synonym:*Olea salicifolia* Barbero, Benabid, Quézel, Rivas Mart. & A. Santos). *Olea paniculata* R. Br. (2 synonyms: *Linociera yunnanensis* H.T. Chang, *Olea glandulifera* Desf.).

[*Osmanthus* Lour. (木樨属)(Distributed in eastern and southeastern Asia, including the southwest, southeast, and central regions of China, as well as countries like Nepal, Cambodia, and India, and Oceania including the island of New Caledonia)]. *Osmanthus armatus* Diels (1 synonym:*Osmanthus obtusifolius* H.T. Chang). *Osmanthus attenuatus* P.S. Green (1 synonym:*Osmanthus lipingensis* D.J. Liu). *Osmanthus delavayi* Franch. (1 synonym:*Siphonosmanthus delavayi* (Franch.) Stapf). *Osmanthus fragrans* var.

aurantiacus Makino (6 synonyms: *Osmanthus aurantiacus* (Makino) Nakai, *Osmanthus aurantiacus* var. *thunbergii* (Makino) Honda, *Olea fragrans* Thunb., *Osmanthus fragrans* form *aurantiacus* (Makino) Hatus., *Osmanthus fragrans* var. *thunbergii* Makino, *Osmanthus longibracteatus* H.T. Chang). **Osmanthus fragrans var. fragrans** (3 synonyms: *Osmanthus asiaticus* Nakai, *Osmanthus fragrans* var. *latifolius* Makino, *Osmanthus macrocarpus* P.Y. Pai). **Osmanthus henryi P.S. Green** (1 synonym: *Osmanthus caudatifolius* P.Y. Pai & J.H. Pang). **Osmanthus heterophyllus (G. Don) P.S. Green** (4 synonyms: *Osmanthus aquifolium* (Thunb.) Siebold, *Osmanthus heterophyllus* var. *bibracteatus* (Hayata) P.S. Green, *Osmanthus ilicifolius* (Hassk.) Naudin, *Osmanthus integrifolius* Hayata). **Osmanthus insularis Koidz.** (2 synonyms: *Osmanthus hachijoensis* Nakai, *Osmanthus zentaroanus* Makino). **Osmanthus urceolatus P.S. Green** (1 synonym: *Osmanthus hupehensis* H.T. Chang). **Osmanthus yunnanensis (Franch.) P.S. Green** (5 synonyms: *Osmanthus bambusifolius* H.T. Chang, *Osmanthus brevipetiolatus* H.T. Chang, *Osmanthus forrestii* Rehder, *Osmanthus liangshanensis* H.T. Chang, *Osmanthus polyneurus* H.T. Chang).

[**Phillyrea L.** (总序桂属)(Concentrated in Mediterranean coastal regions, including southern Europe (Iberian Peninsula, southern France, Italy, Greece), western North Africa (Morocco, Algeria, Tunisia), and parts of West Asia (e.g., Turkey, Lebanon)]. **Phillyrea latifolia L.** (1 synonym: *Phillyrea media* L.).

[**Syringa L.** (丁香属)(Distributed in China, Europe, North Korea, Japan, Afghanistan, and the Himalayan region)]. **Syringa emodi Wall. ex Royle** (1 synonym: *Syringa tibetica* P.Y. Pai). **Syringa josikaea J. Jacq. ex Rchb.** (1 synonym: *Syringa henryi* var. *eximia* (Olbrich) Rehder). **Syringa komarowii C.K. Schneid.** (5 synonyms: *Syringa komarowii* subsp. *komarowii*, *Syringa komarowii* subsp. *reflexa* (C.K. Schneid.) P.S. Green & M.C. Chang, *Syringa komarowii* var. *reflexa* (C.K. Schneid.) Z.P. Jien ex M.C. Chang & X.L. Chen, *Syringa reflexa* C.K. Schneid., *Syringa sargentiana* C.K. Schneid.). **Syringa oblata Lindl.** (1 synonym: *Syringa oblata* var. *oblata*). **Syringa oblata subsp. dilatata (Nakai) P.S. Green & M.C. Chang** (8 synonyms: *Syringa dilatata* form *alba* (W. Wang & Skvortsov) Y.L. Chou, *Syringa dilatata* Nakai, *Syringa dilatata* var. *alba* W. Wang & Skvortsov, *Syringa dilatata* var. *longituba* W. Wang & Skvortsov, *Syringa dilatata* var. *pubescens* S.D. Zhao, *Syringa dilatata* var. *rubra* W. Wang & Skvortsov, *Syringa dilatata* var. *violacea* W. Wang & Skvortsov, *Syringa oblata* var. *dilatata* (Nakai) Rehder). **Syringa oblata subsp. oblata** (7 synonyms: *Syringa affinis* L. Henry, *Syringa affinis* var. *giraldii* (Lemoine) C.K. Schneid., *Syringa chinensis* Bunge, *Syringa oblata* var. *affinis* (L. Henry) Lingelsh., *Syringa oblata* var. *alba* Rehder, *Syringa oblata* var. *giraldii* (Lemoine) Rehder, *Syringa oblata* var. *hupehensis* Pamp.). **Syringa persica L.** (4 synonyms: *Syringa buxifolia* Nakai, *Syringa laciniata* (L.) Mill., *Syringa persica* var. *laciniata* L., *Syringa protolaciniata* P.S. Green & M.C. Chang). **Syringa pinetorum W.W. Sm.** (2 synonyms: *Syringa mairei* (H. Lév.) Rehder, *Syringa wardii* W.W. Sm.). **Syringa pubescens subsp. microphylla (Diels) M.C. Chang & X.L. Chen** (9 synonyms: *Syringa dielsiana* C.K. Schneid., *Syringa giraldiana* C.K. Schneid., *Syringa julianae* C.K. Schneid., *Syringa meyeri* var. *spontanea* M.C. Chang, *Syringa microphylla* Diels, *Syringa microphylla* var. *alba* W. Wang, P.Y. Fu & T.C. Chao, *Syringa microphylla* var. *glabriuscula* C.K. Schneid., *Syringa potaninii* C.K. Schneid., *Syringa pubescens* subsp. *julianae* (C.K. Schneid.) M.C. Chang & X.L. Chen). **Syringa pubescens subsp. patula (Palib.) M.C. Chang & X.L. Chen** (7 synonyms: *Syringa palibiniana* var. *kamibayashii* (Nakai) Nakai, *Syringa patula* (Palib.) Nakai, *Syringa patula* var. *kamibayashii* (Nakai) M. Kim, *Syringa pubescens* form *alba* S.D. Zhao, *Syringa pubescens* var. *hirsuta* Skvortsov & W. Wang, *Syringa velutina* Kom., *Syringa venosa* Nakai). **Syringa pubescens subsp. pubescens** (2 synonyms: *Syringa meyeri* C.K. Schneid., *Syringa wulingensis* Skvortsov & W. Wang).

