

A Checklist of Woody Plants from East Asia

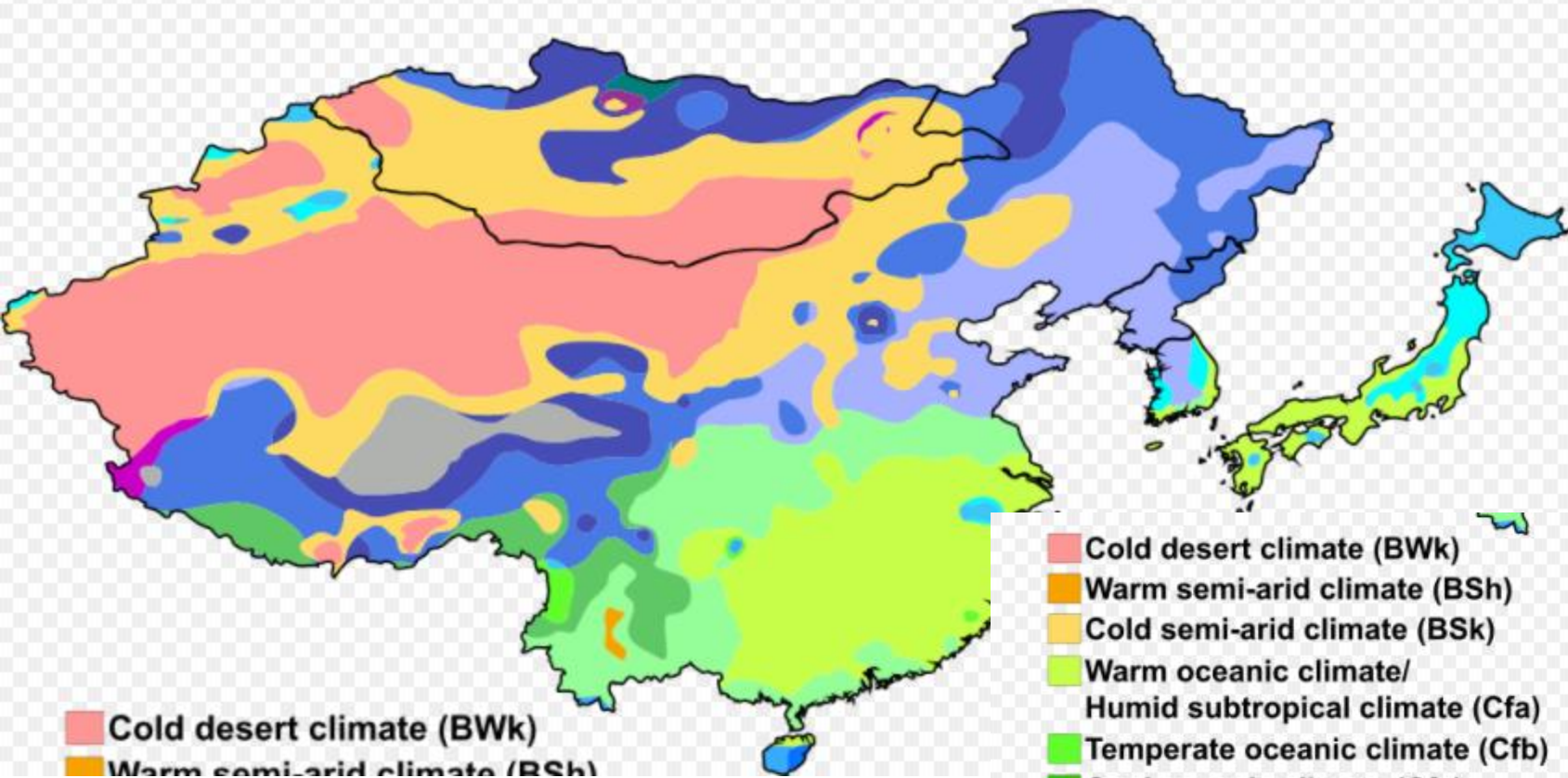
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