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ADDITIONS TO THE FLORAL WEALTH OF SIRMAUR DISTRICT, HIMACHAL PRADESH FROM CHURDHAR WILDLIFE SANCTUARY

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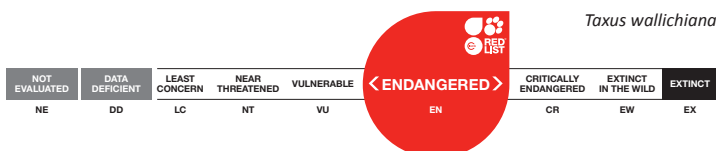
Abstract: A total of 352 species of phanerogams comprising 251 dicotyledons, 97 monocotyledons and four species of gymnosperms belonging to 85 families collected from Nohra Forest Block of Churdhar Wildlife Sanctuary, District Sirmaur, Himachal Pradesh are reported as additions to the district. This includes 13 threatened species under different Red List assessments, both global and regional and 35 species are endemic to western Himalaya.

Keywords: Additions, Churdhar, flora, Himachal Pradesh, protected area, Sirmaur.

Protected areas (PAs) like wildlife reserves and national parks, cover more than 12% of the Earth's surface and are internationally recognized as a major tool in conservation programmes (Khan & Bhagwat 2010). They maintain key habitats, provide refugia, allow species migration and movement and provide goods and services otherwise essential for sustainable

use of natural resources. As a result, they store more than 15% of the terrestrial carbon (Holdgate 1999) and also serve as a tool for containing future exceptional loss of habitat. Accordingly, it has now been realized that inventorisation of plants occurring in such areas is absolutely necessary and so are the initiatives from the Ministry of Environment, Forests, & Climate Change, Government of India, which is now showing great concern for compilation or documentation of floral elements in these areas of importance, ultimately leading towards ensuring the welfare of faunal elements. Though 20177 taxa of flowering plants have been reported from India (Karthikeyan 2009), several areas still remain under-explored and pockets of many forests botanically less studied.

Churdhar Wildlife Sanctuary (CWS) is one of the few remaining citadels of biodiversity that covers wide



Taxus wallichiana



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altitudinal ranges where documentation is certainly inadequate. However, some parts of this sanctuary face heavy threats from a comparatively high density of livestock population belonging to the Gujjar community, residing in the area along with their herds for grazing purposes since long. Besides, visits of thousands and thousands of pilgrims annually to Choreshwar Mahadev Temple at Chur peak—a religiously important place—is adding towards the woes since populations of a few species like *Angelica glauca*, *Betula utilis*, *Cypripedium cordigerum*, *C. himalaicum*, *Dactylorhiza hatagirea*, *Rhododendron anthopogon*, *R. campanulatum*, *Taxus wallichiana* and *Valeriana jatamansi* etc. are in rapid decline during the recent decades.

Botanical explorations of Royle in 1823, Drummond during 1883–1885 and Clarke in 1884, as carried out in the past are some of the pioneering works from Chur Mountains. During the 19th century Collett (1902), and Nair (1977) also made pilot surveys in this area. However, these two studies covered only the Pulbahal Forest Block of the sanctuary falling in Shimla District, Himachal Pradesh. Studies undertaken here in the recent past include the works of Gupta (1998) and Kumar (2004) but they recorded only the medicinal flora of the sanctuary. The first published account on the flora of Sirmaur District is of Kaur & Sharma (2004), wherein they reported 911 species belonging to 544 genera under 139 families again only touching the boundaries of the sanctuary and its core area.

The present study had been carried out systematically for assessing the floristic wealth of Churdhar Wildlife Sanctuary including its rich potential of herbal medicinal plants. However, in this paper only Nohra Block of the sanctuary and the additions to the flora of district Sirmaur have been highlighted.

STUDY AREA

Churdhar Wildlife Sanctuary—one of the important protected areas of the Himalayan region—is located in the Trans-Giri hill ranges of Sirmaur and Shimla districts in the state of Himachal Pradesh. The sanctuary which falls around Chur Peak (3,647m), one of the Shivalik's highest summits in sub-tropical Himalaya, was established in the year 1985 with a view to preserve the biological wealth and floral diversity in the Panchmuda Range of Churdhar. The sanctuary comprises an approximate area of 66.70km² with wide altitudinal ranges varying from approximately 1900–3647m and lies in between 30°48'37"–30°54'39"N & 77°23'32"–77°29'49"E. From a management point of view, the sanctuary area has been divided into two forest blocks

namely, Nohra and Pulbahal. Approximately, 65% of the study area falls in Nohra Block that has three forest beats, i.e., Nohra, Churas and Chhog Thali falling in Sirmaur District (Fig. 1) whereas the remaining 35% of the sanctuary area is in Pulbahal Block which has two forest beats namely Sarpat and Bharog and forms a part of district Shimla (Anonymous 1994–1995; Anonymous 2005–2006). Based on the altitude, aspect and climatic conditions, the sanctuary harbours a wide array of vegetation types ranging from anthropogenic grasslands in lower hill ranges to alpine meadows in the mountain peaks whereas the oak forests, moist deodar forests and western mixed conifer forests occupy the major portion of the middle hill ranges. Because of its rich floral elements in distinct altitudinal zonations including good faunal wealth, the area is spectacular and is quite important for detailed investigations.