Syringa reticulata subsp. *amurensis* (Rupr.) P.S. Green & M.C. Chang (6 synonyms: *Syringa amurensis* Rupr., *Syringa amurensis* var. *mandshurica* (Maxim.) Korsh., *Syringa amurensis* var. *rotundifolia* (Decne.) Lingelsh., *Syringa fauriei* H. Lév., *Syringa reticulata* var. *mandshurica* (Maxim.) H. Hara, *Syringa reticulata* var. *amurensis* (Rupr.) J.S. Pringle). *Syringa reticulata* subsp. *pekinensis* (Rupr.) P.S. Green & M.C. Chang (2 synonyms: *Syringa amurensis* var. *pekinensis* (Rupr.) Maxim., *Syringa pekinensis* Rupr.). *Syringa reticulata* subsp. *reticulata* (1 synonym: *Syringa amurensis* var. *japonica* (Maxim.) Franch. & Sav.). *Syringa tomentella* subsp. *sweginzowii* (Koehne & Lingelsh.) Jin Y. Chen & D.Y. Hong (4 synonyms: *Syringa sweginzowii* Koehne & Lingelsh., *Syringa tetanoloba* C.K. Schneid., *Syringa tigerstedtii* Harry Sm., *Syringa wilsonii* C.K. Schneid.). *Syringa tomentella* subsp. *yunnanensis* (Franch.) Jin Y. Chen & D.Y. Hong (2 synonyms: *Syringa yunnanensis* Franch., *Syringa yunnanensis* var. *pubicalyx* Z.P. Jien ex P.Y. Pai). *Syringa villosa* subsp. *villosa* (1 synonym: *Syringa bretschnideri* Lemoine ex Wittm.). *Syringa villosa* subsp. *wolfii* (C.K. Schneid.) Jin Y. Chen & D.Y. Hong (4 synonyms: *Syringa formosissima* Nakai, *Syringa robusta* Nakai, *Syringa wolfii* C.K. Schneid., *Syringa wolfii* var. *hirsuta* (C.K. Schneid.) Rehder). *Syringa vulgaris* L. (6 synonyms: *Syringa vulgaris* f. *alba* (Weston) Voss, *Syringa vulgaris* f. *albipleniflora* S.D. Zhao, *Syringa vulgaris* f. *coerulea* (Weston) Schelle, *Syringa vulgaris* f. *plena* (Oudin) Rehder, *Syringa vulgaris* f. *purpurea* (Weston) Schelle, *Syringa vulgaris* var. *alba* Aiton).

[*Tetrapilus* Lour. (滨木樨榄属)(Naturally distributed in tropical and subtropical regions of Asia, including China and Southeast Asia)] *Tetrapilus borneensis* (Boerl.) de Juana (1 synonym: *Linociera philippinensis* Merr.). *Tetrapilus brachiatus* Lour. (2 synonyms: *Olea brachiata* (Lour.) Merr., *Olea maritima* Wall. ex G. Don). *Tetrapilus caudatilimbus* (L.C. Chia) de Juana (1 synonym: *Olea caudatilimba* L.C. Chia). *Tetrapilus cordatulus* (H.L. Li) L.A.S. Johnson (1 synonym: *Olea cordatula* H.L. Li). *Tetrapilus dioicus* (Roxb.) L.A.S. Johnson (1 synonym: *Olea dioica* Roxb.). *Tetrapilus gamblei* (C.B. Clarke) de Juana (1 synonym: *Olea gamblei* C.B. Clarke). *Tetrapilus hainanensis* (H.L. Li) L.A.S. Johnson (1 synonym: *Olea hainanensis* H.L. Li). *Tetrapilus laxiflorus* (H.L. Li) L.A.S. Johnson (1 synonym: *Olea laxiflora* H.L. Li). *Tetrapilus neriifolius* (H.L. Li) de Juana (1 synonym: *Olea neriifolia* H.L. Li). *Tetrapilus parvilimbus* (Merr. & Chun) de Juana (2 synonyms: *Linociera parvilimba* Merr. & Chun, *Olea parvilimba* (Merr. & Chun) B.M. Miao). *Tetrapilus roseus* (Craib) L.A.S. Johnson (2 synonyms: *Olea densiflora* H.L. Li, *Olea rosea* Craib). *Tetrapilus salicifolius* (Wall. ex G. Don) de Juana (3 synonyms: *Linociera cambodiana* Hance, *Olea dentata* Wall. ex DC., *Olea guangxiensis* B.M. Miao). *Tetrapilus tetragonocladus* (L.C. Chia) de Juana (1 synonym: *Olea tetragonoclada* L.C. Chia). *Tetrapilus tsoongii* (Merr.) de Juana (5 synonyms: *Ligustrum tsoongii* Merr., *Olea brevipes* L.C. Chia, *Olea tsoongii* (Merr.) P.S. Green, *Olea yuennanensis* Hand.-Mazz., *Olea yuennanensis* var. *xeromorpha* Hand.-Mazz.). *Tetrapilus wightianus* (Wall. ex G. Don) de Juana (2 synonyms: *Olea dioica* var. *wightiana* (Wall. ex G. Don) DC., *Olea wightiana* Wall. ex G. Don).

Table 1. Quantity of specimens with correct names or synonyms of Oleaceae plants preserved in the Chinese Virtual Herbarium (1900-June 2025)

Plant name	Number of specimens with correct name	Count of synonyms (Number of specimens labeled with synonym)
1. <i>Abeliophyllum</i> Nakai 连翘属		
1 <i>Abeliophyllum distichum</i> Nakai 翅果连翘	9	0
2. <i>Cartrema</i> Raf. 美洲木樨榄属		

1	<i>Cartrema americana</i> (L.) G.L. Nesom 美洲木樨	0	1(23)
2	<i>Cartrema floridana</i> (Chapm.) G.L. Nesom 佛罗里达美洲木樨	0	1(1)
	Total count of the <i>Cartrema</i> genus	0	2(24)
	3. <i>Chengiodendron</i> C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li 万钧木属		
1	<i>Chengiodendron marginatum</i> (Champ. ex Benth.) C.B. Shang, X.R.Wang, Yi F. Duan & Yong F. Li 万钧木	2	18(840)
2	<i>Chengiodendron matsumuranum</i> (Hayata) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li 牛屎果	0	3(862)
3	<i>Chengiodendron minor</i> (P.S. Green) C.B. Shang, X.R. Wang, Yi F. Duan & Yong F. Li 小叶万钧木	0	1(155)
	Total count of the <i>Chengiodendron</i> genus	2	22(1857)
	4. <i>Chionanthus</i> Royen 流苏树属		
1	<i>Chionanthus albidiflorus</i> Thwaites 微白花流苏树	0	1(1)
2	<i>Chionanthus cuspidatus</i> Blume 凸尖流苏树	0	1(1)
3	<i>Chionanthus domingensis</i> Lam. 多米尼加流苏树	0	1(1)
4	<i>Chionanthus filiformis</i> (Vell.) P.S. Green 丝状流苏树	1	1(1)
5	<i>Chionanthus guangxiensis</i> B.M. Miao 广西李榄	20	1(8)
6	<i>Chionanthus hainanensis</i> (Merr. & Chun) B.M. Miao 海南李榄	1	2(47)
7	<i>Chionanthus henryanus</i> P.S. Green 李榄	7	1(2)
8	<i>Chionanthus longiflorus</i> (H.L. Li) B.M. Miao 长花李榄	0	1(14)
9	<i>Chionanthus macrocarpus</i> Blume 滇南插柚紫	19	1(22)
10	<i>Chionanthus mala-elengi</i> subsp. <i>linocieroides</i> (Wight) P.S. Green 滇缅流苏树	0	2(2)
11	<i>Chionanthus mala-elengi</i> subsp. <i>mala-elengi</i> 毛茉莉流苏树原亚种	0	2(2)
12	<i>Chionanthus mala-elengi</i> subsp. <i>terniflorus</i> (Wall. ex G. Don) P.S. Green 尾叶李榄	0	1 (2)
13	<i>Chionanthus microstigma</i> (Gagnep.) P.S. Green 小柱流苏树	0	1 (1)
14	<i>Chionanthus montanus</i> Blume 山地流苏树	0	1 (2)
15	<i>Chionanthus nitens</i> Koord. & Valetton 光泽流苏树	2	0
16	<i>Chionanthus oblanceolatus</i> (B.L. Rob.) P.S. Green 倒披针流苏树	6	0
17	<i>Chionanthus oliganthus</i> (Merr.) Kiew 少花流苏树	0	1 (3)
18	<i>Chionanthus panamensis</i> (Standl.) Stearn 巴拿马流苏树	1	0
19	<i>Chionanthus parkinsonii</i> (Hutch.) Bennet & Raizada 白枝流苏树	0	2 (16)
20	<i>Chionanthus purpureus</i> Lam. 紫红流苏树	0	1 (2)
21	<i>Chionanthus ramiflorus</i> Roxb. 枝花流苏树	67	8 (527)
22	<i>Chionanthus retusus</i> Lindl. & Paxton 流苏树	1229	3 (27)
23	<i>Chionanthus robinsonii</i> (Gagnep.) B.H. Quang 轮状流苏树	0	1 (1)
24	<i>Chionanthus sleumeri</i> (C.T. White) Stearn 厚叶李榄	0	1 (2)
25	<i>Chionanthus spiciferus</i> (Ridl.) Kiew 具穗流苏树	0	1 (3)
26	<i>Chionanthus sutepensis</i> (Kerr) P.S. Green 素贴流苏树	1	0