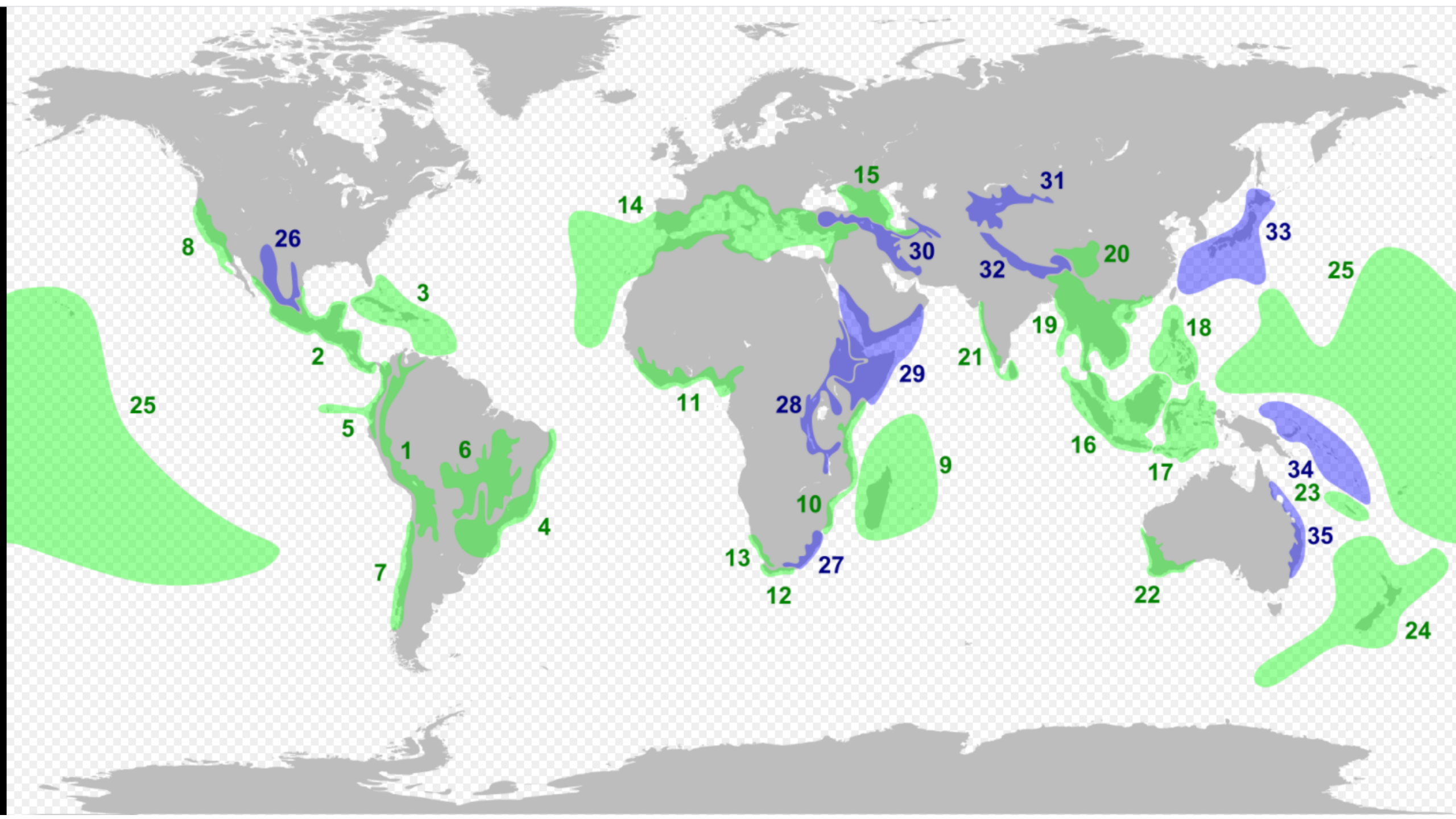
East Asia map of Köppen climate classification

