Report

Flora of the lucidophyllous forest in Japan

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Abstract

The lucidophyllous forest in Japan is a climatic climax in the warm-temperate and subtropical zones from the Ryukyus to the southern part of the Tohoku district. The lucidophyllous forest itself and its component species are in a critical condition. Floristic investigation of the lucidophyllous forest throughout Japan was conducted. This investigation resulted in a list of the lucidophyllous forest flora in each prefecture which contains scientific name, Japanese name, life form and RDB categories. The flora of the lucidophyllous forest throughout Japan consists of 1,008 species (incl. subspecies and varieties). About 30 percent of the total number of component species are endangered.

Key words: endangered species, flora, life form, lucidophyllous forest, RDB

Introduction

The warm-temperate and subtropical zones were covered by lucidophyllous forest which was called laurel forest, oak-laurel forest, evergreen broad leaf forest, subtropical rain forest, temperate rain forest or laurisilvae (Hattori, 1985). Today, most of these zones are covered with substitute vegetation due to human activities. The lucidophyllous natural forests remain only as fragmented forests mainly in sanctuaries around shrines, secluded mountainous districts and isolated islands.

Not only the lucidophyllous fragmented forests but also the component species of the lucidophyllous forest are in a critical condition due to the influence of various human activities. A list of lucidophyllous forest flora using the Red Data Book (RDB) categories of Kyushu and northward was reported (Hattori and Minamiyama, 2001). However, the flora of the lucidophyllous forest throughout the whole of Japan has not been compiled. In this paper, we present a list of component species of the lucidophyllous forest in Japan using the RDB categories.

Methods

Definition of component species of lucidophyllous forest

The component species of the lucidophyllous forest are defined by the following criteria according to Hattori and Minamiyama (2001): (1) lucidophyllous (evergreen broad leaf) trees, shrubs and climbers which compose lucidophyllous forest structure (Most of these plants are recognized as being characteristic or differential species of the phytosociological vegetation units belonging to the class, Camellietea japonicae) (e.g. *Camellia japonica, Aucuba japonica, Castanopsis cuspidata, Persea thunbergii, Quercus acuta, Quercus gilva, Quercus salicina, Podocarpus macrophyllus* and *Distylium racemosum*); (2)

characteristic or differential herbaceous species of those vegetation units (e.g. *Arachniodes aristata, Liriope platyphylla* and *Dryopteris erythrosora*); (3) rare species whose occurrence are mostly limited to the mature phase of the lucidophyllous forest (These species are not designated as characteristic or differential species of those vegetation units owing to their rare occurrence) (e.g. *Sciaphila japonica, Burmannia itoana, Cymbidium nipponicum* and *Balanophora japonica*); (4) widely distributed species whose original habitats are considered to be on the lucidophyllous forest floor (e.g. *Calanthe discolor, Cymbidium goeringii, Goodyera schlechtendaliana* and *Heterotropa takaoi*); (5) epiphitic rare species growing well on large lucidophyllous trees in the lucidophyllous forest (Epiphitic common species like *Lepisorus thunbergianus* and *Lemmaphyllum microphyllum* are recognized as being characteristic or differential species of those vegetation units) (e.g. *Neofinetia falcata, Dendrobium moniliforme* and *Bulbophyllum drymoglossum*).

The intolerant and pioneer plants occurring concentrically in the gap phase of the lucidophyllous forest are excluded from those component species.

Selection of the component species

For the selection of the component species, many phytosociological papers (Yamanaka, 1979; Miyawaki ed., 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1989; Miyawaki et al., eds., 1994; Hattori and Nakanishi, 1983; Hattori, 1985; Suzuki and Suzuki, 1973; Itow and Nakanishi, 1994) and the illustrated book of Japanese flora (e.g. Satake et al., eds., 1981, 1982a, 1982b, 1989a, 1989b; Iwatsuki ed., 1992) were referred to.

Prefectural distribution of the component species

Distribution of the component species of the lucidophyllous forest in each undermentioned prefecture was checked by consulting the available lists of local flora (Hatsushima, 1975; Shimabukuro, 1997; Hattori and Minamiyama, 2001), distribution maps (Kurata and Nakaike eds., 1979, 1981, 1983, 1985, 1987, 1990; Horikawa, 1972, 1976) and phytosociological papers (Yamanaka, 1979; Miyawaki ed., 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1989; Miyawaki et al., eds., 1994; Hattori and Nakanishi, 1983; Hattori, 1985). From Okinawa to Akita and Iwate, 33 prefectures, which were important districts in regard to the distribution of the lucidophyllous forest, were selected for the compilation. These prefectures are shown in Figure 1.

Classification by life form and taxonomical group

The component species were classified into 11 categories (tree (above 15m height), semi-large tree (15–6m), small tree (below 6m), evergreen climber, summergreen climber, perenial evergreen herb, perenial deciduous herb, annual plant, epiphyte, saprophyte and parasite) by life form and into 6 categories (fern, orchid, palm, gymnosperm, Heterotropa and others) by taxonomical division (Hattori and Minamiyama, 2001). By the combination of those life forms and taxonomical division, 24 categories were recognized. These categories are shown in Appendix 1.

RDB categories

In 2000, the Environment Agency published "Threatened Wildlife of Japan—Red Data Book 2nd ed.—vol. 8". Following Environment Agency (ed.) (2000), 33 prefectures (Figure 1) have published the Red Data Books (Hiroshima Pref. ed., 1995; Red Data Res. Gr. Kanagawa ed., 1995; Okinawa Pref. ed., 1996; Shimane Pref. ed., 1997; Comm. Inv. Rare Wildlife Kumamoto Pref. ed., 1998; Tokyo Pref. ed., 1998; Saitama Pref. ed., 1998; Kochi Pref. ed., 1999; Chiba Pref. ed., 1999; Comm. Conserv. Rare Wildlife Ibaraki Pref. ed., 1999; Ishikawa Pref. ed., 1999; Comm. Red Data Book Miyazaki, 2000; Osaka Pref. ed., 2000; Fukuoka Pref. ed., 2001; Comm. Sci. Inv. Nat. Env. Oita Pref. ed., 2001; Aichi Pref. ed., 2001; Comm. Inv. Red Data Wildlife Tokushima Pref., 2001; Iwate Pref. ed., 2001; Mie Pref. Mus., 2001; Miyagi Pref. ed., 2001; Niigata Pref. ed., 2001; Wakayama Pref. ed., 2001; Nagano Pref. ed., 2002; Akita Pref. ed., 2002; Kyoto Pref. ed., 2002; Tottori Pref. ed., 2002; Toyama Pref. ed., 2002; Comm. Inv. Precious Wildlife Ehime Pref. ed., 2003; Hyogo Pref. ed., 2003; Kagoshima Pref. ed., 2003; Okayama Pref. ed., 2003; Shizuoka Pref. ed., 2003; Yamaguchi Pref. ed., 2003). In Environment Agency (ed.) (2000), species were classified into 7 categories (EX: extinct, EW: extinct in the wild, CR: critically endangered, EN: endangered, VU: vulnerable, NT: near threatened, DD: data deficient). In the prefectural Red Data Books, categories are not standardized. Accordingly, in this paper categories were arranged mainly by the criteria of Environment Agency (ed.) (2000). Categories used herein are EX (extinct), DD (data deficient), A (critically endangered), B (endangered or endangered next to A), C (vulnerable

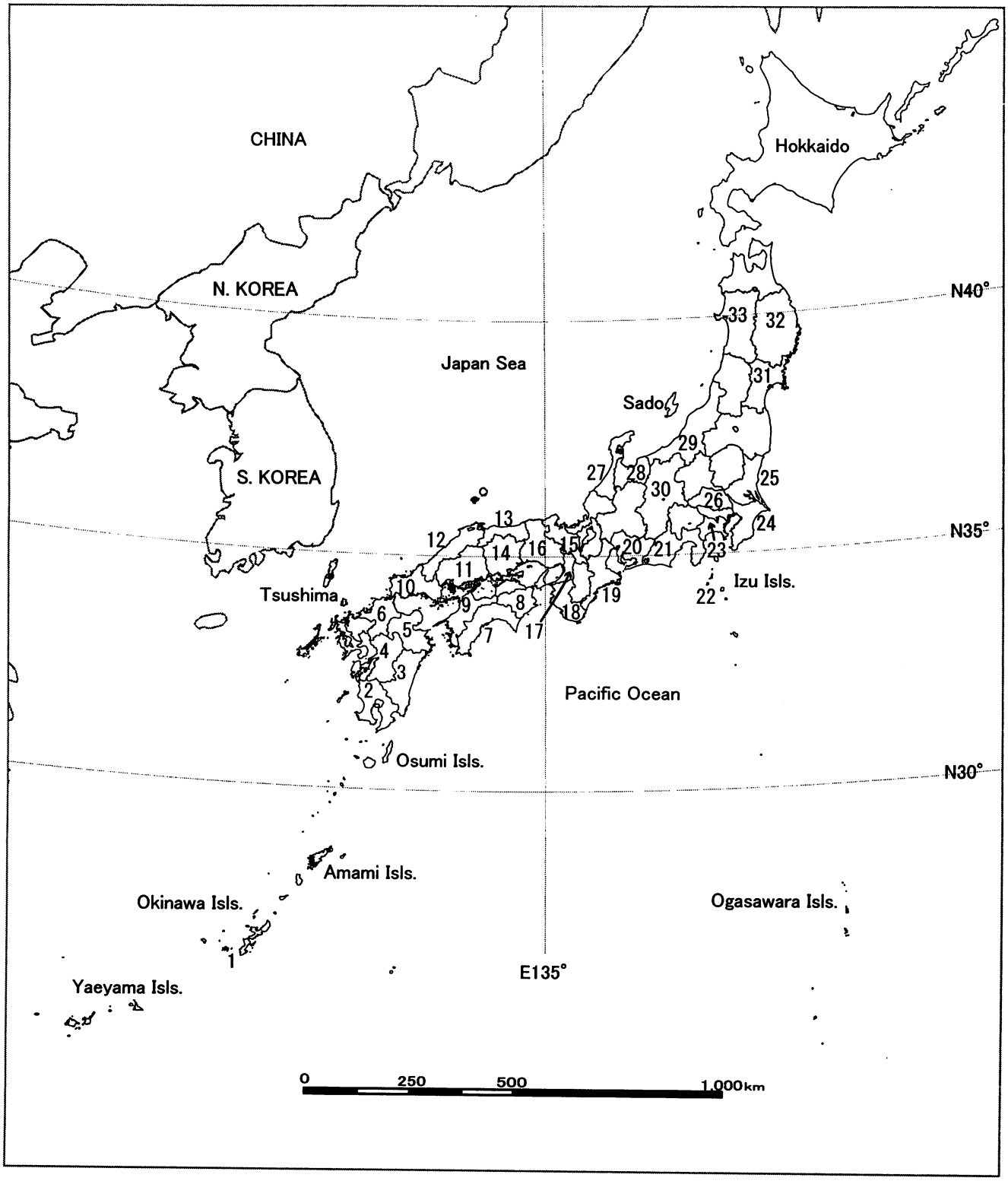

Figure 1. Location of 33 prefectures investigated.
Numberals on the map correspond to the numbers in Appendix 1.
Locality (Prefecture), 1: Okinawa, 2: Kagoshima (except for Yakushima, Tanegashima, Amamioshima and Tokunoshima), 3: Miyazaki, 4: Kumamoto, 5: Oita, 6: Fukuoka, 7: Kochi, 8: Tokushima, 9: Ehime, 10: Yamaguchi, 11: Hiroshima, 12: Shimane, 13: Tottori, 14: Okayama, 15: Kyoto, 16: Hyogo, 17: Osaka, 18: Wakayama, 19: Mie, 20: Aichi, 21: Shizuoka, 22: Tokyo (Izu Island), 23: Kanagawa, 24: Chiba, 25: Ibaraki, 26: Saitama, 27: Ishikawa, 28: Toyama, 29: Niigata, 30: Nagano, 31: Miyagi, 32: Iwate, 33: Akita.

or endangered next to B), D (near threatened or endangered next to C) and + (commonly present).

Scientific name

Scientific names were based on Satake et al. (eds.) (1981, 1982a, b, 1989a, b) and Iwatsuki (ed.) (1992).

Results

According to this floristic investigation, it has become clear that the flora of the lucidophyllous forest throughout Japan consists of 1,008 species (incl. subspecies and varieties) (Appendix 1). About 30 percent of the total number of component species are endangered.

Acknowledgements

We thank Ms. Rie Hasegawa for her help in the laboratory work of this study. This study was supported in part by a Grant-in-Aid for Scientific Research (C) (2) from the Japan Society for the Promotion of Science (No. 13680649).