27	<i>Chionanthus thorelii</i> (Gagnep.) P.S. Green 梭列流苏树	2	0
28	<i>Chionanthus trichotomus</i> (Vell.) P.S. Green 三歧流苏树	0	2 (2)
29	<i>Chionanthus verruculatus</i> D. Fang 疣叶李榄	2	0
30	<i>Chionanthus virginicus</i> L. 美国流苏树	47	0
31	<i>Chionanthus zeylanicus</i> L. 斯里兰卡北美流苏树	0	1 (1)
	Specimens only identified at <i>Chionanthus</i> genus level	9	1 (31)
	Total count of the <i>Chionanthus</i> genus	1414	39 (721)
	5. <i>Chrysojasminum</i> Banfi 探春花属		
1	<i>Chrysojasminum floridum</i> (Bunge) Banfi 探春花	0	4 (1398)
2	<i>Chrysojasminum fruticans</i> (L.) Banfi 灌木探春	0	3 (692)
3	<i>Chrysojasminum humile</i> (L.) Banfi 矮探春	0	2 (12)
4	<i>Chrysojasminum humile</i> var. <i>humile</i> 矮探春原变种	0	4 (100)
5	<i>Chrysojasminum humile</i> var. <i>microphyllum</i> (L.C. Chia) Banfi 小叶矮探春	0	2 (378)
6	<i>Chrysojasminum odoratissimum</i> (L.) Banfi 浓香茉莉	0	1 (28)
7	<i>Chrysojasminum subhumile</i> (W.W. Sm.) Banfi & Galasso 滇探春	0	6 (420)
	Total count of the <i>Chrysojasminum</i> genus	0	22 (3028)
	6. <i>Fontanesia</i> Labill. 雪柳属		
1	<i>Fontanesia fortunei</i> Carrière 雪柳	747	2 (188)
2	<i>Fontanesia phillyreoides</i> Labill. 西亚雪柳	14	0
	Specimens only identified at <i>Fontanesia</i> genus level	5	
	Total count of the <i>Fontanesia</i> genus	766	2 (188)
	7. <i>Forestiera</i> Poir. 泽蜡树属		
1	<i>Forestiera acuminata</i> (Michx.) Poir. 泽蜡树	2	0
2	<i>Forestiera angustifolia</i> Torr. 德克萨斯泽蜡树	3	0
3	<i>Forestiera ligustrina</i> (Michx.) Poir. 女贞叶泽蜡树	4	0
4	<i>Forestiera pubescens</i> var. <i>parvifolia</i> (A. Gray) G.L. Nesom 小叶泽蜡树	0	1 (5)
5	<i>Forestiera pubescens</i> var. <i>pubescens</i> 柔毛泽蜡树原变种	0	1 (1)
6	<i>Forestiera reticulata</i> Torr. 网脉泽蜡树	2	0
7	<i>Forestiera rhamnifolia</i> Griseb. 鼠李叶泽蜡树	1	0
8	<i>Forestiera segregata</i> (Jacq.) Krug & Urb. 佛罗里达泽蜡树	2	0
	Total count of the <i>Forestiera</i> genus	14	2 (6)
	8. <i>Forsythia</i> Vahl 连翘属		
1	<i>Forsythia europaea</i> Degen & Bald. 欧洲连翘	4	1 (3)
2	<i>Forsythia giraldiana</i> Lingelsh. 秦连翘	345	1 (2)
3	<i>Forsythia</i> x <i>intermedia</i> Zabel 金钟连翘	7	No opinion
4	<i>Forsythia intermedia</i> var. <i>densiflora</i> Koehne 金钟连翘密花变种	1	No opinion
5	<i>Forsythia intermedia</i> var. <i>vitellina</i> Koehne 金钟连翘卵黄变种	1	No opinion
6	<i>Forsythia japonica</i> Makino 日本连翘	13	0
7	<i>Forsythia koreana</i> (Rehder) Nakai 朝鲜连翘	10	1 (7)
8	<i>Forsythia likiangensis</i> Ching & K.M. Feng 丽江连翘	10	0
9	<i>Forsythia mandschurica</i> Uyeki 东北连翘	25	0