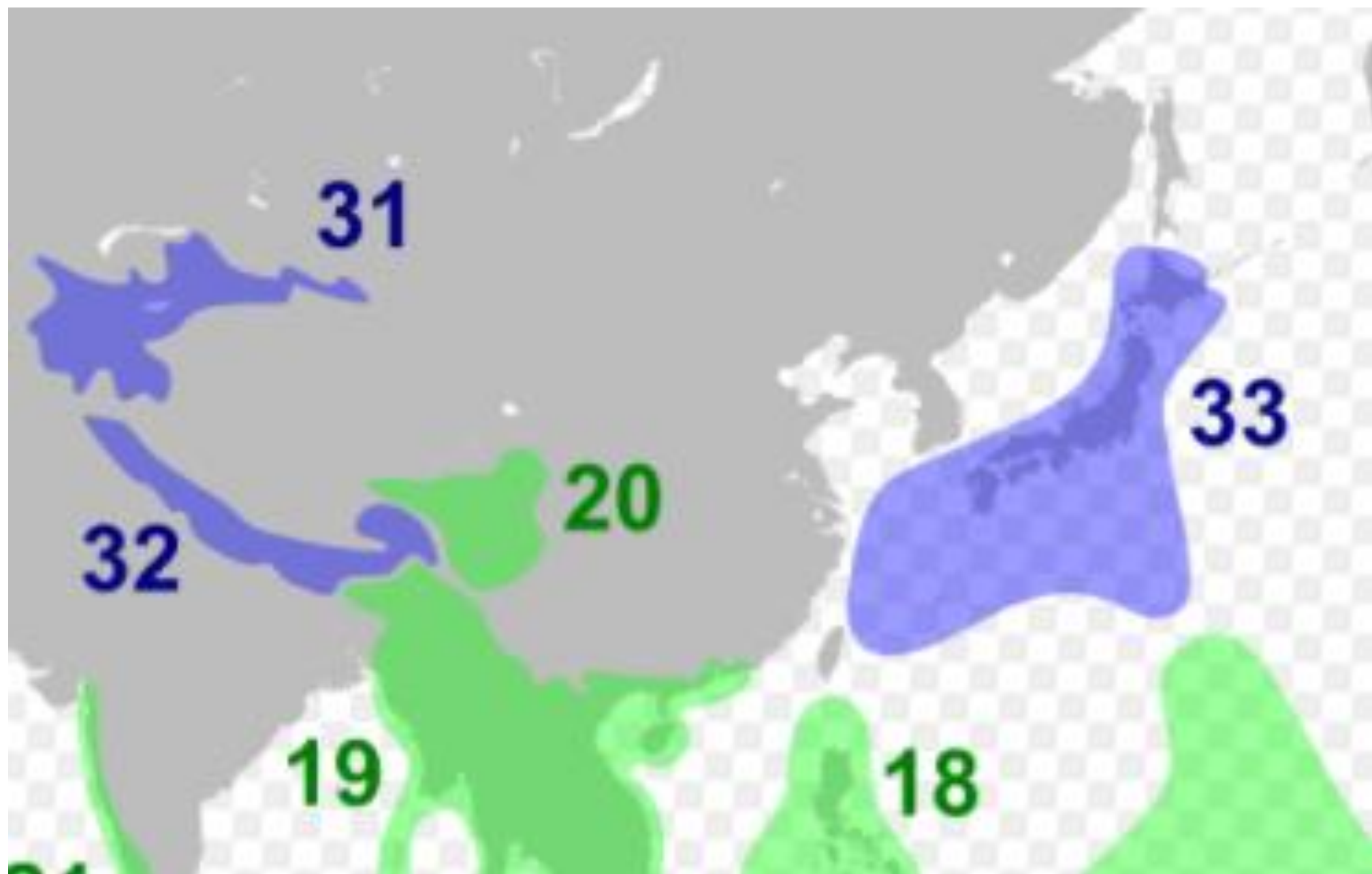


- Cold desert climate (BWk)
- Warm semi-arid climate (BSh)