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Received: August 12, 2003
Accepted: November 26, 2003

Appendix

Appendix 1-1. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Abies firma	Momi	T-N		+	+	+	+	+	+	+	+	+
Acanthophippium pictum	Enreishokiran	Pe-O	B									
Acanthophippium striatum	Taiwanaoiran	Pe-O	A									
Acanthophippium sylhetense	Taiwanshokiran	Pe-O	B									
Acer oblongum subsp. *itoanum*	Kusunohakaede	T	+									
Actinidia rufa	Shimasarunashi	C-Su	+	C	+	+	+	+	+	+	+	+
Actinodaphne lancifolia	Kagonoki	T	+	+	+	+	+	+	+	+	+	+
Actinodaphne longifolia	Baribarinoki	St	+	+	+	+	+	+	+	+	+	+
Adiandra ryukyuensis	Ryukyunagaesakaki	St	+									
Adiandra yaeyamensis	Kenagaesakaki	St	+									
Adiantum diaphanum	Sukiyakujaku	Pe-F	A									
Adiantum flabellulatum	Okinawakujaku	Pe-F	+			A						
Adina pilulifera	Taniwatarinoki	S		+	+	+	+					
Aglaomorpha coronans	Kazarishida	Ep-F	A									
Ainsliaea fragrans var. *integrifolia*	Marubateishoso	Pe-Su		A	D	+						
Alocasia atropurpurea	Yaeyamakuwazuimo	Pe	DD									
Alocasia cucullata	Shimakuwazuimo	Pe	+									
Alocasia odora	Kuwazuimo	Pe	+	+	C	+			C			
Alpinia bilamellata	Chikurinka	Pe										
Alpinia boninensis	Shimakumatakeran	Pe										
Alpinia flabellata	Iriomotekumatakeran	Pe	C									
Alpinia formosana	Kumatakeran	Pe	+	+								
Alpinia intermedia	Aonokumatakeran	Pe	+	+	+	+	B		+	A	B	
Alpinia japonica	Hanamyoga	Pe	+	+	+	+	+	+	+	+	+	+
Alpinia nakaiana	Ioukumatakeran	Pe										
Alpinia speciosa	Getto	Pe	+	+								
Amorphophalus hirtus var. *kiusianus*	Yamakonnyaku	Pe-Su	A	B					EX			
Angiopteris fokiensis	Hinotaniryubintai	Pe-F		B	A	+						
Angiopteris lygodiifolia	Ryubintai	Pe-F	+	+	+	+	A		A	A		
Angiopteris palmiformis	Hosobaryubintai	Pe-F	+									
Anodendron affine	Sakakikazura	C	+	+	+	+	+	+	+	+	+	+
Anoectochilus formosanus	Kibanashusuran	Pe-O	A									
Anoectochilus koshunensis	Koshunshusuran	Pe-O	A									
Antidesma japonicum	Yamahihatsu	S	+	+	D	+		+	+			
Antidesma pentandrum var. *barbatum*	Kotoyamahihatsu	S	+									
Antrophyum formosanum	Shimatakimishida	Pe-F	A									
Antrophyum obovatum	Takimishida	Ep-F		A	A	A		EX	A	A	A	A
Aphyllorchis montana	Tanegashimamuyoran	Sa-O	C	B								
Apostasia nipponica	Yakushimaran	Pe-O		A	B							
Arachniodes amabilis var. *amabilis*	Yakukanawarabi	Pe-F	+	C	+	+	+	+	DD	A	+	
Arachniodes amabilis var. *fimbriata*	Kanawarabi	Pe-F	+	+	+	+	+	+	+	+	+	+
Arachniodes amabilis var. *okinawensis*	Okinawakanawarabi	Pe-F	+									
Arachniodes aristata	Hosobakanawarabi	Pe-F	+	+	+	+	+	+	+	+	+	+
Arachniodes assamica	Otokoshida	Pe-F		C	+	+	A	B	A	B	A	+
Arachniodes cavalerii	Yakushimakanawarabi	Pe-F										
Arachniodes chinensis	Tsurudakanawarabi	Pe-F		A		+			+			
Arachniodes dlimorphophylla	Hozakikanawarabi	Pe-F	+									
Arachniodes hekiana	Shibikanawarabi	Pe-F		A			DD					
Arachniodes hiugana	Hyugakanawarabi	Pe-F			A							
Arachniodes miqueliana	Nangokunaraishida	Pe-F		C	+	+	+	+	+	+	+	+
Arachniodes nipponica	Midorikanawarabi	Pe-F		C	+	+	+	+	+	+	D	+
Arachniodes simplicior	Hakatashida	Pe-F		+	+	+	+	+	+	+	+	+
Arachniodes simplicior var. *major*	Onikanawarabi	Pe-F		+	+	+	+	+	+	+	+	+
Arachniodes sp.	Kobayashikanawarabi	Pe-F			A							
Arachniodes sporadosora	Kobanokanawarabi	Pe-F	+	+	+	+	+	+	+	+	+	+
Arachniodes yasu-inouei	Hagakurekanawarabi	Pe-F		+	+	+	DD	A	+	A	DD	B
Archidendron lucidum	Akahadanoki	St	+									
Ardisia chinensis	Shinayabukoji	S										
Ardisia crenata	Manryo	S	+	+	+	+	+	+	+	+	+	+
Ardisia crispa	Karatachibana	S	B	+	+	+	+	+	B	A	+	+
Ardisia japonica	Yabukoji	S	B	+	+	+	+	+	+	+	+	+
Ardisia pusilla	Tsurukoji	S	+	+	+	+	+	+	+	+	+	+
Ardisia quinquegona	Shishiakuchi	S	+		A							
Ardisia sieboldii	Mokutachibana	St	+	+	+	+	+		D	+		
Arenga engleri	Kurotsugu	S-P	+									
Argostemma solaniflorum	Iriomoteso	A	+									
Arisaema heterocephalum	Amamitennansho	Pe-Su										
Arisaema heterocephalum subsp. *okinawaense*	Okinawatennansho	Pe-Su	B									
Arisaema japonicum	Mamushigusa	Pe-Su		+	+	+	+	+	+	+	+	+
Arisaema kishidae	Kishidamamushigusa	Pe-Su										
Arisaema kiushianum	Himeurashimaso	Pe-Su		C	+	+	+	+				+
Arisaema maximowiczii	Tsukushimamushigusa	Pe-Su		C	D		+	+				
Arisaema minamitanii	Hyugahirohatennansho	Pe-Su		A	A							

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
+	+	+	+	+	+	+	+	+	+	+		+	D	+	+	+	+		+	+	D		
																							B
																							A
																							A
																							C
	+				A		C	B			B												
+	+	+	+	+	+	+	+	+	+	+		+	D	C		A			EX				
	+						+	+	D	D	+	+	C										
																							A
																							B
																							A
																							B
							C	DD		+	+												
	+	+			+	+	+	+	+	+	C	+	+										
																							C
																							A
							B	A		D	B												
+	C				C	C	+	+	+	+	B		C										
																							B
							+																A
																							A
A	B	A			A		A	DD	A	C		A	A			A	EX	A					B
																							C
								B		D													C
+	+	+	C	+	+	+	+	+	+	+	+	+	+	+	A				B				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	A	C		D					
							B	B		B		A											
								B															C
																							B
																							A
																							A
+	+	+	+	+	+	+	+	+	+	+		+	C	+	+		+			D		B	
+			DD	EX			C	DD	+	+	A	B	A										
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	C	+	A	+	A		B	
+	+	+	+	+	+	+	+	+	+	+		+	+	+	B	+	+	B	+	C		B	
																							A
+	+	+		D	+	+	+	+	+	+	+	+	+										
							+	B															
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	A		+				
+	+	+	D	A	+	+	C	B	+	+		+	D	+		C	+	B	A				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			+		C	+	+	+	+	+	C		D										
																							C
+		+	+	+	+	+	+	+	+	+	+				+	+	+	+	+	+	+	+	A
					+	+	+		+														
								+															A

Appendix 1-2. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Arisaema minus	Harimamamushigusa	Pe-Su										
Arisaema negishii	Shimatennansho	Pe-Su										
Arisaema ringens	Musashiabumi	Pe-Su	+	+	+	+	+	+	+	+	+	+
Arisaema sazensoo	Kirishimatennansho	Pe-Su		+	+							
Arisaema sikokianum	Yukimochiso	Pe-Su				+		+	C	C	C	
Arisaema thunbergii	Nangokuurashimaso	Pe-Su		+	+	+	D	+	B	B	D	+
Arisaema tosaense	Aotennansho	Pe-Su					+		+	+		+
Arisaema undulatifolium	Higanmamushigusa	Pe-Su							+	+	+	
Arisaema undulatifolium var. *ionostemma*	Mimigatatennansho	Pe-Su							+	+	+	
Arisaema yamatense	Murotennansho	Pe-Su										
Arthropteris palisotii	Warabitsunagi	Ep-F	A									
Asarum leptophyllum	Onagasaishin	Pe-H	A									
Asplenium antiquum	Ootaniwatari	Ep-F	B	B	B	+		B	EX	EX		
Asplenium apogamum	Taiwanhobishida	Pe-F	C									
Asplenium australasicum	Ryukyutorinosushida	Ep-F	+									
Asplenium cataractarum	Nangokuhobishida	Pe-F	+	+	+	+	+		+	+		
Asplenium cheilosorum	Usubakujaku	Pe-F	B									
Asplenium ensiforme	Hokogatashida	Ep-F			A							
Asplenium excisum	Rahaoshida	Pe-F	B									
Asplenium hondoense	Hobishida	Pe-F	+	+	+	+	+	+	+	A		D
Asplenium laserpitiifolium	Ootokiwashida	Pe-F	+									
Asplenium loriceum	Makinoshida	Pe-F	B									
Asplenium micantifrons	Nankaishida	Ep-F										
Asplenium nidus	Shimaootaniwatari	Ep-F	+									
Asplenium normale	Nuritoranoo	Pe-F	+	+	+	+	+	+	+	+	C	+
Asplenium oligophlebium	Kamigamoshida	Pe-F	A	C			B	B	A		B	C
Asplenium polyodon	Muninshida	Pe-F										
Asplenium prolongatum	Hinokishida	Ep-F		+	+	+	A	C	C	A		
Asplenium ritoense	Kozakishida	Ep-F	C	+	+	+	+	+	+	+	+	B
Asplenium tenerum	Otomeshida	Pe-F	A									A
Asplenium trigonopterum	Oobahinokishida	Pe-F										
Asplenium wilfordii	Aoganeshida	Ep-F	A	+	+	+	+	+	+	+	+	+
Asplenium wrightii	Kurumashida	Pe-F	B	+	+	+	+	+	+	+		+
Athyrium kenzo-satakei	Shibiinuwarabi	Pe-F		A								
Athyrium kuratae	Tsukushiinuwarabi	Pe-F					C					
Athyrium otophorum	Taniinuwarabi	Pe-F		C	+	+	+	+	+	+	+	+
Athyrium sheareri	Uraboshinokogirishida	Pe-F		+	+	+	+	+	+	+	+	+
Athyrium silvicola	Takasagoinuwarabi	Pe-F		+	+							
Athyrium subrigescens	Horaiinuwarabi	Pe-F		B				A				
Athyrium viridescentipes	Aogukiinuwarabi	Pe-F		C	EX	+		A				
Athyrium yakusimense	Yakushimataniinuwarabi	Pe-F										
Aucuba japonica	Aoki	S	B	+	+	+	+	+	+	+	+	+
Balanophora japonica	Tsuchitorimochi	Pa	+	C	+	+	B		+	B	B	
Balanophora kuroiwai	Ryukyutsuchitorimochi	Pa	B									
Balanophora tobiracola	Kiiretsuchitorimochi	Pa	+	C	D							
Balanophora yakushimensis	Yakushimatsuchitorimochi	Pa										
Bauhinia japonica	Hakamakazura	C	+	C	C	+	B		A		B	
Begonia fenicis	Kotoshukaido	Pe	B									
Begonia laciniata	Maruyamashukaido	Pe	+									
Beilschmiedia erythrophloia	Akahadakusunoki	T	+									
Bischofia javanica	Akagi	T	+									
Blastus cochinchinensis	Miyamahashikanboku	S	DD									
Blechnum orientale	Hiryushida	Pe-F	+									
Bolbitis appendiculata	Okinawakijinoo	Pe-F	+									
Bolbitis heteroclita	Oohetsukashida	Pe-F	+									
Bolbitis quoyana	Muninhetsukashida	Pe-F										
Bolbitis subcordata	Hekkashida	Pe-F	+	+	A	+						
Boninia glabra	Shirotetsu	S										
Boninia grisea	Oobashirotetsu	St										
Botrychium atrovirens	Shichitohanawarabi	Pe-F										
Botrychium formosanum	Horaihanawarabi	Pe-F	A	C								
Botrychium japonicum	Oohanawarabi	Pe-F		C	+	+	+	+	+	+	+	+
Botrychium triangularifolium	Midorihanawarabi	Pe-F										
Breynia formosana	Taiwanhimekobannoki	S	B									
Breynia officinalis	Ooshimakobannoki	S	+									
Bridelia balansae	Maruyamakankonoki	St	+									
Bulbophyllum affine	Kusukusuran	Ep-O	B									
Bulbophyllum boninensis	Ogasawarashikoran	Ep-O										
Bulbophyllum drymoglossum	Mamezutaran	Ep-O	C	B	D	+	C	C	D	B	+	A
Bulbophyllum inconspicuum	Mugiran	Ep-O		B	D	+	C	B	C	A	+	C
Bulbophyllum japonicum	Miyamamugiran	Ep-O		B	+	+	+		+	A	DD	
Bulbophyllum macraei	Shikoran	Ep-O	B									
Bulbophyllum macraei var. *tanegashimense*	Tanegashimashikoran	Ep-O										

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
					A																		B
											C												
+	+	C	C	B	B	+	+	+						B									
			+	EX	A		A	A											+				C
+	+	B			B	+	C	+															
+			+	A	+																		
+				+	+	+	+	+	+	+			+										
					A					C	C	+	D	+	+				+	+	C		
			B		+	+	+	+	+		C												
																							A
																							A
							A	A			A												B
								+			+												
																							A
																							C
	C			A		B		DD	C	+	C	+	C			A							
																							B
																							C
																							C
+	+	B	B	D	A	+	+	+	+	+	+	A		B					B				
+	+	C	B	C	+		A	A	A	B								+	+				
							+	B	C	C	B				DD								
+					C		+	DD	+	+	+		C										
																							A
											+												
+			B	A	A	+	+	+	+	+	B	EX			DD								
B	C			B	A	+	+	+	+	+	C	A											
																							A
											+												
+	+	+	+	+	+	+	+	+	+	+		A	A			+	+	B					
+	+	+	+	+	+	+	+	+	+	+	+		B			+	+	B					
							+	EX															
																							B
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		DD	
B							B	DD															
+																							
							B																
																							C
																							C
											+												
											C												
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	+		B	
											B												
																							A
																							A
+	+		B	B	B	A	C	A		D	B		B	B					A				B
+		A	B	B	+	A	C	DD		D	B	B	B	B	B	A	A		C	A			C
						A	C	A		D	B												
																							B
																							A