10	<i>Forsythia mira</i> M.C. Chang 奇异连翘	1	0
11	<i>Forsythia ovata</i> Nakai 卵叶连翘	22	1 (4)
12	<i>Forsythia suspensa</i> (Thunb.) Vahl 连翘	1690	7 (57)
13	<i>Forsythia togashii</i> H. Hara 富樫连翘	0	1 (16)
14	<i>Forsythia viridissima</i> Lindl. 金钟花	753	0
	Specimens only identified at <i>Forsythia</i> genus level	26	
	Total count of the <i>Forsythia</i> genus	2908	12 (89)
	9. <i>Fraxinus</i> Tourn. ex L. 栲属		
1	<i>Fraxinus albicans</i> Buckley 蓝紫果白蜡	0	1 (2)
2	<i>Fraxinus americana</i> L. 美国白蜡	432	5 (25)
3	<i>Fraxinus angustifolia</i> subsp. <i>oxycarpa</i> (M. Bieb. ex Willd.) Franco & Rocha Afonso 尖果栲	2	1 (3)
4	<i>Fraxinus angustifolia</i> Vahl 窄叶栲	3	0
5	<i>Fraxinus anomala</i> Torr. ex S. Watson 异叶栲	2	0
6	<i>Fraxinus apertisquamifera</i> H. Hara 裂鳞栲	15	0
7	<i>Fraxinus baroniana</i> Diels 狭叶栲	96	0
8	<i>Fraxinus berlandieriana</i> A. DC. 贝氏栲	1	0
9	<i>Fraxinus bungeana</i> A. DC. 小叶栲	479	1 (1)
10	<i>Fraxinus caroliniana</i> Mill. 卡罗利纳栲	8	0
11	<i>Fraxinus chiisanensis</i> Nakai 智异山栲	1	0
12	<i>Fraxinus chinensis</i> Roxb. 白蜡树	2183	0
13	<i>Fraxinus chinensis</i> subsp. <i>chinensis</i> 白蜡树原变种	1	5 (126)
14	<i>Fraxinus chinensis</i> subsp. <i>rhynchophylla</i> (Hance) A.E. Murray 花曲柳	115	7 (1072)
15	<i>Fraxinus cuspidata</i> Torr. 凸尖栲	1	0
16	<i>Fraxinus depauperata</i> (Lingelsh.) Z. Wei 疏花栲	9	0
17	<i>Fraxinus dipetala</i> Hook. & Arn. 三叶栲	3	2 (2)
18	<i>Fraxinus excelsior</i> L. 欧栲	46	0
19	<i>Fraxinus excelsior</i> subsp. <i>coriariifolia</i> (Scheele) A.E. Murray 欧栲小叶坚皮亚种	0	1 (1)
20	<i>Fraxinus excelsior</i> subsp. <i>excelsior</i> 欧栲原亚种	0	2 (2)
21	<i>Fraxinus ferruginea</i> Lingelsh. 锈毛栲	21	0
22	<i>Fraxinus floribunda</i> Wall. 多花栲	309	5 (26)
23	<i>Fraxinus griffithii</i> C.B. Clarke 光蜡树	223	6 (48)
24	<i>Fraxinus hubeiensis</i> S.Z. Qu, C.B. Shang & P.L. Su 湖北栲	0	1 (11)
25	<i>Fraxinus insularis</i> Hemsl. 苦枥木	552	8 (430)
26	<i>Fraxinus lanuginosa</i> Koidz. 日本小叶栲	67	3 (11)
27	<i>Fraxinus latifolia</i> Benth. 阔叶栲	16	1 (4)
28	<i>Fraxinus longicuspis</i> Siebold & Zucc. 长尖栲	70	4 (87)
29	<i>Fraxinus malacophylla</i> Hemsl. 白枪杆	69	1 (16)
30	<i>Fraxinus mandshurica</i> Rupr. 水曲柳	260	2 (18)
31	<i>Fraxinus nigra</i> Marshall 黑栲	29	0
32	<i>Fraxinus odontocalyx</i> Hand.-Mazz. ex E. Peter 尖萼栲	150	1 (21)
33	<i>Fraxinus ornus</i> L. 花栲	27	0

34	<i>Fraxinus pallisiae</i> Wilmott 帕利西栲	6	1 (1)
35	<i>Fraxinus paxiana</i> Lingelsh. 秦岭栲	296	0
36	<i>Fraxinus pennsylvanica</i> Marshall 洋白蜡	529	5 (122)
37	<i>Fraxinus platypoda</i> Oliv. 象蜡树	81	3 (39)
38	<i>Fraxinus profunda</i> (Bush) Bush 南瓜栲	5	1 (2)
39	<i>Fraxinus punctata</i> S.Y. Hu 斑叶栲	5	0
40	<i>Fraxinus quadrangulata</i> Michx. 四棱栲	7	0
41	<i>Fraxinus sieboldiana</i> Blume 庐山栲	173	2 (105)
42	<i>Fraxinus sogdiana</i> Bunge 天山栲	83	0
43	<i>Fraxinus stylosa</i> Lingelsh. 宿柱栲	75	2 (19)
44	<i>Fraxinus suaveolens</i> W.W. Sm. 皆古思民木	6	2 (25)
45	<i>Fraxinus trifoliolata</i> W.W. Sm. 三叶栲	19	0
46	<i>Fraxinus velutina</i> Torr. 绒毛栲	72	4 (13)
47	<i>Fraxinus xanthoxyloides</i> (G. Don) Wall. ex A. DC. 椒叶栲	4	0
	Specimens only identified at <i>Fraxinus</i> genus level	255	
	Total count of the <i>Fraxinus</i> genus	6806	77 (2232)
	10. <i>Haenianthus</i> Griseb. 鳞瓣榄属		
1	<i>Haenianthus salicifolius</i> Griseb. 柳叶鳞瓣榄	0	1 (1)
	11. <i>Jasminum</i> L. 素馨属		
1	<i>Jasminum abyssinicum</i> Hochst. ex DC. 埃塞俄比亚素馨	4	0
2	<i>Jasminum annamense</i> subsp. <i>glabrescens</i> P.S. Green 长萼素馨	0	1 (1)
3	<i>Jasminum arborescens</i> Roxb. 乔木状素馨	0	1 (1)
4	<i>Jasminum artense</i> Montrouz. 阿尔腾斯素馨	1	0
5	<i>Jasminum attenuatum</i> Roxb. ex DC 大叶素馨	5	3 (17)
6	<i>Jasminum auriculatum</i> Vahl 耳叶素馨	1	0
7	<i>Jasminum azoricum</i> L. 亚速尔素馨	1	0
8	<i>Jasminum bakeri</i> Scott Elliot 贝氏素馨	2	0
9	<i>Jasminum beesianum</i> Forrest & Diels 红素馨	255	1 (19)
10	<i>Jasminum calycinum</i> Wall. ex Voigt 大萼素馨	2	No opinion
11	<i>Jasminum cinnamomifolium</i> Kobuski 樟叶素馨	61	0
12	<i>Jasminum coarctatum</i> Roxb. 密集素馨	128	0
13	<i>Jasminum coarctatum</i> var. <i>coarctatum</i> 密集素馨原变种	1	1 (2)
14	<i>Jasminum coffeinum</i> Hand.-Mazz. 咖啡素馨	33	2 (23)
15	<i>Jasminum craibianum</i> Kerr 毛萼素馨	0	1 (8)
16	<i>Jasminum crassifolium</i> Blume 厚叶素馨	4	0
17	<i>Jasminum cuspidatum</i> Rottler 凸尖素馨	0	1 (2)
18	<i>Jasminum decipiens</i> P.S. Green 假素馨	1	0
19	<i>Jasminum decussatum</i> Wall. ex G. Don 对生素馨	1	0
20	<i>Jasminum dichotomum</i> Vahl 二歧素馨	2	0
21	<i>Jasminum didymum</i> G. Forst. 对生双花素馨	7	0
22	<i>Jasminum didymum</i> subsp. <i>lineare</i> (R. Br.) P.S. Green 线形素馨	0	1 (3)
23	<i>Jasminum didymum</i> subsp. <i>racemosum</i> (F. Muell.) P.S. Green 总序素馨	1	1 (1)
24	<i>Jasminum dispernum</i> subsp. <i>forrestianum</i> (Kobuski) P.S.	0	1 (24)