- Cold semi-arid climate (BSk)
- Warm oceanic climate/
Humid subtropical climate (Cfa)
- Temperate oceanic climate (Cfb)
- Cool oceanic climate (Cfc)
- Humid subtropical climate (Cwa)
- Humid subtropical climate/
Subtropical oceanic highland climate (Cwb)
- Oceanic subpolar climate (Cwc)
- Warm continental climate/
Humid continental climate (Dfa)
- Temperate continental climate/
Humid continental climate (Dfb)

- Cool continental climate/
Subarctic climate (Dfc)
- Temperate continental climate/
Mediterranean continental climate (Dsb)
- Cool continental climate (Dsc)
- Warm continental climate/
Humid continental climate (Dwa)
- Temperate continental climate/
Humid continental climate (Dwb)
- Cool continental climate/
Subarctic climate (Dwc)
- Tundra climate (ET)





31

33

20

32

19

18



Flora of China



*Cucurbitaceae through Valerianaceae
with Annonaceae and Berberidaceae*

Flora of China Illustrations



Gentianaceae through Boraginaceae



16

Flora of China
25 volumes
(1994-2013)
24 Illustrations
(1998-2013)

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*The Genera
of
Vascular Plants
of
Korea*



2007

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931 × 1280

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Chong-wook Park



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Seoul National University Herbarium

National Institute of Biological Resources
Ministry of Environment, Korea

Object: Woody Plants

trees: main trunk

shrubs: without main trunk

Subshrubs: with woody elements

Vines: woody climb

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Part I Families and Genera

	Taxa	Total Number	Non endemic, endemic	Endemic Number in China, Japan, Koreas
Family Taxa Number	CORNACEAE	5g 45 sp 9 subsp 14 var	23, 45	44, 2, 5
Genera and Their Number	<i>Aucuba</i>	10 sp 6 var	2, 14	14, 1, 1
	<i>Benthamidia</i> = <i>Cornus</i>			
	<i>Bothrocaryum</i> = <i>Cornus</i>			
	<i>Chamaepericlymenum</i> = <i>Cornus</i>			
	<i>Cornus</i>	26 sp 7 subsp 4 vars	14, 23	22, 1, 4
	<i>Helwingia</i>	4 sp 4 var	3, 5	5, 0, 0
	<i>Mastixia</i>	3 sp 2 subsp	3, 2	2, 0, 0
	<i>Swida</i> = <i>Cornus</i>			
	<i>Toricellia</i>	2 sp	1, 1	1, 0, 0