Appendix 1-3. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Burmannia championii	Hinanoshakujo	Sa	B	C	B	+	A	DD	B	A	C	A
Burmannia cryptopetala	Shiroshakujo	Sa	B	C	A	+	A	+	A	A	A	
Burmannia itoana	Rurishakujo	Sa	B	A								
Burmannia liukiuensis	Kirishimashakujo	Sa	DD	A	C	+	A		EX		A	
Caesalpinia bonduc	Shirotsubu	C	+									
Caesalpinia crista	Nantenkazura	C	+									
Caesalpinia globulorum	Hasunomikazura	C	+									
Calanthe aristulifera	Kirishimaebine	Pe-O		A	B	A	DD	EX	A	A	A	A
Calanthe aristulifera var. *amamianus*	Amamiebine	Pe-O										
Calanthe bungoana	Taganeran	Pe-O					A					
Calanthe densiflora	Tamazakiebine	Pe-O	A									
Calanthe discolor	Ebine	Pe-O		B	C	B	B	C	A	B	C	D
Calanthe discolor var. *divaricatipetala*	Hanojiebine	Pe-O										
Calanthe discolor var. *kanashiroi*	Katsudakeebine	Pe-O	A									
Calanthe fauriei	Darumaebine	Pe-O	A	A	A							
Calanthe formosana	Taiwanebine	Pe-O	B									
Calanthe furcata	Tsururan	Pe-O	B	B	+	+						
Calanthe furcata var. *rubicallosa*	Akaboshitsururan	Pe-O	+									
Calanthe gracilis	Tokusaran	Pe-O	+	B								
Calanthe hattorii	Asahiebine	Pe-O										
Calanthe izu-insularis	Ookirishimaebine	Pe-O										
Calanthe lyroglossa	Rengyoebine	Pe-O	B									
Calanthe masuca	Onagaebine	Pe-O	B									
Calanthe oblanceolata	Sakurajimaebine	Pe-O		A								
Calanthe sieboldii	Kiebine	Pe-O	DD	B	B	A	A	A	A	A	B	D
Calanthe tokunoshimensis	Tokunoshimaebine	Pe-O										
Camellia japonica	Yabutsubaki	St	+	+	+	+	+	+	+	+	+	+
Camellia lutchuensis	Himesazanka	St	+									
Camellia sasanqua	Sazanka	St	+	+	+	+	+	C	+	A		+
Captospapelta diffusa	Hyotankazura	C	+									
Carex alliiformis	Ryukyusuge	Pe	+	C								
Carex arisanensis	Arisantamatsurisuge	Pe	B									
Carex autumnalis	Oonakirisuge	Pe							C	A	B	
Carex clivorum	Yamaooitosuge	Pe										
Carex collifera	Ryukyuhiesuge	Pe	B									
Carex conica	Himekansuge	Pe		+	+	+	+	+	+	+	+	+
Carex duvaliana	Kesuge	Pe				+		+	+	+		+
Carex lenta	Nakirisuge	Pe		+	+	+	+	+	+	+	+	+
Carex lenta var. *sendaica*	Sendaisuge	Pe					C		B	B		C
Carex maculata var. *tetsuoi*	Ryukyutachisuge	Pe	B									
Carex matsumurae	Kinokunisuge	Pe		A	C	+	C	D	C	B	DD	C
Carex morrowii	Kansuge	Pe		A	+	+	+	+	+	+	+	+
Carex nachiana	Kishunakiri	Pe		B	A		B	A	B	A	+	A
Carex oshimensis	Ooshimakansuge	Pe										
Carex pachygyna	Sasanohasuge	Pe							A	B	+	+
Carex pisiformis	Honmonjisuge	Pe										
Carex reinii	Kokansuge	Pe				+			+	+	+	+
Carex sacrosancta	Jingusuge	Pe		B	DD	+	B	A	B	A	DD	A
Carex stenostachys	Nishinohonmonjisuge	Pe									+	+
Castanopsis cuspidata	Kojii	T		+	+	+	+	+	+	+	+	+
Castanopsis cuspidata var. *sieboldii*	Sudajii	T	+	+	+	+	+	+	+	+	+	+
Ceniostoma glabrum	Ogasawaramokureishi	S										
Cephalomanes apiifolium	Kikumobahoragoke	Ep-F	A									
Cephalomanes atrovirens	Sakishimahoragoke	Pe-F	C									
Cephalomanes boninense	Hahajimahoragoke	Ep-F										
Cephalomanes javanicum var. *aspleniodes*	Sotetsuhoragoke	Pe-F	+									
Cephalomanes obscurum	Onihoragoke	Pe-F	+									
Cephalomanes obscurum var. *siamene*	Nanbanhoragoke	Pe-F	B									
Cephalomanes thysanostomum	Kanshinobuhoragoke	Ep-F	+									
Cephalotaxus harringtonia	Inugaya	St-N		C	+	+	+	+	+	+	+	+
Cheiropleuria bicuspis	Sujihitotsuba	Pe-F	+	+	+	+			B	A	DD	
Cheirostylis liukiuensis	Akabashusuran	Pe-O	B		A							
Cheirostylis takeoi	Arisanmuyoran	Pe-O	B									
Cibotium barometz	Takawarabi	Pe-F	+									
Cinnamomum camphora	Kusunoki	T		+	+	+	+	+	+	+	+	+
Cinnamomum daphnoides	Marubanikkei	S	C	+				C				
Cinnamomum doederleinii	Shibanikkei	St	+									
Cinnamomum japonicum	Yabunikkei	T	+	+	+	+	+	+	+	+	+	+
Cinnamomum okinawense	Nikkei	T	+									
Cinnamomum pseudo-pedunculatum	Koyabunikkei	St										
Citrus depressa	Hiramiremon	S	+									
Citrus nippokoreana	Koraitachibana	S										A
Citrus tachibana	Tachibana	S	B	B	C	+	B	C	B	A	A	A

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
				A	B	C	C	DD	C	D	A	A	B	+		A							
							B	DD			A												
											A												A
							A	A															A
																							A
																							A
B	B	B	B	C	C	D	B	A	B	D	B	B	D	A	C	B	A	B	A	A	B	D	C
																							A
																							A
																							C
																							D
																							A
											B												A
																							C
																							C
																							A
A	B	A	A		A	+	A	A		A													B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
																							C
			+		C	D	C	DD															
										+	C	+			+				DD				
																							C
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	
+		C	+		+	+	+	+		+		+	+	+	+				+				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C		
+					B		B	DD				+	C	+					A	+	+		
		+		D	A		D	DD	B		B						DD						C
+	+		+	+	+	+	+	+	+	+	+	+	+	+	+				+	B			
	+				A		D	DD	B	C				B									B
										+													
+			+	+	+	+	+	+															
										+		+	+	+	+				+				
+	+	+	+	C	+	+	+		+	+		+			+	+	+	+	+	+	+	+	
+					A		+	DD	+	C	B					B							C
+	+	+	+	+	+	+	+	+	+	D						+	+	+	+				
+	+	+	+	+	+	+	+	+	+	+													
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D		+			
																							C
																							B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
							A	B		B	+												A
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+									
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C		A				
							A	B	B	B													A
																							C

Appendix 1-4. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Claoxylon centinarium	Sekimonnoki	St										
Cleyera japonica	Sakaki	St	+	+	+	+	+	+	+	+	+	+
Clinostigma savoryanum	Noyashi	T-P										
Cocculus laurifolius	Isoyamaaoki	S	+	+	+	+	+	C	A	A		
Codonacanthus pauciflorus	Arimoriso	Pe-Su	+	+	A							
Colysis elliptica	Iwahitode	Pe-F	C	+	+	+	+	+	+	+	+	+
Colysis hemionitidea	Taiwankuriharan	Pe-F	+									
Colysis pothifolia	Ooiwahitode	Pe-F	+	+	+	+	+	A	D		B	
Colysis wrightii	Yarinohokuriharan	Pe-F	+	+	+	+						
Cornopteris banajaoens	Hosobashikechishida	Pe-F										
Corymborkis subdensa	Chikusetsuran	Pe-O										
Corymborkis veratrifolia	Baikeiran	Pe-O	B									
Crenopteris kanashiroi	Shimamukadeshida	Ep-F	B									
Crepidomanes auriculata	Tsuruhoragoke	Ep-F	+	+	+	+	A	+	+	+	DD	B
Crepidomanes bipunctatum	Ooaohoragoke	Ep-F	+									
Crepidomanes birmanicum	Haihoragoke	Pe-F	+	+	+	+	+	+	+	+	+	+
Crepidomanes kurzii	Mamehoragoke	Pe-F	B									
Crepidomanes latealatum	Aohoragoke	Ep-F	+	+	+	+	+	+	+	+	+	+
Crepidomanes latemarginale	Matsubakokeshida	Pe-F	B									
Crepidomanes liukiuense	Ryukyuhoragoke	Pe-F	+	B								
Crepidomanes maximum	Shinobuhoragoke	Pe-F	+									
Crepidomanes minutus	Uchiwagoke	Ep-F	+	+	+	+	+	+	+	+	+	+
Crepidomanes radicans var. *naseanum*	Oohaihoragoke	Pe-F	+	+	+					DD		
Crepidomanes subclathratum	Kokehaihoragoke	Pe-F	C									
Croomia heterosepala	Nabewari	Pe-Su		DD			DD	+	+	+	+	
Croomia japonica	Himenabewari	Pe-Su		+	+	+	+	C	+	+	C	+
Crypsinus engleri	Takanohauraboshi	Ep-F		C	+	+		EX	+	+	B	A
Crypsinus yakuinsularis	Yakushimauraboshi	Ep-F							A	A		
Cryptocarya chinensis	Shinakusumodoki	St			A							
Cryptostylis arachnites	Oosuzumushiran	Pe-O	A									
Cryptostylis taiwaniana	Takaosuzumushiran	Pe-O	A									
Ctenitis iriomotensis	Komidakeshida	Pe-F	B									
Ctenitis lepigera	Kinmoinode	Pe-F										
Ctenitis maximowicziana	Kiyosumihimewarabi	Pe-F		+	+	+	+	+	+	+	+	+
Ctenitis sinii	Satsumashida	Pe-F		B	EX	A						
Ctenitis subglandulosa	Katsumoinode	Pe-F	+	+	+	+			+	A		
Cyathea hancockii	Kusamaruhachi	S-F	+	C	B	+			B	A		
Cyathea lepifera	Hikagehego	S-F	+									
Cyathea mertensiana	Maruhachi	Pe-F										
Cyathea metteniana	Chabohego	Pe-F	+									
Cyathea ogurae	Mehego	S-F										
Cyathea podophylla	Kurohego	S-F	+									
Cyathea spinulosa	Hego	S-F	+	+	C	A			EX			
Cymbidium aberrans	Sagamiranmodoki	Sa-O							DD			
Cymbidium dayanum var. *austrojaponicum*	Hetsukaran	Ep-O	+	A								
Cymbidium goeringii	Shunran	Pe-O		B	+	+	+	+	+	+	+	+
Cymbidium goeringii var. *angustatum*	Hosobashunran	Pe-O							B	B		
Cymbidium javanicum var. *aspidistrifolium*	Akizakinagiran	Pe-O	A	A	A	+			A			
Cymbidium kanran	Kanran	Pe-O	A	A	A	A		A	A	A	A	A
Cymbidium koran	Koran	Pe-O				+						
Cymbidium lancifolium	Nagiran	Pe-O	B	C	C	+	B	A	D	A	C	A
Cymbidium nipponicum	Mayaran	Sa-O	+	A	B	+		A	A	A	DD	A
Cymbidium sinense	Hosai	Ep-O	A									
Cymbidium sp.	Tsushimanioishunran	Pe-O										
Cypripedium japonicum	Kumagaiso	Pe-O		B	B	A	A	A	A	A	C	A
Cyrtandra cumingii	Mizubiwaso	S	+									
Cyrtomium balansae	Miyajimashida	Pe-F		+	+	+		EX				
Cyrtomium falcatum	Oniyabusotetsu	Pe-F	+	+	+	+	+	+	+	+	+	+
Cyrtomium fortunei	Yabusotetsu	Pe-F		C	+	+	+	+	+	+	+	+
Cyrtomium fortunei var. *atropunctatum*	Izuyabusotetsu	Pe-F		+	+	+		+		A		B
Cyrtomium fortunei var. *clivicola*	Yamayabusotetsu	Pe-F		+	+	+	+	+	+	+	+	+
Cyrtomium fortunei var. *intermedium*	Miyakoyabusotetsu	Pe-F		C	+	+	+	+	+	+	+	+
Cyrtomium hookerianum	Hosobayabusotetsu	Pe-F		+	A	A						
Cyrtomium macrophyllum var. *microindusium*	Kumayabusotetsu	Pe-F				+						
Cyrtomium macrophyllum var. *tukusicola*	Tsukushiyabusotetsu	Pe-F		C	+	+	+	+	+	A	+	A
Damnacanthus biflorus	Ryukyuaridooshi	S	+									
Damnacanthus indicus	Aridooshi	S	+	+	+	+	+	+	+	+	+	+
Damnacanthus indicus var. *lancifolius*	Hosobaooaridooshi	S		+	+	+	+	+	+	+	+	+
Damnacanthus indicus var. *major*	Ooaridooshi	S	+	DD	+	+	+	+	+	+	DD	+
Damnacanthus indicus var. *microphyllous*	Himearidooshi	S		+	+	+	+	+	+	+	+	+
Damnacanthus macrophyllus	Oobajuzunenoki	S		+	+	+			DD			C
Damnacanthus macrophyllus var. *giganteus*	Nagabajuzunenoki	S		+	+	+	B	+	+	+	D	C
Damnacanthus okinawensis	Yanbaruaridooshi	S	+									

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C			+				
																							C
B					A		+	+	+	+	+								+				
											+												
																							A
																							B
																							C
	C						+	B			C												
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	+	+	+	A	+	+	DD	
+	+	+	+	+	+	+	+	+	+	+	+	+	C	+	C	C	+	B	+	DD		B	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C		+	+	+	+	+	
							+	A		D	C												
				+	C	+	+	+	+	+		+											
+		A	C		A			+															
+			B				+	B		C	B												
							A	A															B
																							A
																							A
																							C
+	+	+	+	+	+	+	+	+	+	+		+	+	C	+	+	+	B	C	C		B	
								DD															B
+	C						+	+		C	+		B										
							B	A															
							A	DD			B												
												+	C		A								B
																							A
+	+	+	+	+	+	+	+	+	+	+		+	+	+	C	+	+	+	+	+	+	+	
							A																
							A	A	EX	A													A
																							A
							B	A	A	C	+	A	B										C
	C				A	C	A	DD	EX	B	A	+	C	+	A	DD							B
																							A
A	B	A	A	A	B	A	B	A	A	C	A	B	B	A	B	A	A	A	A	A	A	B	C
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	C	+	+	+	+	+	+	+	+	+	+	B	
+							+	B		C													
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	
+	+	A	+	B	C	+	+	+	+	+		+	+	+	+	+	+	+	+				
+					A	B	B	B	+	C		+	D						B				A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	C								
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B								
+	+	C	+	+	+	+	+	+	+	+	+	+	C	+	B								
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+								
+																							
			+		B	C	+	B	C	C													