Green 印度素馨		
25	<i>Jasminum dispernum</i> Wall. 双子素馨	87 0
26	<i>Jasminum duclouxii</i> (H. Lév.) Rehder 丛林素馨	186 0
27	<i>Jasminum elongatum</i> (P.J. Bergius) Willd. 扭肚藤	308 6 (758)
28	<i>Jasminum extensum</i> Wall. ex G. Don 广布素馨	2 3 (681)
29	<i>Jasminum flexile</i> Vahl 盈江素馨	0 1 (4)
30	<i>Jasminum fuchsiifolium</i> Gagnep. 倒吊钟叶素馨	40 0
31	<i>Jasminum grandiflorum</i> L. 素馨花	57 2 (21)
32	<i>Jasminum grandiflorum</i> subsp. <i>floribundum</i> (R. Br. ex Fresen.) P.S. Green 素馨花多花亚种	0 1 (2)
33	<i>Jasminum guangxiense</i> B.M. Miao 广西素馨	20 0
34	<i>Jasminum hongshuihoense</i> Z.P. Jien ex B.M. Miao 绒毛素馨	22 0
35	<i>Jasminum insigne</i> Blume 显著素馨	2 0
36	<i>Jasminum lanceolaria</i> Roxb. 清香藤	3053 3 (410)
37	<i>Jasminum lanceolaria</i> subsp. <i>lanceolaria</i> 清香藤原亚种	3 3 (8)
38	<i>Jasminum laurifolium</i> Roxb. ex Hornem. 桂叶素馨	87 0
39	<i>Jasminum laurifolium</i> var. <i>brachylobum</i> Kurz 短裂桂叶素馨	10 0
40	<i>Jasminum laxiflorum</i> Gagnep. 疏花素馨	4 0
41	<i>Jasminum longitubum</i> L.C. Chia ex B.M. Miao 长管素馨	16 0
42	<i>Jasminum maingayi</i> C.B. Clarke 麦氏素馨	1 0
43	<i>Jasminum mesnyi</i> Hance 野迎春	336 1 (6)
44	<i>Jasminum microcalyx</i> Hance 小萼素馨	98 1 (4)
45	<i>Jasminum multiflorum</i> (Burm.f.) Andrews 毛茉莉	57 2 (2)
46	<i>Jasminum nepalense</i> Spreng. 尼泊尔素馨	0 1 (1)
47	<i>Jasminum nervosum</i> Lour. 青藤仔	877 5 (54)
48	<i>Jasminum nintoooides</i> Rehder 银花素馨	30 0
49	<i>Jasminum nudiflorum</i> Lindl. 迎春花	523 1 (5)
50	<i>Jasminum nudiflorum</i> form <i>pulvinatum</i> (W.W. Sm.) P.S. Green 垫状迎春	0 2 (64)
51	<i>Jasminum officinale</i> L. 素方花	638 6 (110)
52	<i>Jasminum pedunculatum</i> Gagnep. 白萼素馨	0 1 (172)
53	<i>Jasminum pentaneurum</i> Hand.-Mazz. 厚叶素馨	400 0
54	<i>Jasminum pierreanum</i> Gagnep. 心叶素馨	1 2 (14)
55	<i>Jasminum polyanthum</i> Franch. 多花素馨	200 1 (1)
56	<i>Jasminum prainii</i> H. Lév. 披针叶素馨	40 0
57	<i>Jasminum quinatum</i> Schinz 五出素馨	1 0
58	<i>Jasminum rehderianum</i> Kobuski 白皮素馨	20 0
59	<i>Jasminum rudiflorum</i> 粗花素馨	3 0
60	<i>Jasminum rufohirtum</i> Gagnep. 云南素馨	1 1 (20)
61	<i>Jasminum sambac</i> (L.) Aiton 茉莉花	240 1 (7)
62	<i>Jasminum simplicifolium</i> G. Forst. 单叶素馨	1 0
63	<i>Jasminum simplicifolium</i> subsp. <i>australiense</i> P.S. Green 澳大利亚单叶素馨	0 2 (3)
64	<i>Jasminum simplicifolium</i> subsp. <i>funale</i> (Decne.) Kiew	0 1 (2)

	绳索单叶素馨		
65	<i>Jasminum simplicifolium</i> subsp. <i>leratii</i> (Schltr.) P.S. Green 勒拉单叶素馨	0	1 (2)
66	<i>Jasminum sinense</i> Hemsl. 华素馨	939	0
67	<i>Jasminum x stephanense</i> É. Lemoine 淡红素馨	56	2 (3)
68	<i>Jasminum subglandulosum</i> Kurz 腺叶素馨	1	1 (46)
69	<i>Jasminum szechuanense</i> 四川素馨	1	0
70	<i>Jasminum tomentosum</i> Knobl. 绒毛素馨	1	0
71	<i>Jasminum urophyllum</i> Hemsl. 川素馨	226	5 (84)
72	<i>Jasminum wengeri</i> C.E.C. Fisch. 异叶素馨	5	1 (7)
73	<i>Jasminum yuanjiangense</i> P.Y. Pai 元江素馨	10	0
	Specimens only identified at <i>Jasminum</i> genus level	275	
	Total count of the <i>Jasminum</i> genus	9388	71 (2592)
	12. <i>Ligustrum</i> L.女贞属		
1	<i>Ligustrum angustum</i> B.M. Miao 狭叶女贞	22	0
2	<i>Ligustrum compactum</i> (Wall. ex G. Don) Hook.f. & Thomson ex Brandis 长叶女贞	672	1 (2)
3	<i>Ligustrum compactum</i> var. <i>compactum</i> 长叶女贞原变种	5	1 (3)
4	<i>Ligustrum compactum</i> var. <i>velutinum</i> P.S. Green 毛长叶女贞	1	1 (1)
5	<i>Ligustrum confusum</i> Decne. 散生女贞	219	0
6	<i>Ligustrum confusum</i> var. <i>macrocarpum</i> C.B. Clarke 大果女贞	4	0
7	<i>Ligustrum delavayanum</i> Har. 紫药女贞	1141	2 (4)
8	<i>Ligustrum expansum</i> Rehder 扩展女贞	24	3 (197)
9	<i>Ligustrum foliosum</i> Nakai 多叶女贞	1	0
10	<i>Ligustrum glomeratum</i> Blume 团伞女贞	7	1 (2)
11	<i>Ligustrum gracile</i> Rehder 细女贞	142	2 (13)
12	<i>Ligustrum guangdongense</i> R.J. Wang & H.Z. Wen 广东女贞	2	0
13	<i>Ligustrum henryi</i> Hemsl. 丽叶女贞	743	0
14	<i>Ligustrum ibolium</i> Coe ex Rehder 依博女贞	1	No opinion
15	<i>Ligustrum ibota</i> Siebold 大叶东亚女贞	37	1 (2)
16	<i>Ligustrum japonicum</i> Thunb. 日本女贞	642	5 (72)
17	<i>Ligustrum leucanthum</i> (S. Moore) P.S. Green 蜡子树	323	5 (1791)
18	<i>Ligustrum lianum</i> P.S. Hsu 华女贞	480	2 (30)
19	<i>Ligustrum lindleyi</i> (Wall. ex G. Don) P.S. Green 林氏女贞	0	1 (4)
20	<i>Ligustrum liukiense</i> Koidz. 台湾女贞	26	0
21	<i>Ligustrum lucidum</i> W.T. Aiton 女贞	4411	1 (32)
22	<i>Ligustrum mellosum</i> Decne. 薄片女贞	3	No opinion
23	<i>Ligustrum micranthum</i> Zucc. 小花女贞	5	0
24	<i>Ligustrum morrisonense</i> Kaneh. & Sasaki 玉山女贞	4	0
25	<i>Ligustrum nepalense</i> Wall. 尼泊尔小蜡	4	1 (10)
26	<i>Ligustrum obovatilimbum</i> B.M. Miao 倒卵叶女贞	6	0
27	<i>Ligustrum obtusifolium</i> Siebold & Zucc. 水蜡树	381	1 (3)
28	<i>Ligustrum obtusifolium</i> subsp. <i>microphyllum</i> (Nakai) P.S. Green 小叶水蜡树	10	1 (64)