Part II: Genera and Species

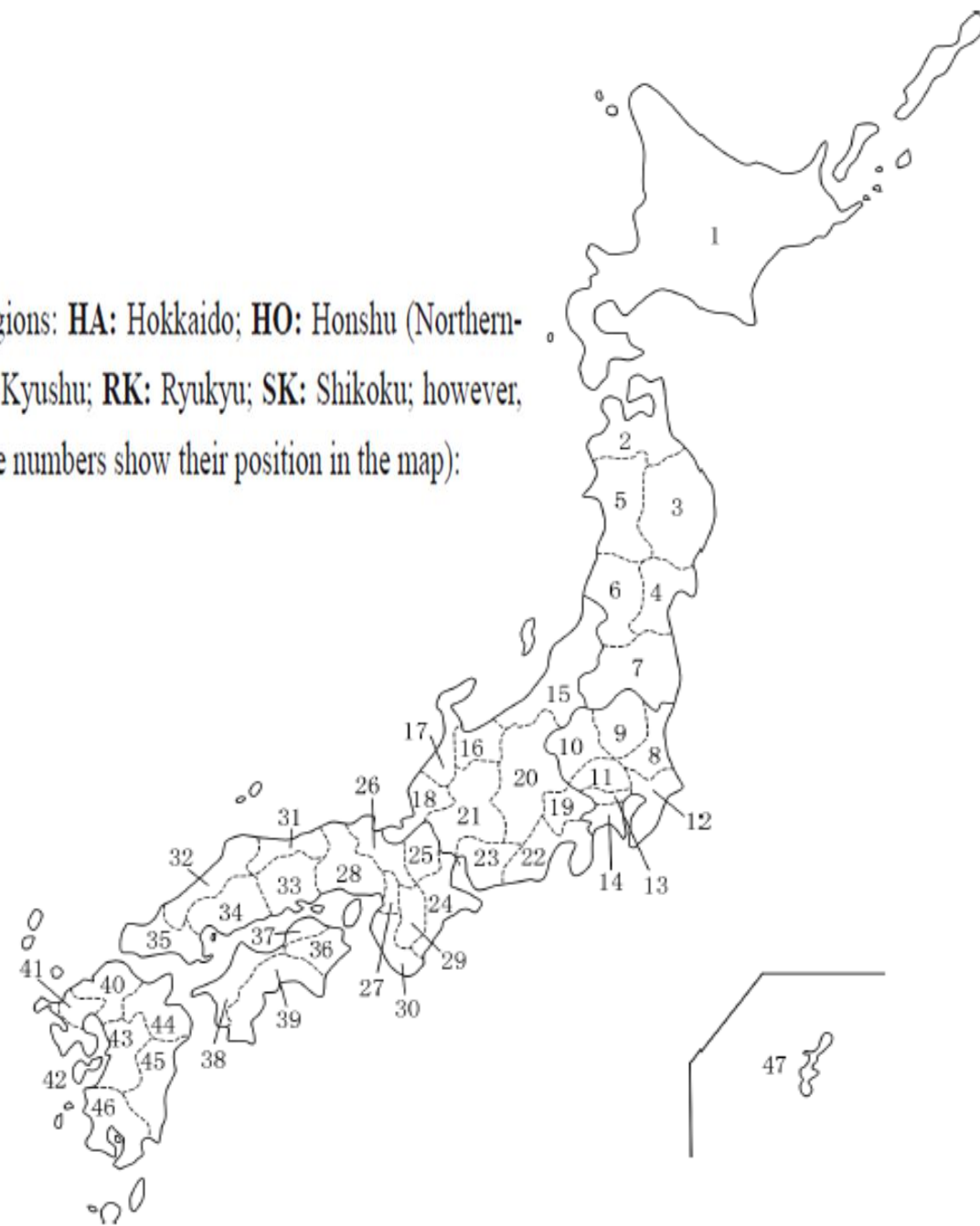
Genera (Family)	Helwingia (Cornaceae)
	<i>Helwingia chinensis</i> Batalin
Species A	1000~2600 m, China: s GS, GZ, w HB, HX, s SX, SC, YN; n Myanmar, Thailand
Elevation and distribution	<i>Helwingia chinensis</i> var. <i>crenata</i> (Lingelsheim ex Limpricht) W. P. Fang 1400~1900 m, China: se GS, GZ, s SX, SC, YN
Species B	<i>Helwingia himalaica</i> J. D. Hooker & Thomson ex C. B. Clarke (1000~)1700~3000 m, China: GD, GX, GZ, HB, HX, SC, XZ, YN; Bhutan, n & ne India, n Myanmar, Nepal, n Vietnam
Elevation and distribution	<i>Helwingia japonica</i> (Thunberg) F. Dietrich < 3000 m, China: AH, FJ, GD, GX, GZ, HY, HB, HX, JS, JX, SD, SJ, SC, TW, YN, ZJ; Japan: s HA, HO, KY, RK, SK; s Korea; Bhutan, n Myanmar
...	<i>Helwingia japonica</i> (Thunberg) F. Dietrich var. <i>hypoleuca</i> Hemsley ex Rehder 1200~2800 m, China: n GZ, w HB, s SX, SC, ne YN
Species Z	<i>Helwingia japonica</i> (Thunberg) F. Dietrich var. <i>papillosa</i> W. P. Fang & T. P. Soong 2100~3400 m, China: se GS, s SX, ne & sw SC
Elevation and distribution	<i>Helwingia japonica</i> (Thunberg) F. Dietrich var. <i>zhejiangensis</i> (W. P. Fang & T. P. Soong) M. B. Deng & Yong Zhang 100~2500 m, China: TW, ZJ
	<i>Helwingia omeiensis</i> (W. P. Fang) H. Hara & S. Kurosawa 600~1700 m, China: se GS, n GX, GZ, HB, HX, s SX, SC, YN