Appendix 1-5. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Damnacanthus parvispinus	Ooshimaaridooshi	S										
Daphne kiusiana	Koshonoki	S	B	+	+	+	+	+	+	+	+	+
Daphniphyllum macropodum	Yuzuriha	St	+	C	+	+	+	+	+	+	+	+
Daphniphyllum teijsmannii	Himeyuzuriha	St	+	+	+	+	+	+	+	+	+	+
Davallia mariesii	Shinobu	Ep-F	+	B	+	+	+	+	+	+	+	+
Dendrobium moniliforme	Sekkoku	Ep-O	+	C	+	+	C	C	+	A	C	C
Dendrobium okinawense	Okinawasekkoku	Ep-O	A									
Dendrobium tosaense	Kibananosekkoku	Ep-O	A	B	B	+			A	A		
Dendropanax trifidus	Kakuremino	St	+	+	+	+	+	+	+	+	+	+
Deparia bonincola	Ooshikeshida	Pe-F										
Deparia minamitanii	Hyugashikeshida	Pe-F			EX							
Derris trifoliata	Shiinokikazura	C	+									
Desmodium laxum	Oobanusubitohagi	Pe-Su		+	+	+	+	+	+	+	+	C
Desmodium laxum subsp. *laterale*	Ryukyunusubitohagi	Pe	+	+								
Desmodium laxum subsp. *leptopus*	Tokiwayabuhagi	Pe	+									
Didymoplexis pallens	Himeyatsushiroran	Sa-O	B									
Didymoplexis subcampanulata	Yureiran	Sa-O	B									
Diospyros eriantha	Yawarakegaki	St	B									
Diospyros ferrea	Yaeyamakokutan	St	+									
Diospyros maritima	Ryukyugaki	St	+									
Diospyros morrisiana	Tokiwagaki	St	+	+	+	+	+	B	+	+	+	C
Diplazium amamianum	Amamishida	Pe-F										
Diplazium crassiusculum	Ibutakekinoborishida	Pe-F	C									
Diplazium dilatatum	Hirohanokogirishida	Pe-F		+	B				A			
Diplazium doederleinii	Shimashiroyamashida	Pe-F	+	+		+				A		A
Diplazium donianum	Kinoborishida	Pe-F	+									
Diplazium hachijoense	Shiroyamashida	Pe-F	+	+	+	+	+	+	+	+	+	+
Diplazium incomptum	Niseshikechishida	Pe-F	+									
Diplazium kawakamii	Aoigawarabi	Pe-F										
Diplazium lobatum	Kirebakinoborishida	Pe-F	+									
Diplazium longicarpum	Shimakujaku	Pe-F										
Diplazium mettenianum	Miyamanokogirishida	Pe-F	+	+	+	+	+	+	+	+	+	+
Diplazium petri	Hirohamiyamanokogirishida	Pe-F	C									
Diplazium pin-faense	Fukuregishida	Pe-F		A		A						
Diplazium pullingeri	Hankokushida	Pe-F	B									
Diplazium subsinuatum	Herashida	Pe-F	+	+	+	+	+	+	+	+	+	+
Diplazium subtripinnatum	Muninmidorishida	Pe-F										
Diplazium taiwanense	Niseshiroyamashida	Pe-F	C	+								
Diplazium tomitaroanum	Nokogiriherashida	Pe-F	+	+	+	A	+	+	A	+		+
Diplazium virescens	Kokumokujaku	Pe-F	+	+	+	+	B	A	+	A	DD	A
Diplazium virescens var. *conterminum*	Nisekokumokujaku	Pe-F	+	+	+	+			A		DD	
Diplazium virescens var. *okinawaense*	Okinawakokumokujaku	Pe-F	+	+	+	+			A		DD	
Diplazium wichurae	Nokogirishida	Pe-F	C	+	+	+	+	+	+	+	+	+
Diplazium wichurae var. *amabile*	Himenokogirishida	Pe-F		C				DD	A	+	DD	
Diplazium yakumontanum	Yakushimawarabi	Pe-F						+				B
Diplazium yaoshanense	Hokozakinokogirishida	Pe-F	B									
Disperis siamensis	Jororan	Pe-O	B									
Distylium lepidotum	Shimaisunoki	S										
Distylium racemosum	Isunoki	T	+	+	+	+	+	+	+	+	+	+
Dodonaea viscosa	Hauchiwanoki	S	+									
Drynaria fortunei	Hakamauraboshi	Ep-F	A									
Dryopteris anadroma	Mukashibenishida	Pe-F										
Dryopteris anthracinisquama	Kumaiwahego	Pe-F			A	A						
Dryopteris atrata	Iwahego	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris bissetiana	Yamaitachishida	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris caudipinna	Hachijobenishida	Pe-F										C
Dryopteris championii	Saigokubenishida	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris commixta	Tsukushiiwahego	Pe-F		C	+	+	+	+	C	A	D	+
Dryopteris decipiens	Nachikujaku	Pe-F		C	+	+	D	A	+	+	D	+
Dryopteris erythrosora	Benishida	Pe-F		+	+	+	+	+	+	+	+	+
Dryopteris formosana	Takasagoshida	Pe-F		C				A			+	A
Dryopteris fuscipes	Marubabenishida	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris gymnosora	Nukaitachishida	Pe-F		C	+	+	B		+	+	C	D
Dryopteris gymnosora var. *angustata*	Hosobanukaitachishida	Pe-F										
Dryopteris hadanoi	Niseyogoreitachishida	Pe-F		A	D		D		B		B	B
Dryopteris handeliana	Tsukushiookujaku	Pe-F		C	+	+		+	+		A	A
Dryopteris hangchowensis	Kirishimaiwahego	Pe-F		A	A					A		
Dryopteris hasseltii	Ryukyushida	Pe-F	C									
Dryopteris hayatae	Inutamashida	Pe-F	+	C	B	+			A			
Dryopteris hendersonii	Horaihimewarabi	Pe-F										
Dryopteris hondoensis	Oobenishida	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris indusiata	Nukaitachishidamodoki	Pe-F	+	+	+	+	C	+	+	+	C	+
Dryopteris insularis	Muninbenishida	Pe-F										

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
+	+	B	+	C	+	C	D	+	+	+	B		C										
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	D	+		DD	
+	+	+	C	+	+	+	+	+	+	+	+	+	+										
+	+	C	+	+	+	+	+	+	+	+	C	+	+	+	+	C	+	A	+	+	+	C	
+	+	A	B	A	A	A	B	B	+	D	+	B	B	A	C	A		A	A	A			
																							A
											+												B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	B		B						DD	
																							A
+						+	+	DD	+	+			C										
																							A
																							C
+			+		B	C	+	DD		+									+				
							+	A															
				+	A		+	B															
+	+	+	B	+	C	+	+	+	+	+	+	A	D			C	+	D					
																							A
																							A
+	+	+	B	+	+	+	+	+	+	+	+	A	EX			C	C	B					
																							A
+	+	+	B	+	+	+	+	+	+	+	+	+	+	C	DD	C			A				
																							A
+							+	+		B	+		C										
							+	B		+	+	A											
							+	+	C	C	+	+											
							+	+															
+	+	+	C	+	+	+	+	+	+	+	+	+	+	B	A	C		D	DD				
																							C
																							A
+	C		+		+	+	+	+	+	+	C												
																							B
																							C
																							A
+	+	+	+	+	+	+	+	+	+	+		+	+	C	B	+	+	+	A			A	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
				D						+	+	B											
+	+	+	+	+	+	+	+	+	+	+		+	+	+	B	B	C	B	+	EX		A	
+			B			B	+	B	D	D	B	EX	C			B							
+				D	A	+	+	+	+	+		EX	C										
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
				B				B	D	D													
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	C	B	+				
				B	A		+	+	+	+					+								
																							C
																							C
																							D
											B												
																							B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	
+				A	A	+	+	+	+	D	B												
																							C

Appendix 1-6. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Dryopteris insularis var. *chichisimensis*	Chichijimabenishida	Pe-F										
Dryopteris labordei	Tanukishida	Pe-F	B									
Dryopteris lacera	Kumawarabi	Pe-F		+	+	+	+	+	+	+	+	+
Dryopteris nipponensis	Togokushida	Pe-F		+	+	+	+	+	+	+	+	+
Dryopteris pacifica	Ooitachishida	Pe-F		+	+	+	+	+	+	+	+	+
Dryopteris polita	Taitobenishida	Pe-F										
Dryopteris purpurella	Murasakibenishida	Pe-F	+	C	+	+		A	A		DD	
Dryopteris ryo-itoana	Owasebenishida	Pe-F		C					+	+	D	A
Dryopteris sacrosancta	Himeitachishida	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris scottii	Taiwankujaku	Pe-F		C								
Dryopteris shikokiana	Hoonokawashida	Pe-F		C	+	+		A	+	B	+	A
Dryopteris sieboldii	Nagasakishida	Pe-F		C	+	+	+	+	+		+	+
Dryopteris simasakii	Nukaitachishidamagai	Pe-F					B		+	B	B	
Dryopteris sordidipes	Yogoreitachishida	Pe-F	+	+	C				B			
Dryopteris sparsa	Nagabanoitachishida	Pe-F	+	+	+	+	+	+	+	+	+	+
Dryopteris tsugiwoi	Marubanukaitachishidamodoki	Pe-F		C					A			
Dryopteris uniformis	Okumawarabi	Pe-F		C	+	+	+	+	+	+	+	+
Dryopteris varia	Nankaiitachishida	Pe-F	+	+	+	+	+	+	+	+	+	+
Dryopteris yakusilvicola	Kosugiitachishida	Pe-F										
Drypetes matsumurae	Tsugemodoki	St	+									
Ecdysanthera utilis	Gomukazura	C	B									
Ehretia dichotoma	Ryukyuchishanoki	St	B									
Elaeagnus glabra	Tsurugumi	C	+	+	+	+	+	+	+	+	+	+
Elaeagnus macrophylla	Marubagumi	S	+	+	+	+	+	+	+	+	+	+
Elaeagnus pungens	Nawashirogumi	S		+	+	+	+	+	+	+	+	+
Elaegnus liukiuensis	Ryukyutsurugumi	S	+									
Elaegnus rotundata	Ogasawaragumi	S										
Elaeocarpus japonicus	Kobanmochi	St	+	+	+	+	+	+	+	+	+	+
Elaeocarpus multiflorus	Nagabakobanmochi	T	B									
Elaeocarpus photiniaefolius	Shimahorutonoki	T										
Elaeocarpus sylvestris var. *ellipticus*	Horutonoki	T	+	+	+	+	+	+	+	+	+	+
Elaphoglossum callifolium	Okinawaatsuita	Ep-F	A									
Elaphoglossum tosaense	Hirohaatsuita	Ep-F		A	A				A	A		
Elaphoglossum yoshinagae	Atsuita	Ep-F	A	A	EX	+			A	A		
Entada phaseoloides	Modama	C	B									
Epipogium roseum	Tashiroran	Sa-O	B	B	C		B	C	A	A	A	A
Epipremnum pinnatum	Habukazura	C	+									
Eria corneri	Ooosaran	Ep-O	B									
Eria ovata	Ryukyusekkoku	Ep-O	B									
Eria ovata var. *retroflexa*	Fushinashiosaran	Ep-O	+									
Eria reptans	Osaran	Ep-O	DD	B	C	+			A	A	DD	
Erycibe henryi	Horutokazura	C	+	C								
Erythrodes formosana	Hosofuderan	Pe-O	A									
Euchresta formosana	Taiwanmiyamatobera	S	B									
Euchresta japonica	Miyamatobera	S		C	+	+	C	A	+	+		A
Eulophia graminea	Okinawaimoneyagara	Sa-O	+									
Eulophia toyoshimae	Imoran	Sa-O										
Eulophia zollingeri	Imoneyagara	Sa-O	B	A	B							
Euodia nishimurae	Muningoshuyu	S										
Euonymus boninensis	Himemasaki	S										
Euonymus chibae	Hizenmayumi	S	+	B			B	C		EX		B
Euonymus fortunei var. *austroliukiuensis*	Ryukyutsurumasaki	C	B									
Euonymus fortunei var. *radicans*	Tsurumasaki	C	+	+	+	+	+	+	+	+	+	+
Euonymus japonicus	Masaki	S	+	+	+	+	+	+	+	+	+	+
Euonymus lutechuensis	Ryukyumayumi	S	+	+								
Euonymus oblongifolius	Nagabahizenmayumi	S					A					
Euonymus tanakae	Kokutengi	S	+	+		+		+				
Euonymus tashiroi	Yanbarumayumi	S	+									
Euonymus trichocarpus	Niitakamayumi	S	+									
Eurya emarginata	Hamahisakaki	S	+	+	+	+	+	+	+	+	+	+
Eurya japonica	Hisakaki	S	+	+	+	+	+	+	+	+	+	+
Eurya osimensis	Amamihisakaki	S	+									
Eurya sakishimensis	Sakishimahisakaki	S	B									
Eurya yakushimensis	Himehisakaki	S										
Eurya zigzag	Kunigamihisakaki	S	B									
Evrardia poilanei	Tsushimaran	Sa-O										
Excoecaria formosana var. *daitoinsularis*	Daitoseishiboku	S	B									
Farfugium hiberniflorum	Kantsuwabuki	Pe										
Fatsia japonica	Yatsude	S	+	+	+	+	+	+	+	+	+	+
Fatsia japonica var. *liukiuensis*	Ryukyuyatsude	S	+									
Fatsia oligocarpella	Muninyatsude	S										
Ficus ampelas	Hosobamukuinubiwa	St	+									
Ficus bengutensis	Akameinubiwa	St	+									

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		D	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B		B	
+							B	B															
							+	C															
+	+	+	+	+	+	+	+	+	+	+	C	+	+	+	+				+	B			
							+	A		C													
C			B		A	+	C	DD		B		A	C			A							
			C	A	DD		+	A	+	C									A				
+	+	B	+	+	B	+	+	+	+	+		B	D						+				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+			+		B	+	+	+	D	+	+	EX	+										
																							B
																							B
																							B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D	+				
+	+	+	+	+	+	D	+	+	+	+	+	+	+	+		B	+	+		B	A	C	
+	+	+	+	+	+	+	+	+	+	+	+		+			B			+				
+	C						+	+															
+			+		+	+	+	+	+	+	+	+	D										
																							A
							B	A		B	A												B
							B	A			A												B
																							B
				D		+	B	B		D	+	+	C										D
																							B
																							B
							B				A												B
																							A
					A	C	C	A	C	C		A	B	B									
																							B
																							A
																							C
																							B
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+		+	+	+	
																							A
+	+	C	EX		+	+	+	+	+	+	+												
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	
																							A
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+			
																							C