29	<i>Ligustrum obtusifolium</i> subsp. <i>obtusifolium</i> 水蜡树原亚种	0	6 (186)
30	<i>Ligustrum ovalifolium</i> Hassk. 卵叶女贞	70	3 (7)
31	<i>Ligustrum ovalifolium</i> var. <i>hisauchii</i> (Makino) Noshiro 希扫女贞	1	1 (3)
32	<i>Ligustrum ovalifolium</i> var. <i>pacificum</i> (Nakai) Mizush. 太平洋女贞	10	0
33	<i>Ligustrum pricei</i> Hayata 总梗女贞	165	2 (315)
34	<i>Ligustrum punctifolium</i> M.C. Chang 斑叶女贞	15	0
35	<i>Ligustrum quihoui</i> Carrière 小叶女贞	2012	4 (11)
36	<i>Ligustrum retusum</i> Merr. 凹叶女贞	61	0
37	<i>Ligustrum robustum</i> (Roxb.) Blume 粗壮女贞	590	0
38	<i>Ligustrum robustum</i> subsp. <i>robustum</i> 粗壮女贞原亚种	0	1 (4)
39	<i>Ligustrum robustum</i> subsp. <i>walkerii</i> (Decne.) P.S. Green 沃克粗壮女贞	0	1 (4)
40	<i>Ligustrum salicinum</i> Nakai 柳状女贞	1	0
41	<i>Ligustrum sempervirens</i> (Franch.) Lingelsh. 裂果女贞	102	5 (4)
42	<i>Ligustrum sinense</i> Lour. 小蜡	4594	2 (3)
43	<i>Ligustrum sinense</i> var. <i>chayuense</i> (P.Y. Pai) Y.F. Deng & B.Q. Xu 察隅女贞	0	3 (181)
44	<i>Ligustrum sinense</i> var. <i>concavum</i> M.C. Chang 滇桂小蜡	54	0
45	<i>Ligustrum sinense</i> var. <i>coryanum</i> (W.W. Sm.) Hand.-Mazz. 多毛小蜡	274	1 (3)
46	<i>Ligustrum sinense</i> var. <i>dissimile</i> S.J. Hao 异型小蜡	32	0
47	<i>Ligustrum sinense</i> var. <i>luodianense</i> M.C. Chang 罗甸小蜡	31	0
48	<i>Ligustrum sinense</i> var. <i>myrianthum</i> (Diels) Hoefker 光萼小蜡	1641	3 (63)
49	<i>Ligustrum sinense</i> var. <i>opienense</i> Y.C. Yang 峨边小蜡	48	0
50	<i>Ligustrum sinense</i> var. <i>sinense</i> 小蜡原变种	313	8 (387)
51	<i>Ligustrum strongylophyllum</i> Hemsl. 宜昌女贞	271	1 (1)
52	<i>Ligustrum tamakii</i> Hatus. 塔马克女贞	1	0
53	<i>Ligustrum tenuipes</i> M.C. Chang 细梗女贞	26	0
54	<i>Ligustrum tschonoskii</i> Decne. 邱氏女贞	76	7 (28)
55	<i>Ligustrum vicaryi</i> Rehder 维卡利女贞	84	No opinion
56	<i>Ligustrum vulgare</i> L. 欧洲女贞	77	0
57	<i>Ligustrum xingrenense</i> D.J. Liu 兴仁女贞	21	0
	Specimens only identified at <i>Ligustrum</i> genus level	418	
	Total count of the <i>Ligustrum</i> genus	20304	77 (3430)
	13. <i>Menodora</i> Bonpl. 惜春花属		
1	<i>Menodora scabra</i> Engelm. ex A. Gray 黄惜春	5	1 (1)
2	<i>Menodora spinescens</i> A. Gray 具刺惜春花	2	0
	Total count of the <i>Menodora</i> genus	7	1 (1)
	14. <i>Myxopyrum</i> Bl. 胶核木属		
1	<i>Myxopyrum nervosum</i> Blume 胶核木	3	0
2	<i>Myxopyrum pierrei</i> Gagnep. 海南胶核木	8	1 (25)
3	<i>Myxopyrum smilacifolium</i> subsp. <i>smilacifolium</i>	0	1 (1)

阔叶胶核木原亚种

Total count of the <i>Myxopyrum</i> genus	11	2 (26)
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15. *Nestegis* Raf.岛蜡树属

- | | | | |
|---|--|---|-------|
| 1 | <i>Nestegis cunninghamii</i> (Hook.f.) L.A.S. Johnson 黑岛蜡树 | 0 | 1 (1) |
| 2 | <i>Nestegis ligustrina</i> (Vent.) L. A. S. Johnson 女贞叶岛蜡树 | 1 | 0 |
| 3 | <i>Nestegis montana</i> (Hook.f.) L.A.S. Johnson 山地岛蜡树 | 0 | 1 (1) |

Total count of the <i>Nestegis</i> genus	1	2 (2)
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16. *Noronhia* Stadman ex Thouars 冠花榄属

- | | | | |
|---|---|---|--------|
| 1 | <i>Noronhia congesta</i> (Baker) Jongkind 紧密冠花榄 | 0 | 1 (1) |
| 2 | <i>Noronhia macrophylla</i> (Baker) Hong-Wa & Callm.大叶冠花榄 | 0 | 2 (13) |

Total count of the <i>Noronhia</i> genus	0	3 (14)
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17. *Notelaea* Vent.澳樺榄属

- | | | | |
|---|---|---|-------|
| 1 | <i>Notelaea ligustrina</i> Vent. 女贞叶澳樺榄 | 2 | 1 (1) |
| 2 | <i>Notelaea microcarpa</i> R. Br. 小果澳樺榄 | 2 | 0 |
| 3 | <i>Notelaea ovata</i> R. Br. 卵形澳樺榄 | 2 | 0 |
| 4 | <i>Notelaea punctata</i> R. Br. 斑点澳樺榄 | 1 | 0 |
| 5 | <i>Notelaea venosa</i> F. Muell. 多脉澳樺榄 | 1 | 0 |

Total count of the <i>Notelaea</i> genus	8	1 (1)
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18. *Nyctanthes* L.夜花属

- | | | | |
|---|--|----|---|
| 1 | <i>Nyctanthes arbor-tristis</i> L. 夜花 | 79 | 0 |
| | Specimens only identified at <i>Nyctanthes</i> genus level | 4 | 0 |

Total count of the <i>Nyctanthes</i> genus	83	0
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19. *Olea* L.木樨榄属