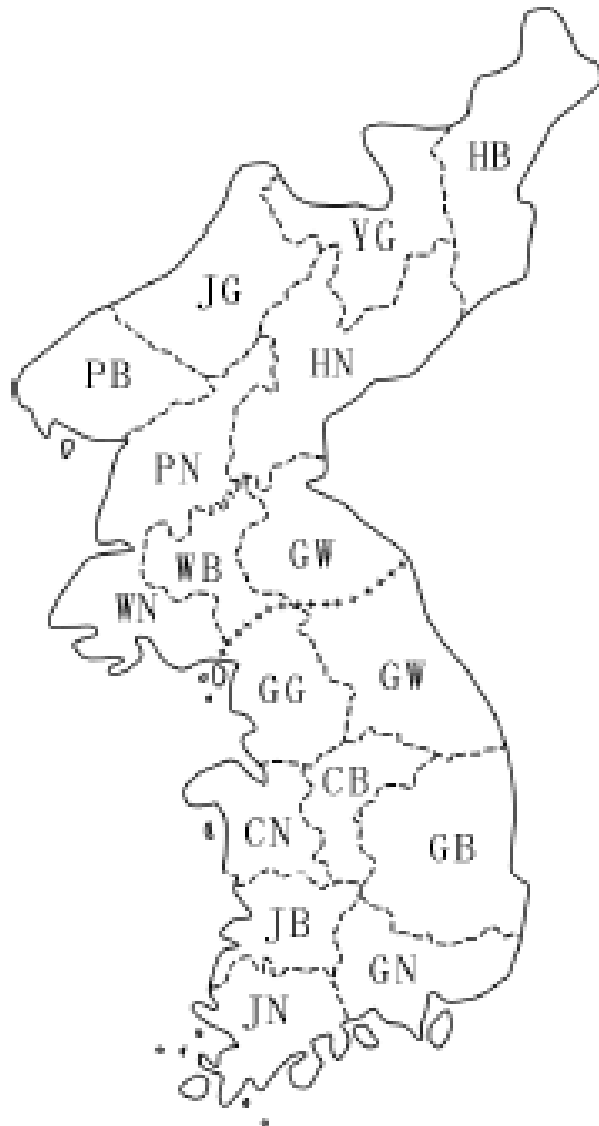


AH	Anhui	HL	Heilongjiang
BJ	Beijing	HY	Henan
CQ	Chongqing (i.e., former e SC)	HB	Hubei
FJ	Fujian	HX	Hunan
GS	Gansu	JS	Jiangsu
GD	Guangdong	JX	Jiangxi
GX	Guangxi	JL	Jilin
GZ	Guizhou	LN	Liaoning
HN	Hainan	MC	Macao
HJ	Hebei	NM	Nei Mongol
HK	Hong Kong	NX	Ningxia
SH	Shanghai	QH	Qinghai
SX	Shaanxi	TJ	Tianjin
SD	Shandong	XJ	Xinjiang
SJ	Shanxi	XZ	Xizang (Tibet)
SC	Sichuan	YN	Yunnan
TW	Taiwan	ZJ	Zhejiang



Japan is usually divided into following five regions: **HA**: Hokkaido; **HO**: Honshu (Northern-Tohoku, Western-Chugoku, and Central); **KY**: Kyushu; **RK**: Ryukyu; **SK**: Shikoku; however, further division into county are as following (the numbers show their position in the map):





North Korea (KP, Democratic People's Republic of Korea) are divided into following: GW: Kangwon (Gangwon-Do, Kangwon-do); HB: North Hamgyong (Hamgyong-Bukto, Hamgyong-pukto); HN: South Hamgyong (Hamgyong-Namdo, Hamgyong-namdo); JG: Chagang (Jagang-Do, Changang-do); PB: North Pyongan (Pyongan-Bukto, Pyongan-pukto); PN: South Pyongan (Pyongan-Namdo, Pyongan-namdo); WB: North Hwanghae (Hwanghae-Bukto, Hwanghae-pukto); YG: Yanggang (Yanggang-Do, Ryanggang-do); WN: South Hwanghae (Hwanghae-Namdo, Hwanghae-namdo).