Appendix 1-7. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Ficus boninsimae	Tokiwainubiwa	S										
Ficus caulocarpa	Oobaako	T-S	+									
Ficus iidaiana	Ooyamaichijiku	St										
Ficus irisana	Mukuinubiwa	T	B									
Ficus microcarpa	Gajumaru	T-S	+									
Ficus nipponica	Itabikazura	C	+	+	+	+	+	+	+	+	+	+
Ficus pumila	Ooitabi	C	+	+	+	+	+	+	+	+	+	+
Ficus septica	Oobainubiwa	T	+									
Ficus stipulata	Himeitabi	C	+	+	+	+	+	+	+	+	+	+
Ficus superba	Ako	T-S	+	+	+	+	+		+	+		B
Ficus variegata	Giraninubiwa	T-S	+									
Ficus virgata	Hamainubiwa	St	+									
Flagellaria indica	Totsurumodoki	C	+									
Fraxinus griffithii	Shimatoneriko	St	+									
Freycinetia formosana	Tsuruadan	C	+									
Freycinetia williamsii	Himetsuruadan	C	B									
Galeola altissima	Takatsururan	Sa-O	B									
Galeola septentrionalis	Tsuchiakebi	Sa-O		C	+	+	+	+	+	+	+	+
Garcinia subelliptica	Fukugi	St	+									
Gardenia boninensis	Ogasawarakuchinashi	S										
Gardenia jasminoides f. *grandiflora*	Kuchinashi	S	+	+	+	+	+	+	+	+	+	+
Gardneria liukiuensis	Ryukyuhoraikazura	C	B									
Gardneria multiflora	Chitosekazura	C										B
Gardneria nutans	Horaikazura	C		+	+	+	+	+	+	B	C	+
Gardneria shimadae	Taiwanchitosekazura	C	B									
Gastrodia elata	Oninoyagara	Sa-O		A		+	C	DD	A	A	B	C
Gastrodia gracilis	Nayotenma	Sa-O		A	A		+		A		DD	
Gastrodia javanica	Konjikiyagara	Sa-O	B									
Gastrodia nipponica	Haruzakiyatsushiroran	Sa-O	C	B	C	+	DD		C	A	B	
Gastrodia pubilabiata	Kuroyatsushiroran	Sa-O		A	DD			A	A	A		
Gastrodia shimizuana	Nangokuyatsushiroran	Sa-O	B									
Gastrodia verrucosa	Akizakiyatsushiroran	Sa-O	+	B	+	+	B	DD	A	A	B	A
Glochidion acuminatum	Urajirokankonoki	S	+									
Glochidion lanceolatum	Kirunkankonoki	St	+									
Glochidion rubrum	Hiramikankonoki	S	+									
Glochidion zeylancium	Kakibakankonoki	St	+									
Glochidion zeylancium var. *tomentosum*	Kekankonoki	St	+									
Goodyera augustini	Nankaishusuran	Pe-O										
Goodyera boninensis	Muninshusuran	Pe-O										
Goodyera foliosa	Akebonoshusuran	Pe-O	+	C	+	+	B	+	+	DD	C	+
Goodyera foliosa var. *commelinoides*	Tsuyukusashusuran	Pe-O	C	+		+						
Goodyera fumata	Yabumyogaran	Pe-O	A									
Goodyera grandis	Nanbankinginso	Pe-O	B									
Goodyera hachijoensis	Hachijoshusuran	Pe-O										
Goodyera hachijoensis var. *leuconeura*	Shiraitoshusuran	Pe-O										
Goodyera hachijoensis var. *matsumurana*	Kagomeran	Pe-O	C	+	EX							
Goodyera hachijoensis var. *yakushimensis*	Yakushimashusuran	Pe-O										
Goodyera longibracteata	Higenagakinginso	Pe-O	B									
Goodyera macrantha	Benishusuran	Pe-O		A	A	+	B	+	+	A	C	A
Goodyera pendula	Tsurishusuran	Ep-O		B	C	+	A	DD	A	A	B	A
Goodyera schlechtendaliana	Miyamauzura	Pe-O	+	+	+	+	+	+	+	+	+	+
Goodyera sonoharae	Kunigamishusuran	Pe-O	B									
Goodyera velutina	Shusuran	Pe-O	A	+	+	+	C	+	+	DD	D	+
Goodyera viridiflora	Shimashusuran	Pe-O	B	B								
Grammitis dorsipila	Himeuraboshi	Ep-F	A	B								
Grammitis nipponica	Hirohahimeuraboshi	Pe-F		C	A					A	DD	
Grammitis tuyamae	Nagabakoraboshi	Ep-F				+						
Gymnema sylvestre	Horaiaokazura	C	B									
Hedera rhombea	Kizuta	C	+	+	+	+	+	+	+	+	+	+
Helicia cochinchinensis	Yamamogashi	St	+	+	+	+	+	+	+	+	+	C
Hemiboea bicornuta	Tsunogiriso	Pe-Su	+									
Hemigramma decurrens	Haruranshida	Pe-F	+									
Hetaeria cristata	Shirosujikageroran	Pe-O	DD									
Hetaeria oblongifolia	Ookageroran	Pe-O	B									
Hetaeria sikokiana	Himenoyagara	Sa-O		B	C		C		A	A	DD	A
Hetaeria yakushimensis	Yakushimaakashusuran	Pe-O	C	D	C				A		A	
Heterotropa asaroides	Tairinaoi	Pe-H			C	+	D	+				+
Heterotropa aspera	Miyakoaoi	Pe-H					D	A	C	B		+
Heterotropa blumei	Ranyoaoi	Pe-H										
Heterotropa celsa	Miyabikanaoi	Pe-H										
Heterotropa costata	Tosanoaoi	Pe-H							D			
Heterotropa curvistigma	Kagigataaoi	Pe-H										
Heterotropa dissita	Omorokanaoi	Pe-H	B									

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D	+				
+			+		+	+	+	+		+	+	+	+										
+	+		+		+	+	+	+	+	+	+	+	+	+									
							D																
																							C
																							A
+	+	+	C	+	+	+	+	+	+	+	+	+	D	+	A	C	+	C	C	+	B	B	
																							C
+	+		+	+	+	+	+	+	+	+	+												
																							C
A		B	+		C																		
C	C	B		+	C	+	+	A	+	+	B	+	D										A
+			B	C	C	+	C	DD		+		+	D	+	A	C	+	+	+	+	+	D	
EX			DD						A	B	B		A										A
							B	DD		D													B
	C					C			B	D	C	+	D			A							C
+		C			A		C			+	C	+	C	+	A	DD							B
																							A
+			+	C	+	+	+	B		D	+	A	C	B		B	+	+	C	+		D	
											C												A
																							C
											+												
B			A		A	A	B	B		D		B	A				A	A	A	A		A	
+		A		EX	A	A	B	A		B		+					DD	A	A	A	A	B	
+	+	C	+	+	+	+	+	+	+	+	C	+	+	+	C	+	+	+	+	+	+	+	
																							B
	+		+		+	+	+	+	+	D	+	B	C	+									
																							B
							A	B		A													C
																							A
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
C					+		+	+	C	+													
+			A		A					B	C	A	B			A		D		A	A		C
	C						A			B	A												B
+	+	+	+	+	+	+	+																
										+		+											
																							B
																							C
										C													B

Appendix 1-8. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Heterotropa draconis	Tenryukanaoi	Pe-H										
Heterotropa fudsinoi	Fujinokanaoi	Pe-H										
Heterotropa gelasina	Ekubosaishin	Pe-H	B									
Heterotropa hatsushimae	Hatsushimakanaoi	Pe-H										
Heterotropa hexaloba	Sanyoaoi	Pe-H		B	C	+	D	C	D		+	+
Heterotropa hexaloba var. *perfecta*	Kinchakuaoi	Pe-H		C	+	+		+	+			
Heterotropa hugana	Hyugakanaoi	Pe-H			A							
Heterotropa kinoshitae	Jurokanaoi	Pe-H										
Heterotropa kiusiana	Tsukushiaoi	Pe-H			A	+		+				
Heterotropa kiusiana var. *tubulosa*	Akebonoaoi	Pe-H										
Heterotropa kooyana	Koyakanaoi	Pe-H										
Heterotropa kumageana	Kuwaibakanaoi	Pe-H										
Heterotropa kumageana var. *satakeana*	Murakumoaoi	Pe-H										
Heterotropa kurosawae	Iwatakanaoi	Pe-H										
Heterotropa lutchuensis	Oobakanaoi	Pe-H										
Heterotropa megacalyx	Koshinokanaoi	Pe-H										
Heterotropa minamitaniana	Onagakanaoi	Pe-H			A							
Heterotropa monodoriflorum	Monodorakanaoi	Pe-H	A									
Heterotropa muramatsui	Amagikanaoi	Pe-H										
Heterotropa muramatsui var. *shimodana*	Shimodakanaoi	Pe-H										
Heterotropa muramatsui var. *tamaensis*	Tamanokanaoi	Pe-H										
Heterotropa nankaiensis	Nankaiaoi	Pe-H							D	C	C	
Heterotropa nipponica	Kanaoi	Pe-H										
Heterotropa nipponica var. *brachypodion*	Suzukakanaoi	Pe-H										
Heterotropa nipponica var. *rigescens*	Atsumikanaoi	Pe-H										
Heterotropa nomadakensis	Nomadakekanaoi	Pe-H		EX								
Heterotropa okinawensis	Hinakanaoi	Pe-H	A									
Heterotropa sakawana	Sakawasaishin	Pe-H							C	A	+	
Heterotropa satsumensis	Satsumaaoi	Pe-H		A								
Heterotropa savatieri	Otomeaoi	Pe-H										
Heterotropa savatieri var. *pseudosavatieri*	Zusokanaoi	Pe-H										
Heterotropa senkakuinsularis	Senkakuaoi	Pe-H	A									
Heterotropa sp.	Izumikanaoi	Pe-H										
Heterotropa stellata	Hoshizakikanaoi	Pe-H							B			
Heterotropa subglobosa	Maruminokanaoi	Pe-H			D	+						
Heterotropa takaoi	Himekanaoi	Pe-H							C	A		
Heterotropa takaoi var. *austrokiiensis*	Kinankanaoi	Pe-H										
Heterotropa takaoi var. *dilatatum*	Suehiroaoi	Pe-H										
Heterotropa trigyna	Sankokanaoi	Pe-H										
Heterotropa unzen	Unzenkanaoi	Pe-H		B		+	+	+				
Heterotropa yaeyamensis	Yaeyamakanaoi	Pe-H	A									
Heterotropa yakusimensis	Yakushimaaoi	Pe-H										
Heterotropa yoshikawai	Kurohimekanaoi	Pe-H										
Hoya carnosa	Sakuraran	C		+	A							
Hydrangea graosseserrata	Yakushimaajisai	S-Su										
Hydrangea kawagoeana	Tokaraajisai	S-Su	C									
Hydrangea liukiuensis	Ryukyukonterigi	S-Su	+									
Hydrangea yayeyamensis	Yaeyamakonterigi	S-Su	+									
Hymenophyllum badium	Ookokeshinobu	Ep-F		+	+	+	C		+	B	A	
Hymenophyllum barbatum	Koyakokeshinobu	Ep-F	+	+	+	+	+	+	+	+	+	+
Hymenophyllum denticulatum	Himechijirekokeshinobu	Ep-F	B									
Hymenophyllum oligosorum	Kiyosumikokeshinobu	Ep-F		+	+	+	+	+	+	+	+	B
Hymenophyllum polyanthos	Hosobakokeshinobu	Ep-F	C	+	+	+	+	+	+	+	+	+
Hymenophyllum riukiuense	Ryukyukokeshinobu	Pe-F	C	+	B				EX			
Ilex buergeri	Shiimochi	St		C	+	+	+	+	+		+	+
Ilex chinensis	Nanamenoki	St		+	+	+	+	+	+	+	+	+
Ilex dimorphophylla	Amamihiiragimochi	S										
Ilex goshiensis	Tsugemochi	St	+	+	+	+			C	B	DD	
Ilex integra	Mochinoki	T	+	+	+	+	+	+	+	+	+	+
Ilex latifolia	Tarayo	St		+	+	+	+	+	+	+	+	+
Ilex liukiuensis	Ryukyumochi	St	+									
Ilex matanoana	Munininutsuge	S										
Ilex maximowicziana	Nagabainutsuge	S	+									
Ilex maximowicziana var. *kanehirae*	Mucchagara	S	+									
Ilex mertensii	Shimamochi	S										
Ilex mertensii var. *beecheyi*	Muninmochi	S										
Ilex pedunculosa	Soyogo	St		+	+	+	+	+	+	+	+	+
Ilex rotunda	Kuroganemochi	T	+	+	+	+	+	+	+	+	+	+
Ilex warburgii	Ooshiibamochi	St	+									
Illicium anisatum	Shikimi	St	+	+	+	+	+	+	+	+	+	+
Illicium anisatum var. *tashiroi*	Yaeyamashikimi	St	+									
Intsia bijuga	Tashiromame	T	B									
Itea oldhamii	Hiiragizuina	St	+									

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
										DD													A
																							C
																							B
+	C																						
																							C
							+	DD															A
																							C
																							B
							B																DD
																							B
																							A
									C	C													B
																+	+	C	D	A		B	D
																							A
																							A
										C													DD
										B													A
										DD		B			A								C
					+		+																C
										+		+	D		C				+				
								+	+	+													
				+	+		+	+								A							
																							A
																							C
																							B
										D		+											C
										C		+											C
						D																	
																							B
																							B
B		A	D	B	+	A	+	+	+	+							+		D				
							B																DD
							B	DD		DD													DD
																							C
																							C
																							B
																	+	+					
																							C
					A		+	+	+	+	C												
+	+	+	+	+	+	+	+	+	+	+	+	+	C	+	+	+	+	+	+	+	+	+	
+				B	A		+	DD	+	+	C	B	B	+	C			B	B				
+	+	+	D	+	+	+	+	+	+	+	+	+	A	+	+		+	D	+	+		A	
							A	B															
C	C																						
+	+	+	+	+	+	+	+	+	D	+	B												
																							A
					A		D	B															
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	D		D			
+	+	+	+	+	+	+	+	+	+	+													
																							C
																							C
																							A
+	+	+	+	+	+	+	+	+	+	+						+	+	D	+	C			
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+									
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	B	D	+	+			
																							A