- | | | | |
|---|---|-----|---------|
| 1 | <i>Olea capensis</i> L. 好望角木樨榄 | 1 | 0 |
| 2 | <i>Olea europaea</i> L. 木樨榄(木犀榄、油橄榄) | 174 | 1 (2) |
| 3 | <i>Olea europaea</i> subsp. <i>cuspidata</i> (Wall. & G. Don) Cif.
锈鳞木樨榄 | 12 | 3 (104) |
| 4 | <i>Olea europaea</i> subsp. <i>europaea</i> 木樨榄原亚种 | 1 | 3 (4) |
| 5 | <i>Olea europaea</i> subsp. <i>guanchica</i> P. Vargas, J. Hess,
Muñoz Garm. & Kadereit 加那利木樨榄 | 1 | 0 |
| 6 | <i>Olea europaea</i> subsp. <i>maroccana</i> (Greuter & Burdet)
P. Vargas, J. Hess, Muñoz Garm. & Kadereit 扁平木樨榄 | 0 | 1 (3) |
| 7 | <i>Olea ferruginea</i> Wall. ex Aitch. 锈色木樨榄 | 49 | 0 |
| 8 | <i>Olea paniculata</i> R. Br. 腺叶木樨榄 | 254 | 2 (34) |
| | Specimens only identified at <i>Olea</i> genus level | 72 | |

Total count of the <i>Olea</i> genus	564	9 (134)
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20. *Osmanthus* Lour. 木樨属

- | | | | |
|---|--|-----|------------|
| 1 | <i>Osmanthus armatus</i> Diels 红柄木樨 | 193 | 1 (3) |
| 2 | <i>Osmanthus attenuatus</i> P.S. Green 狭叶木樨 | 37 | 1 (1) |
| 3 | <i>Osmanthus burkwoodii</i> (Burkwood & Skipwith) P.S. Green
伯克伍德木樨 | 1 | No opinion |
| 4 | <i>Osmanthus cooperi</i> Hemsl. 宁波木樨 | 164 | 0 |
| 5 | <i>Osmanthus delavayi</i> Franch. 管花木樨 | 160 | 1 (8) |
| 6 | <i>Osmanthus didymopetalus</i> P.S. Green 双瓣木樨 | 87 | 0 |

7	<i>Osmanthus enervius</i> Masam. & T. Mori 无脉木樨	4	0
8	<i>Osmanthus fordii</i> Hemsl. 石山桂花	17	0
9	<i>Osmanthus fortunei</i> Carr 福琼木樨	9	No opinion
10	<i>Osmanthus fragrans</i> Lour. 桂花	2463	1 (3)
11	<i>Osmanthus fragrans</i> var. <i>aurantiacus</i> Makino 丹桂	33	6 (34)
12	<i>Osmanthus fragrans</i> var. <i>fragrans</i> 桂花原变种	0	3 (13)
13	<i>Osmanthus gracilinervis</i> L.C. Chia ex R.L. Lu 细脉木樨	71	0
14	<i>Osmanthus hainanensis</i> P.S. Green 显脉木樨	6	0
15	<i>Osmanthus henryi</i> P.S. Green 蒙自桂花	99	1 (8)
16	<i>Osmanthus heterophyllus</i> (G. Don) P.S. Green 柃树	83	4 (13)
17	<i>Osmanthus insularis</i> Koidz. 岛屿木樨	15	2 (13)
18	<i>Osmanthus japonicus</i> Siebold ex Makino 日本木樨	1	No opinion
19	<i>Osmanthus kaoi</i> (T.S. Liu & J.C. Liao) S.Y. Lu 高氏木樨	3	0
20	<i>Osmanthus lanceolatus</i> Hayata 锐叶木樨	13	0
21	<i>Osmanthus pubipedicellatus</i> L.C. Chia ex H.T. Chang 毛柄木樨	5	0
22	<i>Osmanthus racemosus</i> X.H. Song 总状桂花	3	No opinion
23	<i>Osmanthus reticulatus</i> P.S. Green 网脉木樨	155	0
24	<i>Osmanthus sandwicensis</i> Benth. & Hook.f. 三明治岛木樨	1	0
25	<i>Osmanthus serrulatus</i> Rehder 短丝木樨	119	0
26	<i>Osmanthus suavis</i> King ex C.B. Clarke 香花木樨	17	0
27	<i>Osmanthus urceolatus</i> P.S. Green 坛花木樨	7	1 (1)
28	<i>Osmanthus venosus</i> Pamp. 毛木樨	24	0
29	<i>Osmanthus yunnanensis</i> (Franch.) P.S. Green 野桂花	209	5 (25)
	Specimens only identified at <i>Osmanthus</i> genus level	159	
	Total count of the <i>Osmanthus</i> genus	4158	26 (122)
	21. <i>Phillyrea</i> L.总序桂属		
1	<i>Phillyrea angustifolia</i> L. 狭叶总序桂	6	0
2	<i>Phillyrea latifolia</i> L. 总序桂	4	1 (11)
	Total count of the <i>Phillyrea</i> genus	10	1 (11)
	22. <i>Picconia</i> DC.大苞榄属		
1	<i>Picconia excelsa</i> (Aiton) DC. 高大大苞榄	1	0
	23. <i>Schrebera</i> Roxb.元春花属		
1	<i>Schrebera trichoclada</i> Welw. 毛枝元春花	1	0
2	<i>Schrebera swietenoides</i> Roxb. 莫什卡(Moshka)	1	0
	Total count of the <i>Schrebera</i> genus	2	0
	24. <i>Syringa</i> L. 丁香属		
1	<i>Syringa diversifolia</i> Rehder 异叶丁香	2	No opinion
2	<i>Syringa emodi</i> Wall. ex Royle 喜马拉雅丁香	17	1 (15)
3	<i>Syringa henryi</i> C.K. Schneid. 亨利丁香	2	No opinion
4	<i>Syringa josikaea</i> J.Jacq. ex Rchb. 匈牙利丁香	14	1 (2)
5	<i>Syringa komarowii</i> C.K. Schneid. 西蜀丁香	583	5 (86)
6	<i>Syringa oblata</i> Lindl. 紫丁香	1687	3 (17)
7	<i>Syringa oblata</i> subsp. <i>dilatata</i> (Nakai) P.S. Green & M.C. Chang 朝阳丁香	0	8 (270)