South Korea (KR, Republic of Korea) are divided into following: CB: North Chungchong (Chungcheongbuk-Do, Chungcheongbuk); CN: South Chungchong (Chungcheongnam-Do, Chungcheongnam); GB: North Kyongsang (Gyeongsangbuk-Do, Gyeongsangbuk); GG: Kyonggi (Gyeonggi-Do, Gyeonggi); GW: Kangwon (Gangwon-Do, Gangwon); JB: North Cholla (Jeollabuk-Do, Joellabuk); JJ: Cheju (Jeju-Do, Jeju); JN: South Cholla (Jeollanam-Do, Jeollanam); GN: South Kyongsang (Gyeongsangnam-Do, Gyeongsangnam).

Gymnosperms	11 f.	38 g.	224 sp.	74 subsp & var.
Angiosperms	141 f.	1226 g.	11661 sp.	1720 subsp & var.
Total	152 f.	1264 g.	11885 sp.	1794 subsp & var.

Widely distributed 4940 36.1%

Endemic distributed 8739 63.9%

China: 8110 (92.8%) --- Japan: 857 (9.8%) --- 337 (3.9%)

Most difficult taxa – few examples

Symplocos (Symplocaceae)

FOC: 42 species (18 endemic) in China.

FOJ: 23 species (12 endemic) in Japan

Bambusoideae (Poaceae / Gramineae)

Many genera are different each other

Much work to be considered

Major issues

Concept of taxa (splitter or lumpers)

Taxa: Large or small, combine or separate?

Still long way to reach agreement from the taxonomic treatment!