Appendix 1-9. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Jasminum sinense	Okinawasokei	C	+									
Kadsura japonica	Sanekazura	C	+	+	+	+	+	+	+	+		+
Korthalsella japonica	Hinokibayadorigi	Pa	+	+	+	+	+	+	+	+	+	+
Lasianthus bunzanensis	Nikogeruriminoki	S	B									
Lasianthus curtisii	Kehadaruriminoki	S	+									
Lasianthus cyanocarpus	Taiwanruriminoki	S	+									
Lasianthus fordii	Ryukyururiminoki	S	+									
Lasianthus fordii var. *pubescens*	Shintenruriminoki	S	+									
Lasianthus japonicus	Ruriminoki	S	+	+	+	+	D	D	+	+	+	B
Lasianthus japonicus var. *satsumensis*	Satsumaruriminoki	S	+	+	+	+	D		+	+	+	
Lasianthus obliquinervis	Oobaruriminoki	S	+									
Lasianthus wallichii	Marubaruriminoki	S	+									
Lecanorchis flavicans	Sakishimasukerokuran	Sa-O	B									
Lecanorchis flavicans var. *acutilova*	Shirahigemuyoran	Sa-O										
Lecanorchis hokurikuensis	Hokurikumuyoran	Sa-O						DD	A	A		
Lecanorchis japonica	Muyoran	Sa-O		B	+	+	B	A	+	A	C	C
Lecanorchis japonica var. *tubiformis*	Yaeyamasukerokuran	Sa-O	B									
Lecanorchis kiiensis	Kiimuyoran	Sa-O		A					DD	DD		
Lecanorchis kiusiana	Usugimuyoran	Sa-O		A	+			A	B	A	B	
Lecanorchis nigricans	Kuromuyoran	Sa-O	B	A	B	+		A	C	A		
Lecanorchis purpurea	Murasakimuyoran	Sa-O	B	A				A				
Lecanorchis trachycaula	Awamuyoran	Sa-O		A					DD	A		
Lecanorchis trilova	Okinawamuyoran	Sa-O	B							DD		
Lemmaphyllum microphyllum	Mamezuta	Ep-F	+	+	+	+	+	+	+	+	+	+
Lemmaphyllum pyriforme	Onimamezuta	Ep-F										
Lepidagathis formosensis	Urokomari	Pe-Su	+									
Lepisorus boninensis	Hosobakuriharan	Ep-F										
Lepisorus onoei	Himenokishinobu	Ep-F	+	+	+	+	+	+	+	+	+	+
Lepisorus thunbergianus	Nokishinobu	Ep-F	+	+	+	+	+	+	+	+	+	+
Lepisorus tosaensis	Tsukushinokishinobu	Ep-F		C	+	+	C	A	D	+	B	
Leptochilus decurrens	Okinokuriharan	Pe-F										
Ligustrum japonicum	Nezumimochi	S	+	+	+	+	+	+	+	+	+	+
Ligustrum liukiuense	Okinawaibota	S	+									
Ligustrum micranthum	Muninnezumimochi	S										
Lindera communis var. *okinawensis*	Okinawakobashi	St	B									
Lindsaea cambodgensis	Himehongushida	Pe-F	B									
Lindsaea chienii	Edauchihongushida	Pe-F	+	+	+	+	B	B	+	A	B	+
Lindsaea javanensis	Sankakuhongushida	Pe-F	+	+					A			
Lindsaea kawabatae	Shinobuhongushida	Pe-F										
Lindsaea lucida	Yaeyamahongushida	Pe-F	+									
Lindsaea merrillii	Toranoohongushida	Ep-F										
Lindsaea orubiculata var. *commixta*	Shinedauchihongushida	Pe-F	+	+	B				B			
Lindsaea repanda	Muninedauchihongushida	Pe-F										
Liparis auriculata	Giboshiran	Pe-O		C	+		+	DD	B	A	A	
Liparis elliptica	Kogomekinoeran	Ep-O										
Liparis formosana	Yukokuran	Pe-O	+	+	C							
Liparis formosana var. *hachijoensis*	Shimasasabaran	Pe-O										
Liparis hostaefolia	Shimakumokiriso	Pe-O										
Liparis krameri var. *shichitoana*	Himejigabachiso	Pe-O										
Liparis nervosa	Kokuran	Pe-O	C	+	+	+	+	+	+	+	+	+
Liparis plicata	Chikeiran	Ep-O	B	D	A							
Liparis uchiyamae	Kinoesasaran	Ep-O										
Liriope platyphylla	Yaburan	Pe	+	+	+	+	+	+	+	+	+	+
Liriope spicata	Koyaburan	Pe	+	+	+	+	+	+	+	+	+	+
Listera japonica	Himefutabaran	Pe-O		C	A			DD	B		C	
Listera makinoana	Aofutabaran	Pe-O		A	D		C	DD	+	A		
Litsea japonica	Hamabiwa	S	+	+	+	+	+	+	+		+	+
Livistona chinensis var. *boninensis*	Ogasawarabiro	T-P										
Livistona chinensis var. *subglobosa*	Biro	T-P	+	C	D		C	A	B		A	
Lomariopsis spectabilis	Tsurukijinoo	Ep-F	B									
Lonicera hypoglauca	Kidachinindo	C	+	+	+	+	+	+	+		+	+
Loropetalum chinense	Tokiwamansaku	S				A						
Loxogramme boninensis	Muninsajiran	Ep-F										
Loxogramme salicifolia	Iwayanagishida	Ep-F	+	+	+	+	D	+	+	+	+	+
Luisia boninensis	Muninboran	Ep-O										
Luisia teres	Boran	Ep-O	C	+	+	A	B	C	B	A	+	
Lycopodium cryptomerinum	Sugiran	Ep-F		+	B	B	B	A	B	A	C	A
Lycopodium cunninghamioides	Koyokazura	Ep-F										
Lycopodium fargesii	Himosugiran	Ep-F	+									
Lycopodium hamiltonii	Nankakuran	Ep-F	B	+	C	+			B	A	A	
Lycopodium laxum	Bokazura	Ep-F	A									
Lycopodium phlegmaria	Yorakuhiba	Ep-F	B	B								
Lycopodium salvinioides	Himeyorakuhiba	Ep-F	A									

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
																							C
+	+		+		+	+	+	+	+	+	+	+	+	+	+	+	C	B	C				
+	+		+	B	+	+	+	+	+	+	+		B										
B	+			B	A	+	+	+	C	+													
							+																
																							A
+			A		DD	C			B	+						B	C	B					
C	+	B	A	A	C	C	B	B	+	C	C	+	B	B	A					+	A		
																							A
							A	B	B														A
							A		B	D													D
			A			C	A	B	B	+		+	C										
							A				C												A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C	C	+	+	B			
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	C	+	+	B			+	+	C	B	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
							+	DD															
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		DD	
																							A
C					A		+	+		D	+												
							EX																
																							A
							A																
B			A				EX	+	C	D	C	A	EX	+		DD	+	B	+	A	A	B	
																							A
							A																
											+												D
																							A
											+												C
+	+	C	+	C	+	+	+	+	+	+	+	+	+	B	EX								
																							B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			A
+			+	D	C	+	+	+		+												DD	
				A	A		B	DD	B	D	C	EX	C	+		A		B	D			B	
					B	A	+	DD	D	D		B		C			DD	B	C	B	B	D	
	+																						
+							+	+	C	+													A
								A		B													
																							A
+	+			A	C	+	+	+	+	+	+	A	A						+				C
																							B
							A	A															D
B	+	A	+	B	A	EX	B	DD	B	C		B		+	A	A		A	B	A	A	B	B
							A	A		B	C												A
																							B
																							A
																							A

Appendix 1-10. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Lycopodium serratum	Togeshiba	Pe-F	+	+	+	+	+	+	+	+	+	+
Lycopodium sieboldii	Himoran	Ep-F	+	C	C	B	A	EX	A		A	
Lycopodium sieboldii var. *christensenianum*	Ryukyuhimoran	Ep-F	A	+		+						
Lysimachia sikokiana	Morokoshiso	Pe-Su	+	+	+	+	+	A	+	A	C	
Lysionotus pauciflorus	Shishinran	Ep	B	A	B	B	A	A	B	A	B	
Maclura cochinchinensis	Kakatsugayu	C	+	+	+	+	+	+	A		C	C
Macodes petola	Nanbankagomeran	Pe-O	B									
Maesa japonica	Izusenryo	S	B	+	+	+	+	+	+	+	+	+
Maesa tenera	Shimaizusenryo	S	+	+	+							
Malaxis bancanoides	Iriomotehimeran	Pe-O	+									
Malaxis boninensis	Shimahozakiran	Pe-O										
Malaxis latifolia	Hozakihimeran	Pe-O	B									
Malaxis matsudai	Matsudahimeran	Pe-O	B									
Malaxis purpurea	Okinawahimeran	Pe-O	B									
Marattia boninensis	Ryubintaimodoki	Pe-F										
Marsdenia formosana	Taiwankijoran	C	B									
Marsdenia tinctoria var. *tomentosa*	Somemonokazura	C	+									
Marsdenia tomentosa	Kijoran	C	B	+	+	+	+	+	+	+	+	+
Melicope triphylla	Awadan	S	+									
Meliosma oldhamii	Fushinohaawabuki	T	+			A	C					A
Meliosma oldhamii var. *hachijoensis*	Sakunoki	T										
Meliosma rigida	Yamabiwa	St	+	+	+	+	+	+	+	+	+	+
Meliosma squamulata	Nanbanawabuki	St	+									
Mercurialis leiocarpa	Yamaai	Pe-Su	B	+	+	+	+	+	+	+	+	+
Meterosideros boninensis	Muninfutomomo	S										
Michelia compressa	Ogatamanoki	T	+	+	+	+	+	+	+	+	+	+
Michelia compressa var. *formosana*	Taiwanogatama	T	+									
Microlepia hookeriana	Yanbarufumotoshida	Pe-F	B									
Microlepia izu-peninsulae	Odorikokaguma	Pe-F		C	+	+		A		+		
Microlepia marginata	Fumotoshida	Pe-F	+	+	+	+	+	+	+	+	+	+
Microlepia marginata var. *bipinnata*	Kujakufumotoshida	Pe-F	+	+	+	+	+	+	+	+	+	+
Microlepia obtusiloba	Koshunshida	Pe-F	C	C								
Microlepia pseudo-strigosa	Fumotokaguma	Pe-F										
Microlepia strigosa	Ishikaguma	Pe-F	+	+	+	+	+	+	+	+	+	+
Microlepia substrigosa	Usubaishikaguma	Pe-F	+						A			
Microsorium buergerianum	Nukaboshikuriharan	Pe-F	+	+	+	+	DD	+	+	A	D	+
Microsorium dilatatum	Hokozakiuraboshi	Ep-F	+	+	EX							
Microsorium fortunei	Ookuriharan	Pe-F	EX									
Microsorium superficiale	Hahajimanukaboshi	Pe-F										
Microtropis japonica	Mokureishi	S	+	+	+							
Mitrastemon yamamotoi	Yakkoso	Pa	+	C	B	+			B	B		
Monachosorum arakii	Himemukagoshida	Pe-F		B		A			A	A		A
Monotropa uniflora	Ginryosomodoki	Sa		+	+	+	+	+	+	+	+	C
Monotropastrum globosum	Ginryoso	Sa	+	+	+	+	+	+	+	+	+	+
Morinda umbellata	Hanagasanoki	C	+									
Morinda umbellata subsp. *boninensis*	Muninhanagasanoki	C										
Morinda umbellata var. *hahazimensis*	Hahajimahanagasanoki	C										
Mucuna gigantea	Waniguchimodama	C	B									
Mucuna macrocarpa	Ujirukanda	C	+	B			+					
Mucuna membranacea	Kashokuzumame	C	+									
Mussaenda shikokiana	Hirohakonronka	S		C				B	A	A	A	
Myrica rubra	Yamamomo	T	+	+	+	+	+	+	+	+	+	+
Myrsine maximowiczii	Shimataimintachibana	S										
Myrsine seguinii	Taimintachibana	S	+	+	+	+	+	+	+	+	+	+
Myrsine stolonifera	Tsurumanryo	S	DD									A
Nandina domestica	Nanten	S		+	+	+	+	+	+	+	+	+
Neocheiropteris ensata	Kuriharan	Pe-F	EX	C	+	+	+	+	+	+	+	+
Neocheiropteris subhastata	Yanoneshida	Pe-F		C	+	+	+	+	+	+	+	+
Neofinetia falcata	Furan	Ep-O	A	A	C	+	B	A	C	A	C	C
Neolitsea aciculata	Inugashi	St	+	+	+	+	+	+	+	+	+	+
Neolitsea boninensis	Ogasawarashirodamo	St										
Neolitsea gilva	Nagabashirodamo	St										
Neolitsea sericea	Shirodamo	St	+	+	+	+	+	+	+	+	+	+
Neolitsea sericea var. *argentea*	Daitoshirodamo	St	B									
Nephrolepis biserrata	Hobikanju	Pe-F	+									
Nephrolepis cordifolia	Tamashida	Pe-F	+	+	+	+	+		+	+	+	D
Nervilia aragoana	Yaeyamahitotsubokuro	Pe-O	B									
Nervilia nipponica	Mukagosaishin	Pe-O	A	A	A	+	A		A	A		
Oberonia arisanensis	Kusukusuyorakuran	Ep-O	B									
Oberonia japonica	Yorakuran	Ep-O	DD	B	+	+	B	A	+	B	A	
Oberonia makinoi	Oobayorakuran	Ep-O	+	DD	A				A	DD		
Ochrosia hexandra	Hosobayarodo	S										
Ochrosia nakaiana	Yarodo	St										

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	A						A	A	EX	A		EX											A
																							A
A					A		C	DD		D	+		C										
	A	A		A			A	A		B													B
+	+		+		+	+	+	+	+	+	+	+	D	C									
																							A
																							A
																							A
																							C
+	+	B	+	D	+	C	D	+	+	+		+	D	C					+				
											A												C
+					C	+	+	+	C	+													
+	+	+	+	+	+	+	+	+	+	+					B	+	+	+	+			C	
																							B
B	+		+		B	+	+	B	+	+	+		D										
										D													
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	C		A	
+					+	+	+	+	+	+	C	A	+										
									C	+	A	+	+										
+	C		D		D	+	+	+	D	+	+		B										
	C				A		C	A		+	+		B										
										D	+	+	C										
				A			A	A															
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	C	+	D	+	B	+	+	+	+	+	+	+	
																							C
							C	B		D													
+	+	C	+	+	+	+	+	+	+	+	+	+	+										
																							C
+	+		C		D	+	+	+	+	+	+	EX	D										
A																							
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					+				
+	+	B	+		D	+	+	+	+	+	+	+	+	B	EX		A	D	A				
+	+	+	C	C	+	+	+	+	+	+	+	EX	A										
+	B	B	A	A	A	A	C	A	A	C	A	A	A	+									C
+	+	+	+	+	+	+	+	+	+	+		+	+			A							
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	DD	+		DD	
+			+		B		+	DD	+	+	+	+											
																							C
					A		A			A	B	A							+				A
C		A		A	A	A	B	A		+	C	B	+	+	B	A			B	B			C
							+				B												A