8	<i>Syringa oblata</i> subsp. <i>oblata</i> 紫丁香原亚种	12	7 (238)
9	<i>Syringa persica</i> L. 棒棒花	108	5 (122)
10	<i>Syringa pinetorum</i> W.W. Sm. 松林丁香	109	1 (41)
11	<i>Syringa pinnatifolia</i> Hemsl. 羽叶丁香	97	2 (15)
12	<i>Syringa pubescens</i> subsp. <i>microphylla</i> (Diels) M.C. Chang & X.L. Chen 小叶巧玲花	577	9 (304)
13	<i>Syringa pubescens</i> subsp. <i>patula</i> (Palib.) M.C. Chang & X.L. Chen 关东巧玲花	82	7 (213)
14	<i>Syringa pubescens</i> Turcz. 巧玲花	922	2 (3)
15	<i>Syringa pubescens</i> subsp. <i>pubescens</i> 巧玲花原亚种	6	2 (61)
16	<i>Syringa reticulata</i> (Blume) H. Hara 日本丁香	149	0
17	<i>Syringa reticulata</i> subsp. <i>amurensis</i> (Rupr.) P.S. Green & M.C. Chang 暴马丁香	98	6 (847)
18	<i>Syringa reticulata</i> subsp. <i>pekinensis</i> (Rupr.) P.S. Green & M.C. Chang 北京丁香	289	3 (918)
19	<i>Syringa reticulata</i> subsp. <i>reticulata</i> 日本丁香原亚种	0	2 (7)
20	<i>Syringa tomentella</i> Bureau & Franch. 毛丁香	224	0
21	<i>Syringa tomentella</i> subsp. <i>sweginzowii</i> (Koehne & Lingelsh.) Jin Y. Chen & D.Y. Hong 四川丁香	12	4 (584)
22	<i>Syringa tomentella</i> subsp. <i>tomentella</i> 毛丁香原亚种	9	0
23	<i>Syringa tomentella</i> subsp. <i>yunnanensis</i> (Franch.) Jin Y. Chen & D.Y. Hong 云南丁香	12	2 (486)
24	<i>Syringa villosa</i> subsp. <i>villosa</i> 红丁香原亚种	34	1 (3)
25	<i>Syringa villosa</i> subsp. <i>wolfii</i> (C.K. Schneid.) Jin Y. Chen & D.Y. Hong 辽东丁香	41	4 (290)
26	<i>Syringa villosa</i> Vahl 红丁香	654	0
27	<i>Syringa vulgaris</i> L. 欧丁香	229	7 (27)
Total count of the <i>Syringa</i> genus		5969	82 (4549)
25. <i>Tetrapilus</i> Lour. 滨木樨榄属			
1	<i>Tetrapilus borneensis</i> (Boerl.) de Juana 婆罗洲滨木樨榄	0	1 (1)
2	<i>Tetrapilus brachiatus</i> Lour. 滨木樨榄	0	2 (118)
3	<i>Tetrapilus caudatilimbus</i> (L.C. Chia) de Juana 尾叶滨木樨榄	0	1 (9)
4	<i>Tetrapilus cordatulus</i> (H.L. Li) L.A.S. Johnson 心叶滨木樨榄	0	1 (9)
5	<i>Tetrapilus dioicus</i> (Roxb.) L.A.S. Johnson 雌雄异株滨木樨榄	1	1 (340)
6	<i>Tetrapilus gamblei</i> (C.B. Clarke) de Juana 喜马滨木樨榄	0	1 (2)
7	<i>Tetrapilus hainanensis</i> (H.L. Li) L.A.S. Johnson 海南滨木樨榄	0	1 (111)
8	<i>Tetrapilus laxiflorus</i> (H.L. Li) L.A.S. Johnson 疏花滨木樨榄	0	1 (14)
9	<i>Tetrapilus neriifolius</i> (H.L. Li) de Juana 狭叶滨木樨榄	0	1 (23)
10	<i>Tetrapilus parvilimbus</i> (Merr. & Chun) de Juana 小叶滨木樨榄	0	2 (34)
11	<i>Tetrapilus roseus</i> (Craib) L.A.S. Johnson 红花滨木樨榄	1	2 (212)
12	<i>Tetrapilus salicifolius</i> (Wall. ex G. Don) de Juana 柳叶滨木樨榄	0	3 (184)
13	<i>Tetrapilus tetragonocladus</i> (L.C. Chia) de Juana 方枝滨木樨榄	0	1 (10)
14	<i>Tetrapilus tsoongii</i> (Merr.) de Juana 钟氏滨木樨榄	0	5 (357)
15	<i>Tetrapilus wightianus</i> (Wall. ex G. Don) de Juana 球果滨木樨榄	0	2 (37)

Total count of the <i>Tetrapilus</i> genus		2	25 (1461)
26. <i>Ilex</i> L.(Aquifoliaceae Bercht. & J. Pres 冬青科)			
1	<i>Ilex hookeri</i> King 贡山冬青	0	1 (2)
Total		52427	480(20490)
Count of specimens with no match		460 (0.61%)	
Count of correct names		346	

4. Discussion

As previously stated, identifying the names of specimens belonging to Oleaceae plants is relatively intricate. Take *Tetrapilus tsoongii* (Merr.) de Juana from the genus *Tetrapilus* as an example; it originates from specimens labeled with five synonyms from two distinct genera, namely *Ligustrum tsoongii* Merr., *Olea brevipes* L.C. Chia, *Olea tsoongii* (Merr.) P.S. Green, *Olea yuennanensis* Hand.-Mazz., and *Olea yuennanensis* var. *xeromorpha* Hand.-Mazz. This indicates that historically, different specimens or living plants of this single species have been classified as five taxa (i.e., five different species/varieties) and placed within two other genera: *Ligustrum* and *Olea*. Synonyms are a fairly common occurrence, primarily stemming from inconsistent understanding and/or poor communication. If synonyms are not clarified, they can severely limit the scope and depth of scientific research progress. For instance, *Linociera* Sw. ex Schreb. is a synonym for the genus *Chionanthus* because the type specimens and some other specimens of *Linociera* were initially inaccurately identified and later discovered to actually belong to the genus *Chionanthus*. However, this does not necessarily imply that every taxon within the genus *Linociera* is a member of the genus *Chionanthus*[6]. After verification using the TNRS name verification system, the 745 specimens of the genus *Linociera* encompass the following four genera within the Oleaceae family: ① *Tetrapilus* Lour. (comprising 3 species and a total of 22 specimens), ② *Olea* L. (with 1 species and 13 specimens), ③ *Noronia* Stadman ex Thouars (with 1 species and 12 specimens), and ④ *Chionanthus* Royen (with 36 species and a total of 709 specimens). The barcodes for the seven specimens of *Linociera hupehensis* are PE 01511025, PE 01511026, PE 01021239, PE 01021240, IBSC 0651371, HIB 0027209, and HIB 0027210. The TNRS verification result for these specimens is "No matches found," indicating that no correct name or synonym was matched. The TNRS verification result for *Linociera obscurinervis* C.J. Qi & Q.Z. Lin (the barcodes for the two specimens are CSFI046566 and CSFI050244) is "No opinion," meaning that no judgment could be rendered. The 745 specimens within the genus *Linociera* actually represent a mixed group of plants from at least four different genera.

Scientific research is a process of collective wisdom, continuous refinement, and iterative understanding. Extensive and frequent discussions and collaborations among researchers, coupled with open access to high-quality literature, can help accelerate the pace of iterative understanding and rapidly advance relevant scientific research. Fine-grained analysis and verification of existing data, research on the quality standards for data and graphical images required for training large artificial intelligence models, and methods for extracting deep information can establish a high-quality plant specimen information database. This can foster an excellent scientific research environment and break free from the passive situation of only being able to conduct research using a limited number of representative samples. Global sampling studies of all families and genera of plants necessitate a clear understanding of the correct names, synonyms, plant specimen entities, living plants, and the names of test samples in literature, as well as the corresponding relationships between them [7, 8]. According to academic norms, plant names should adhere to the correct Latin binomial nomenclature.

5. Conclusion

After over 120 years of collecting and preserving plant specimens, China's herbarium system still has yet to achieve complete global coverage of Oleaceae species. Comprehensive taxonomic and identification research on this family could unlock significant innovation potential across related fields, notably interdisciplinary scientific endeavors, however, this requires global sampling efforts and international collaboration. This study aims to establish a foundational framework for the taxonomic revision, conservation, and sustainable utilization of Oleaceae biodiversity.

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Conflict of Interest

The authors declare that there are no known competing financial interests or personal relationships that could have seemed to influence the work reported in this paper.

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