Further Consideration

Mongolia and Russian Far East

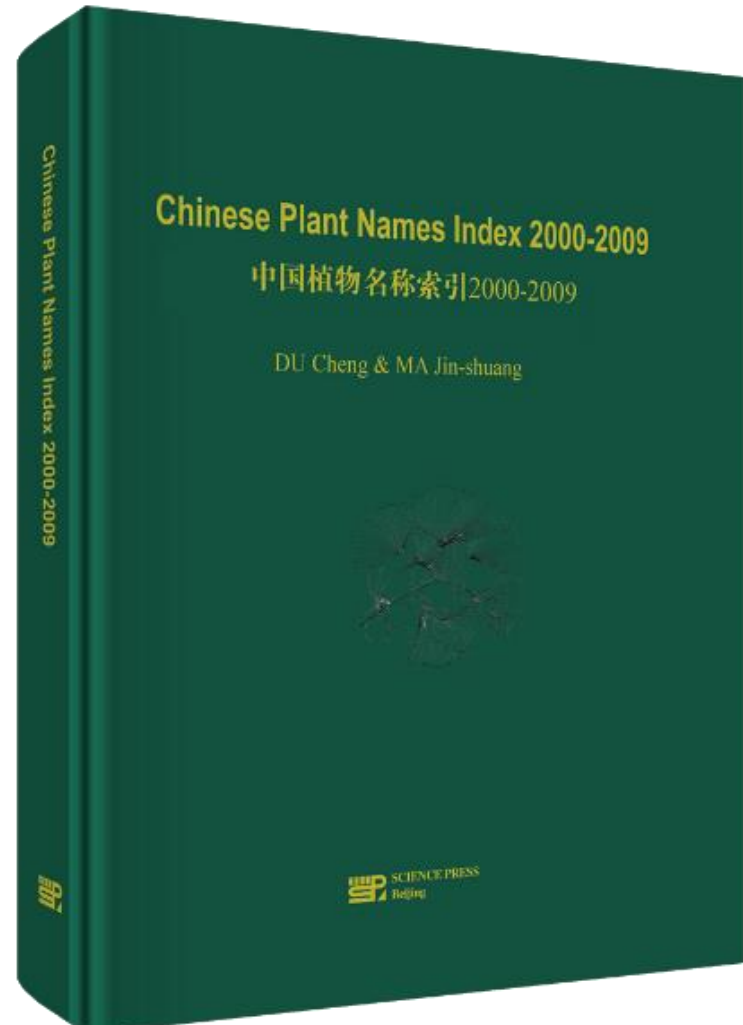
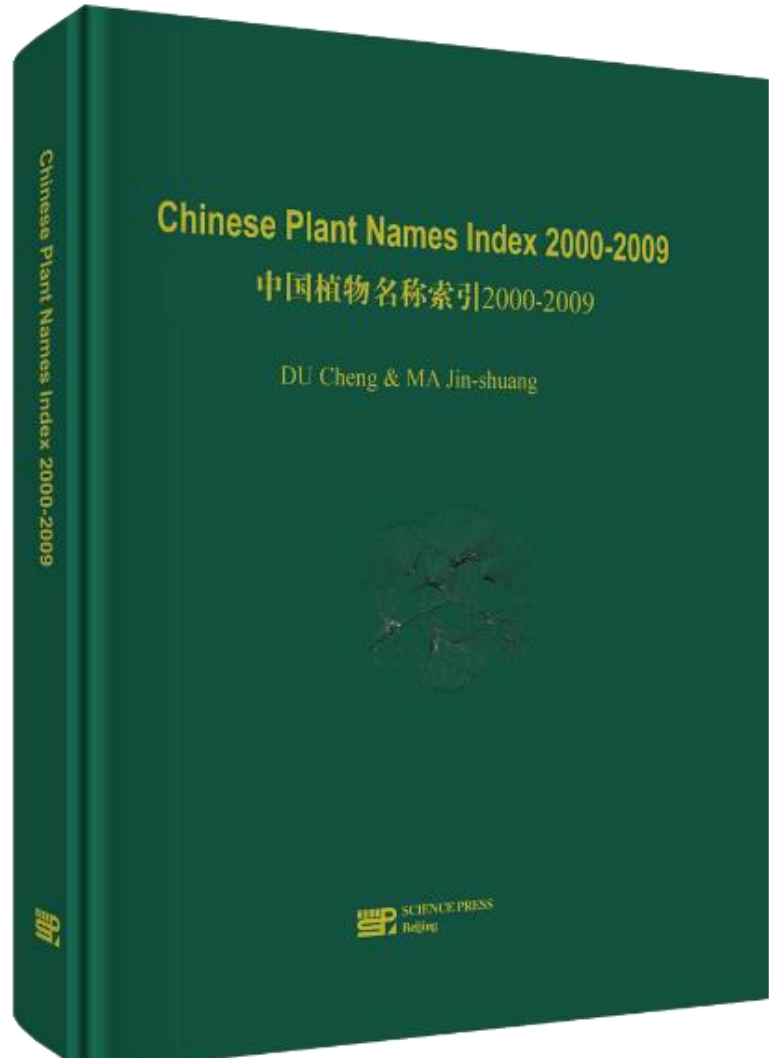
Updated different taxa

Detail Data

Cooperation are badly needed from different countries

Particularly on those difficult or problematic taxa!

Chinese Plant Names Index 2000~2009 2010~2017



CPNI 2000-2017

Total : 10850

sources: 182 journals, 3466 papers;
138 books, 2400 pages;

Taxa: 5 families; 137 genera; 3152 species;
61 subspecies; 462 varieties; 142个新变型;

Names : 3313 combination; 283 new names;
2219 synonyms;

Records: 582 Nation wide

Main References

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Thanks for your attention!

Any comments, questions and suggestions?