Appendix 1-11. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Ochrosia oppositifolia	Shimasokei	St	B									
Odontochilus hatusimanus	Hatsushimaran	Pe-O		A				EX				
Odontochilus inabae	Inabaran	Pe-O	B									
Odontochilus tashiroi	Oogimiran	Pe-O	B									
Ophioglossum pendulum	Koburan	Ep-F	A									
Ophiopogon jaburan	Noshiran	Pe	+	+	+	+	+	+	+	+	+	+
Ophiopogon japonicus	Janohige	Pe	+	C	+	+	+	+	+	+	+	+
Ophiopogon ohwii	Nagabajanohige	Pe	+	C	+	+	+	+	+	+	+	+
Ophiopogon planiscapus	Oobajanohige	Pe		+	+	+	+		DD	+	DD	C
Ophiorrhiza japonica	Satsumainamori	Pe-Su	+	+	+	+	+	+	+	+	+	+
Ophiorrhiza japonica var. *acutiloba*	Okinawainamori	Pe	C									
Ophiorrhiza kuroiwai	Ryukyuinamori	S	+									
Ophiorrhiza pumila	Chaboinamori	Pe	+									
Oreocnide pedunculata	Hadonoki	S	+	+	+		+		D		B	
Osmanthus heterophyllus	Hiiragi	St			A	+			+	+	+	+
Osmanthus heterophyllus var. *iriomotensis*	Yaeyamahiiragi	St	B									
Osmanthus insularis	Shimamokusei	T	B	C	C	+	A	D			A	A
Osmanthus marginatus	Ryukyumokusei	T	+									
Osmanthus okinawensis	Yanagibamokusei	S	B									
Osmanthus rigidus	Oomokusei	S										
Osmunda banksiifolia	Shiroyamazenmai	Pe-F	+	+	+	+	A		D	A	DD	
Oxygyne hyodoi	Hinanobonbori	Sa									A	
Pachypleuria repens	Kikushinobu	Ep-F	+	B	A	+			B	A		
Pachypleuria vestita	Shimakikushinobu	Ep-F	+									
Pachysandra terminalis	Fukkiso	S			A	+	+	+	C	B	+	C
Pasania edulis	Matebashii	T	+	+	+	+	+	+		+		+
Pasania glabra	Shiribukagashi	T		C	+	+	+	+	+	+	+	+
Pellionia brevifolia	Aragesanshoso	Pe-Su		C	A							
Pellionia minima	Sanshoso	Pe-Su	B	+	+	+	+	+	+	+	+	+
Pellionia radicans	Oosanshoso	Pe-Su	B	+	+	+	+	+	+	+	+	+
Pellionia scabra	Kimizu	Pe-Su	+	+	+	+	+	+	+	+	C	+
Pellionia yosiei	Nagabasanshoso	Pe			D							
Persea boninensis	Ogasawaraaogusu	T										
Persea japonica	Hosobatabu	T	+	+	+	+	+	+	+	+	+	+
Persea kobu	Kobugashi	T										
Persea thunbergii	Tabunoki	T	+	+	+	+	+	+	+	+	+	+
Phacellanthus tubiflorus	Kiyosumiutsubo	Pa		A	C	+	C	+	B	A	B	A
Phaius minor	Ganzekiran	Pe-O	A	A	B	+	A		A	EX	B	
Phaius mishmensis	Himekakuran	Pe-O	A									
Phaius tancarvilleae	Kakuchoran	Pe-O	B									
Photinia glabra	Kanamemochi	S		C		+		+	+	+	+	+
Photinia serrulata	Ookanamemochi	S	DD								A	
Photinia wrightiana	Shimakanamemochi	S	+									
Pieris japonica	Asebi	S		+	+	+	+	+	+	+	+	+
Pieris japonica var. *yakushimensis*	Yakushimaasebi	S										
Pieris koidzumiana	Ryukyuasebi	S	EX									
Pileostegia viburnoides	Shimayukikazura	C	+									
Pinellia tripartita	Oohange	Pe-Su	+	+	+	+		+	+		+	+
Piper kadzura	Futokazura	C	+	+	+	+	+	+	+	+	+	+
Pisonia grandis	Togemiudonoki	T										
Pisonia umbellifera	Udonoki	St	+									
Pittosporum boninense	Shirotobera	S										
Pittosporum boninense var. *chichijimense*	Ominotobera	S										
Pittosporum illicioides	Koyasunoki	S										
Pittosporum parvifolium	Kobatobera	S										
Pittosporum parvifolium var. *beecheyi*	Hahajimatobera	S										
Pittosporum tobira	Tobera	S	+	+	+	+	+	+	+	+	+	+
Plagiogyria adnata	Takasagokijinoo	Pe-F	C	+	+	+	+	+	+	+	+	+
Plagiogyria euphlebia	Ookijinoo	Pe-F	+	+	+	+	+	+	+	+	+	+
Plagiogyria japonica	Kijinooshida	Pe-F		+	+	+	+	+	+	+	+	+
Plagiogyria yakumonticola	Kosugidanikijinoo	Pe-F										
Platanthera brevicalcarata var. *yakumontana*	Niitakachidori	Pe-O										
Podocarpus macrophyllus	Inumaki	T-N	+	+	+	+	+	+	+	+	+	+
Podocarpus nagi	Nagi	T-N	+	C	+	+	+		+	+	+	+
Pollia hasskarlii	Nangokuyabumyoga	Pe-Su	B									
Pollia japonica	Yabumyoga	Pe-Su		+	+	+	+	+	+	+	+	+
Pollia japonica var. *minor*	Koyabumyoga	Pe-Su	+									
Polyalthia liukiuensis	Kurobomodoki	St	A									
Polypodium amamianum	Amamiaonekazura	Ep-F										
Polypodium formosanum	Taiwanaonekazura	Ep-F	A									
Polypodium niponicum	Aonekazura	Ep-F		C	+	+	+	+	+	+	+	+
Polystichum eximium	Komochiinode	Pe-F										
Polystichum fibrilloso-paleaceum	Asukainode	Pe-F					DD		EX			

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
																							B
																							A
																							B
																							A
																							B
C	C	B	+	D	B	DD	D	DD		+	C		C	+									
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+					DD					+	+	+	+	+	+	+	+	C	+	+	+	+	
+		C	+	D	B	+	C			+			C										
							D				C												
+			+	+	+	+	+	+	+	+		+	+	+	+				+				
								A			+												
																							A
							C			C													
					A																		A
							B	A															C
C	+	+	B	+	B	+	+	+	+	C		+	+	+	+	+	+	+	+	+	+	+	
+			+	+	B	+	+	DD	C														
																							C
+		A	C	+	+	+	+	+	+	+													
+			C		+	+	+			+													
+						D	+				C		D										
																							B
+	+		+	+	+	+	+	+		DD													
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	
+		A	D	B	B	C	B	DD	C	D		+	B	+		DD	B	B	B	+	B	B	
							A	A		A	+												A
																							A
+			+	+	+	+	+	+	+	+													B
			EX																				A
																							C
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	B	EX		+	D			
																							A
							B																
+			C	C	C	+	+	+		+					B								
C	+				+	+	+	+	+	+	+	+	+										
			A		C																		DD
																							C
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	C	D		+	C	DD	
+	C		+	D	DD	+	+	+	D	+	+												
+	+	+	+	+	+	+	+	+	+	+	+	B	B	+	A	+	+	+	+				
+	+	+	+	+	+	+	+	+	+	+	+	B	+	+	A	+	+	+	+			A	
+	+	+	+	+	+	+	+	+	+	+	+	+	+			DD							
							+	+															
																							C
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	+	B	+	A		A	
																							B
																							B
+	C	B	+	A	C	C	C	A	+	D		A			A		A		A				A
							+	B	+	+	+	+	+	+	+					+				

Appendix 1-12. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Polystichum hancockii	Taiwanjyumonjishida	Pe-F	+	C								
Polystichum kiusiuense	Kyushuinode	Pe-F		A		+						
Polystichum lepidocaulon	Orizurushida	Pe-F	+	+	+	+	+	+	+	A	+	D
Polystichum longifrons	Aiasukainode	Pe-F		C	+	+	D		C			B
Polystichum makinoi	Katainode	Pe-F		C	+	+	+	+	+	+	+	+
Polystichum obai	Amamidenda	Pe-F										
Polystichum otomasui	Nanpiinode	Pe-F			C	+						
Polystichum polyblepharum	Inode	Pe-F		+	+	+	+	+	+	+	+	+
Polystichum pseudo-makinoi	Saigokuinode	Pe-F		C	+	+	+	+	+	+	+	+
Polystichum shimurae	Shimurainode	Pe-F										
Polystichum tagawanum	Inodemodoki	Pe-F		C	+	+	+	+	+	+	+	+
Polystichum tsus-simense	Himekanawarabi	Pe-F		+	+	+	+	+	+	+	+	+
Polystichum tsus-simense var. *mayebarae*	Ookiyosumishida	Pe-F		+	B	+	+	+	+	+	+	+
Polystichum yaeyamense	Yaeyamatoranoo	Pe-F	C									
Pothos chinensis	Yuzunohakazura	C	B									
Pouteria boninensis	Muninnoki	S										
Pouteria obovata	Akatetsu	S	+									
Protolirion sakuraii	Sakuraiso	Sa										
Prunus spinulosa	Rinboku	St	B	+	+	+	+	+	+	+	+	+
Prunus zippeliana	Bakuchinoki	T	+	+	+	+	+	+	+	+		D
Psilotum nudum	Matsubaran	Ep-F	+	C	C	A	D	B	B	A	A	A
Psychotria boninensis	Ooshiratamakazura	C										
Psychotria homalosperma	Ogasawarabochoji	S										
Psychotria manillensis	Nagamibochoji	S	+									
Psychotria rubra	Bochoji	S	+									
Psychotria serpens	Shiratamakazura	C	+	+	+		+		C	B		
Pteris cadieri	Kawaribaamakusashida	Pe-F	C									
Pteris disper	Amakusashida	Pe-F	+	+	+	+	+	+	+	+	+	+
Pteris excelsa	Oobanohachijoshida	Pe-F	+	+	+	+	+	+	+	+	+	+
Pteris grevilleana	Ashigatashida	Pe-F	A									
Pteris kiuschiuensis	Nishinokohachijoshida	Pe-F		+	+				B	B		
Pteris nakasimae	Hinotanishida	Pe-F		A								
Pteris natiensis	Yawarahachijoshida	Pe-F		+	+		A		B	A		
Pteris oshimensis	Hachijoshidamodoki	Pe-F		+	+		B	+	+	B	+	
Pteris semipinnata	Ooamakusashida	Pe-F	+									
Pteris setuloso-costulata	Togehachijoshida	Pe-F										
Pteris tokioi	Hikageamakusashida	Pe-F		C	A							
Pyrrosia adnascens	Hitotsubamamezuta	Ep-F	A									
Pyrrosia hastata	Iwaomodaka	Ep-F		C	+	+	+	+	+	A	B	A
Pyrrosia lingua	Hitotsuba	Ep-F	+	+	+	+	+	+	+	+	+	+
Quercus acuta	Akagashi	T		+	+	+	+	+	+	+	+	+
Quercus gilva	Ichiigashi	T		C	+	+	+	+	+	+	+	+
Quercus glauca	Arakashi	T		+	+	+	+	+	+	+	+	+
Quercus glauca var. *amamiana*	Amamiarakashi	T	+									
Quercus hondae	Hanagagashi	T		B	D	+	B		B		A	
Quercus miyagii	Okinawaurajirogashi	T	+									
Quercus myrsinaefolia	Shirakashi	T		+	+	+	+	+	+	+	+	+
Quercus phillyraeoides	Ubamegashi	St	B	+	D	+	+		+	+	+	+
Quercus salicina	Urajirogashi	T	+	+	+	+	+	+	+	+	+	+
Quercus sessilifolia	Tsukubanegashi	T		+	+	+	+	+	+	+	+	+
Randia canthioides	Shimamisaonoki	S	+									
Randia cochinchinensis	Misaonoki	S	+	+	+	+	D		+	+	D	
Randia sinensis	Hijiharinoki	S	B									
Reineckea carnea	Kichijyoso	Pe		C	+	+	+	+	+	+	+	+
Renanthera labrosa	Jinyakuran	Ep-O	EX									
Rhaphidophora kortharthii	Sakishimahabukazura	C	B									
Rhaphidophora liukiuensis	Himehabukazura	C	B									
Rhaphiolepis indica var. *liukiuensis*	Hosobasharinbai	S	+									
Rhaphiolepis indica var. *umbellata*	Sharinbai	S	+	+	+	+	+	+	+	+	+	+
Rhododendron amamiense	Amamiseishika	S										
Rhododendron latoucheae	Seishika	S	B									
Rhododendron tashiroi	Sakuratsutsuji	S	+	+					A			
Rhynchotechum discolor	Yamabiwaso	S	+									
Rhynchotechum discolor var. *austrokiushiuense*	Tamazakiyamabiwaso	S	+	C								
Rohdea japonica	Omoto	Pe		B	+	+	+	+	+	+	+	+
Rohdea japonica var. *latifolia*	Satsumaomoto	Pe										
Rubus amamianus	Amamifuyuichigo	S										
Rubus amamianus var. *minor*	Kobanoamamifuyuichigo	S										
Rubus buergeri	Fuyuichigo	S		+	+	+	+	+	+	+	+	+
Rubus hakonensis	Miyamafuyuichigo	S		C	+	+	+	+	+	+	+	+
Saccolabium ciliare	Matsugekayaran	Ep-O										
Saccolabium japonicum	Kashinokiran	Ep-O	B	D	D	+	DD		B	A	B	
Saccolabium matsuran	Matsuran	Ep-O		A	A	+	C	+	C	DD	C	

Locality																						En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
																							B
							A		DD	+	+	+	+										
+		+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	C	+	
+	+		+	+	+	+	+	+	+	+		+	D		C			D	B				
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		D	
+	+	+	+	+	+	+	+	+	+	+		+	D		+	C	+	B	+			B	
										EX		EX											A
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	C	+	B	+			A	
+	+	+	+	+	+	+	+	+	+	+	C	+	+	C	C	C	+	B	B				
+	+	+	+	+	+	+	+	+	+	+		+	+	+	C	B	+	B	B				
																							C
																							A
				A					EX							A			A				A
+	+	B	+	+	+	+	+	+	+	+		B	C	C					B				
C	+		A		B	C	+	DD	+	+		+	D										
B			+	A	B	A	B	A	A	C	+	A	A	A	A	EX				A			C
																							C
							C																
+	C		C	B	+	+	+	+	+	+	+	+	+	B	A				EX				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	B	A	+	+	C	B			B	
																							A
							+	B		B		A											
																							C
							C	B															
							+	+		C		+	+										
								A															
																							A
C	+		B	EX	B	A	A	B	+	+		+	A	B	A	A	A	B	C	B	C	C	
+	+	+	+	+	+	+	+	+	+	+		+	+	B					+				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D	A	+			
+	+		B	+	C	+	+	+	+	+		+	C	+	+								
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				+	D			
																							B
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				+	+			
+			+	D	+	+	+	+	+	+	+	A	C										
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D	+	D			
+	+	+	+	+	+	+	+	+	+	+		+	C	+	+	B	C		+	+			
							+	B															
																							A
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+						
																							EX
																							A
+	+	C	+	+	+	+	+	+	+	+	+	+	+	+		B	+	D		D			
																							A
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	C	C	+	+			
																							A
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	D	+				A
+	+	+	+	+	+	+	+	+	+	+	C	+	D	+	+	+	+	+	+				
																							A
							A	A	DD	B			EX										C
+	+			A	A	C	A	DD	DD	C		+	EX	+					+	A	EX		

Appendix 1-13. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Saccolabium toramanum	Momiran	Ep-O			DD				B	A		A
Saionia shinzatoi	Hoshizakishakujo	Sa	A									
Santalum boninense	Muninbyakudan	Pa										
Sarcandra glabra	Senryo	S	+	+	+	+	+	+	+	+	+	+
Sarcanthus scolopendrifolius	Mukaderan	Ep-O			A	+	B		B	A		
Sarcochilus japonicus	Kayaran	Ep-O		A	C	+	D	+	+	A	C	C
Satakentia liukiuensis	Yaeyamayashi	T-P	B									
Saurauia tristyla	Takasagoshiratama	S	+									
Schefflera octophylla	Fukanoki	St	+	+	+	+						
Schima wallichii	Ijyu	T	+									
Schizaea dichotoma	Kanzashiwarabi	Pe-F	B									
Schizaea digitata	Fusashida	Pe-F										
Sciaphila japonica	Hongoso	Sa	B	A	B	+	+	A	A	A	B	A
Sciaphila okabeana	Suzufurihongoso	Sa										
Sciaphila takakumensis	Takakumaso	Sa	B	A								
Sciaphila tosaensis	Uematsuso	Sa	B	A	A	+	+		A	A	A	
Scurrula lonicerifolius	Nindobanoyadorigi	Pa	B									
Scurrula yadoriki	Oobayadorigi	Pa	+	C	+	+	D	+	A	A	B	C
Sedirea japonica	Nagoran	Ep-O	A	A	B	+	A		A	EX	DD	
Selaginella boninensis	Hibagoke	Pe-F										
Selaginella doederleinii	Onikuramagoke	Pe-F	+						A			
Selaginella involvens	Katahiba	Ep-F	+	+	+	+	+	+	+	+	+	+
Selaginella moellendorffii	Inukatahiba	Ep-F	B									D
Skimmia japonica	Miyamashikimi	S	+	+	+	+	+	+	+	+	+	D
Skimmia japonica var. *lutchuensis*	Ryukyumiyamashikimi	S	+									
Stauntonia hexaphylla	Mube	C	+	+	+	+	+	+	+	+	+	+
Stegnogramma griffithii var. *wilfordii*	Amishida	Pe-F	C	C	+	A			B	A		
Stephania japonica	Hasunohakazura	C	+	+	+	+	+	+	+	+		+
Stephanotis lutchuensis	Okinawashitakizuru	C	+	+								
Stephanotis lutchuensis var. *japonica*	Shitakiso	C		C	+	+		DD	+	+		A
Stereosandra javanica	Iriomotemuyoran	Sa-O	B									
Stigmatodactylus sikokianus	Koorogiran	Pe-O		A	A	+			A	A		
Strobilanthes glanduliferus	Seitakasuzumushiso	Pe-Su	+									
Strobilanthes tashiroi	Okinawasuzumushiso	Pe-Su	+									
Symplocos boninensis	Muninkuroki	St										
Symplocos caudata	Aobanahainoki	St	+									
Symplocos cochinchinensis	Aobanoki	St	+									
Symplocos cochinchinensis subsp. *laurina*	Konishihainoki	St	B									
Symplocos confusa	Miyamashirobai	St	+									
Symplocos glauca	Mimizubai	St	+	+	+	+	+	+	+	+	+	+
Symplocos kawakamii	Uchidashikuroki	S										
Symplocos lancifolia	Shirobai	S		+	+	+	+	+	+	+	+	+
Symplocos lucida	Kuroki	St	+	+	+	+	+	+	+		+	+
Symplocos microcalyx	Amashiba	S	+									
Symplocos myrtacea	Hainoki	S		+	+	+	+	+	+	+	+	+
Symplocos nakaharae	Nakaharakuroki	St	+									
Symplocos okinawensis	Ryukyuhainoki	S	+									
Symplocos pergracilis	Chichijimakuroki	S										
Symplocos prunifolia	Kurobai	St	+	+	+	+	+	+	+	+	+	+
Symplocos stellaris	Yanbarumimizubai	St	+									
Symplocos tanakae	Hirohanomimizubai	St	+	C	+				C	+		
Symplocos theophrastaefolia	Kanzaburonoki	St		C	+	+	+	+	+	+	+	C
Syzygium buxifolium	Adeku	S	+	+	+							
Syzygium cleyeraefolium	Himefutomomo	S										
Syzygium cleyeraefolium var. *microphyllum*	Adekumodoki	S										
Taeniophyllum aphyllum	Kumoran	Ep-O	A	A	+	+	C	+	+	+	C	B
Tainia laxiflora	Himetokenran	Pe-O	B	B	DD	+			EX			
Tarenna gracilipes	Gyokushinka	S	+	+	+							
Tarenna subsessilis	Shimagyokushinka	S										
Taxillus kaempferi	Matsugumi	Pa		C	D	+	+	A	+	+	C	+
Tectaria decurrens	Nanabakeshida	Pe-F	+									
Tectaria devexa	Usubashida	Pe-F	+									
Tectaria fauriei	Komochinanabakeshida	Pe-F	A									
Tectaria kusukusensis	Nagabausubashida	Pe-F	B									
Tectaria phaeocaulis	Kawariusubashida	Pe-F	+									
Tectaria simonsii	Karenkoamishida	Pe-F	+									
Tectaria subtriphylla	Mikawarishida	Pe-F	+									
Ternstroemia gymnanthera	Mokkoku	St	+	+	+	+	+	+	+	+	+	+
Thelypteris castanea	Taiwanhashigoshida	Pe-F	B									
Thelypteris erubescens	Taiyoshida	Pe-F										
Thelypteris liukiuensis	Ookomorishida	Pe-F	+									
Thelypteris omeiensis	Mizoshidamodoki	Pe-F		C	A	+		A		A	B	
Thelypteris simplex	Hitotsubakomorishida	Pe-F	+									

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
+					A		A		DD	C				A					A	A			
																							A
																							B
+	+		+		C	+	+	+	+	+	+	A	C										
					A		A	A	B	C					A								B
+		A	C	C	C	+	C	A		+		B	C	+	B	A			A	A			
																							A
A			A	A	B	C	B	A	EX	B	A		A			A				DD			B
																							C
																							A
+				A	A		B	A		B	A												C
+				A			C	DD		+		A	C										
	A			A			A	A		A	B												A
											+												
+	+	C	+	+	+	+	+	+	+	+	+	+	+	C	+	B			+	EX			
																							C
+	+	+	+	+	+	+	+	+	+	+	+	+	D	+	+	+	+	+	+	+	+	DD	
+	+	+	+	C	+	+	+	+	+	+	+	+	+	+		+	B	D					
							B	B															
+	+					+	+	+	+	D	C						A		+				
				EX			+	DD		+			C										
																							C
							A				A												A
										B													
																							C
																							C
+					+	+	+	+	+	+	C												
																							A
C							+	+	C														
+	+																						
+			D		A	DD	+	+															
+	+	B	+	+	+	+	+	+	+	+	+		C										A
+					A	+	+	+	C	+													
																							C
B	+		A	A	B	A	+	A		+		A	A	A	B				A				
											A												B
+	+		+	C	+	+	+	+	+	+		+	B	+	B	A	A		D				
																							A
																							A
+	+	+	+	+	+	+	+	+	+	+	+		+	+								DD	
																							C
																							A
	C						B	B		D			A										

Appendix 1-14. List of component species of lucidophyllous forest in Japan.

Scientific name	Japanese name	Life form	1	2	3	4	5	6	7	8	9	10
Thelypteris taiwanensis	Kobazakeshida	Pe-F	+									
Thelypteris triphylla	Komorishida	Pe-F	+									
Thelypteris truncata	Natagirishida	Pe-F	+									
Thismia abei	Tanukinoshokudai	Sa		A	A	+				A		
Thismia tuberculata	Kirishimatanukinoshokudai	Sa		A	A							
Thrixspermum fantasticum	Hagakurenagamiran	Ep-O	B									
Toddalia asiatica	Sarukakemikan	C	+									
Torreya nucifera	Kaya	T-N		C	+	+	+	+	+	+	+	+
Trachelospermum asiaticum var. *intermedium*	Teikakazura	C		C	+	+	+	+	+	+	+	+
Trachelospermum gracilipes var. *liukiuense*	Okinawateikakazura	C	+	+								
Trachelospermum jasminoides	Keteikakazura	C	+	C	+	+	+	+	+	+	+	+
Trachycarpus fortunei	Syuro	S-P		+	+	+	+	+	+	+	+	
Tricalysia dubia	Shiromimizu	S	+									
Trichoglottis luchuensis	Iriomoteran	Ep-O	B									
Trichomanes motleyi	Mamegokeshida	Ep-F	C									
Trichomanes tahitense	Zenigokeshida	Ep-F	+									
Tristellateia australasiae	Kosyunkazura	C	+									
Tropidia calcarata	Akonettairan	Pe-O	B									
Tropidia nipponica	Yakushimanettairan	Pe-O	B	A	A				A		DD	
Tropidia nipponica var. *hachijoensis*	Hachijonettairan	Pe-O										
Tsuga sieboldii	Tsuga	T-N		+	+	+	+	+	+	+	+	+
Turpinia ternata	Shobennoki	St	+	+	+	+	B		A			
Tutcheria virgata	Hisakakisazanka	St	+									
Tylophora japonica	Tokiwakamomezuru	C	+	+	+	+	+	DD	C		C	
Typhonium divaricatum	Ryukyuhange	Pe-Su	+	+								
Uncaria rhynchophylla	Kagikazura	C		+	+	+	+	+	+	+	+	+
Vaccinium boninense	Muninsyasyanbo	S										
Vaccinium bracteatum	Syasyanbo	S	+	+	+	+	+	+	+	+	+	+
Vaccinium emarginatum	Yadorikokemomo	Ep										
Vaccinium wrightii	Gima	S	+									
Vanda lamellata	Kotohisuiran	Ep-O	DD									
Veronicastrum axillare	Toranoosuzukake	Pe-Su		B	+	+	+	A	C		A	
Veronicastrum tagawae	Kinokunisuzukage	Pe-Su										
Vexillabium fissum	Oohakuunran	Pe-O					B					
Vexillabium yakushimense	Yakushimahimearidooshiran	Pe-O	C	B							A	
Viburnum awabuki	Sangojyu	St	+	+	+	+	+	+	+	+	+	+
Viburnum japonicum	Hakusanboku	S	+	+	+	+	A	+				+
Viburnum japonicum var. *boninsimense*	Tokiwagamazumi	S										
Viburnum suspensum	Gomojyu	S	+									
Vitex quinata	Ooninjinboku	St	B									
Vittaria ensiformis	Himeshishiran	Ep-F	C									
Vittaria flexuosa	Shishiran	Ep-F	+	+	+	+	+	+	B	+	+	+
Vittaria zosterifolia	Amamoshishiran	Ep-F	+	C								
Vittarira forrestiana	Oobashishiran	Ep-F										
Vrydagzynea nuda	Misoboshiran	Pe-O	B									
Wendlandia formosana	Akamizuki	S	+									
Woodwardia harlandii	Oogimishida	Pe-F	C									
Woodwardia japonica	Ookaguma	Pe-F		+	+	+	+	+	+	A		+
Woodwardia kempii	Hosobaookaguma	Pe-F										
Xiphopteris okuboi	Ookuboshida	Ep-F		C	+	B	DD	A	B	A	A	
Xylosma congestum	Kusudoige	St	DD	+	+	+	+	+	+	+	+	+
Zanthoxylum nitidum	Teribazansho	C	+									
Zanthoxylum scandens	Tsuruzansho	C	+									
Zeuxine affinis	Aojikukinuran	Pe-O	B									
Zeuxine agyokuana	Kageroran	Pe-O	C	B	C				A		A	
Zeuxine fluvida	Taitokinuran	Pe-O	B									
Zeuxine leucochila	Ishigakikinuran	Pe-O	C									
Zeuxine nervosa	Ookinuran	Pe-O	B									
Zeuxine odorata	Jakokinuran	Pe-O	B									

Life form, T: Tree (Evergreen broad leaf), T-N: Tree (Needle leaf), T-P: Tree (Palm), T-S: Tree (Strangler), St: Semi-large tree (Evergreen broad leaf), St-N: Semi-large leaf), C-Su: Climber (Summergreen), Pe-O: Perenial herb (Orchid), Pe-F: Perenial herb (Evergreen Fern), Pe-H: Perenial herb (Evergreen Heterotropa), Pe: Perenial herb (Orchid), Sa: Saprophyte (Others), Pa: Parasite.

Locality (Prefecture), 1: Okinawa, 2: Kagoshima (except for Yakushima, Tanegashima, Amamioshima and Tokunoshima), 3: Miyazaki, 4: Kumamoto, 5: Oita, 6: Fukuoka, Aichi, 21: Shizuoka, 22: Tokyo (Izu Islands), 23: Kanagawa, 24: Chiba, 25: Ibaraki, 26: Saitama, 27: Ishikawa, 28: Toyama, 29: Niigata, 30: Nagano, 31: Miyagi, 32: Iwate, RDB Categories, A: Critically endangered, B: Endangered or Endangered next to A, C: Vulnerable or Endangered next to B, D: Near threatened or Endangered next to C,

Locality																							En
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
										B													A
																							A
																							B
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+				+	+	D		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		A	
			+	+	C	+	+	+		+													
		+		+			+	+															
																							B
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											B												C
+	+	C	+	+	+	+	+	+	+	+		+	D	+	+				+				
+	+			B	B	D	+	+	+	+	C	+	C											
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+	+	+	+	+	+	+	+	+	+	+	+	+	D			B	EX						
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			EX					B		C													
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										B	+	B	B						A				B
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+	C	+	+	+	+	+	+	+	+	+	+	EX	EX	B	+				B				
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+			+		C	D	+	+															
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							A			C	A												C
																							A
																							C

tree (Needle leaf), S: Small tree (Evergreen broad leaf), S-Su: Small tree (Summergreen), S-P:Small tree (Palm), S-F: Small tree (Fern), C: Climber (Evergreen broad (Evergreen others), Pe-Su: Perenial summergreen herb, A: Annual plant, Ep-O: Epiphyte (Orchid), Ep-F: Epiphyte (Fern), Ep: Epiphyte (Others), Sa-O: Saprophyte

7: Kochi, 8: Tokushima, 9: Ehime, 10: Yamaguchi, 11: Hiroshima, 12: Shimane, 13: Tottori, 14: Okayama, 15: Kyoto, 16: Hyogo, 17: Osaka, 18: Wakayama, 19: Mie, 20: 33: Akita, En: Environment Agency (2000).

DD: Data deficient, Ex: Extinct, +: Present.