MATERIAL AND METHODS

For complete botanical explorations and phytosociological studies for quantification of the floristic elements in different altitudinal zonations of the sanctuary, periodic field trips were undertaken starting

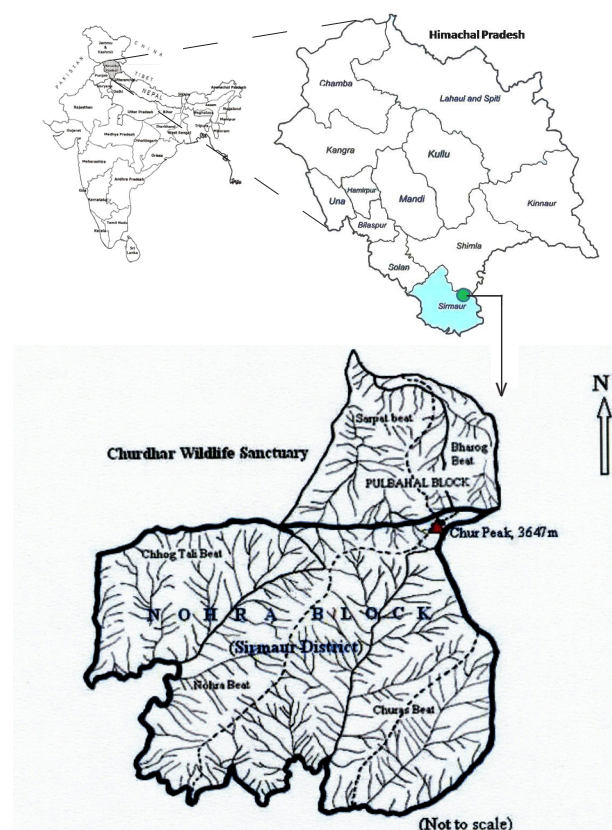


Figure 1. Churdhar Wildlife Sanctuary showing location of Nohra Block, Sirmaur District, Himachal Pradesh

from March 2002 till September 2008 in different forest types including macro- and micro-habitats. The voucher specimens thus collected, were identified using local Floras (Chowdhery & Wadhwa 1984; Polunin & Stainton 1984; Collett 1902; Kaur & Sharma 2004) and species identity was further confirmed by comparing the authentic specimens housed in DD Herbarium of Forest Research Institute and Herbarium of Botanical Survey of India, Dehra Dun. Families of the specimens are arranged following Bentham and Hooker's classification and under each family, species were arranged alphabetically with their recent botanical name, habit, flowering season, forest area and altitudinal zonations. During the process of verification of herbarium specimens and their screening with existing literature for their earlier records many taxa collected from Nohra Block of Sirmaur area as highlighted in the present attempt, turned out to be new additions to the flora of district Sirmaur, Himachal Pradesh. Voucher specimens for each species are also deposited in the herbarium of Himalayan Forest Research Institute (HFRI), Shimla.

RESULTS AND DISCUSSIONS

A total of 793 taxa with 748 angiosperms, eight gymnosperms and 37 pteridophytes belonging to 431 genera distributed under 143 families were collected during the survey period. A further scrutiny of the literature revealed that out of the total 756 species of phanerogams, 352 species representing 251 dicotyledons, 97 monocotyledons and four species of gymnosperms spread over to 85 families were hitherto unreported from district Sirmaur, Himachal Pradesh (Table 1). In this paper the floral elements from Nohra Block of CWS has been listed which forms new records for Sirmaur District, Himachal Pradesh. Kaur & Sharma (2004) in their earlier studies had documented only 911 taxa from district Sirmaur having a total geographical area of 2,825km², whereas, the outcome of the present intensive botanical investigation in CWS alone has yielded 756 taxa of flowering plants and conifers within the 66.70km² area of the sanctuary. It clearly reflects that this particular sanctuary is the citadel of plant diversity and accordingly, a number of plant lovers in the past, appreciated its ecological importance and subsequently developed an interest in this area, though they did not have much of the scientific data to explain its relevance. Hence, the present study besides, providing the firm scientific footing to the earlier accounts, has further pointed out that the focused approach for the management of the sanctuary is essentially required from its conservation point of view.

In this enumeration as carried out in the sanctuary, the dominant 10 families are Poaceae followed by Asteraceae, Orchidaceae, Cyperaceae, Ranunculaceae, Scrophulariaceae, Apiaceae, Papilionoideae, Rosaceae and Caprifoliaceae which contribute 45% of the total collections (Fig. 2). Though the habit of plants are exhibited in all life forms, herbaceous habit was found to be the most dominant among others, followed by shrubs, trees, climbers and others as shown in Fig. 3.

Out of the total 352 species, 35 taxa, viz., *Acer acuminatum*, *A. caesium*, *Aconitum laeve*, *Aconogonum rumicifolium*, *Arenaria festucoides*, *Bupleurum lanceolatum*, *Buxus wallichiana*, *Chaerophyllum reflexum* var. *acuminatum*, *Clematis barbellata*, *Cortusa brotheri*, *Corylus jacquemontii*, *Delphinium vestitum*, *Hedysarum microcalyx*, *Impatiens glauca*, *Jaeschkea canaliculata*, *Lindelofia longiflora*, *Meconopsis aculeata*, *Nepeta connata*, *Pedicularis bicornuta*, *P. hoffmeisteri*, *P. pectinata*, *P. pyramidata*, *Pleurospermum brunonis*, *P. candollei*, *Polygonum paronychioides*, *Primula reidii*, *Rhamnus procumbens*, *R. purpurea*, *Salix denticulata*, *Selinum vaginatum*, *Silene indica* var. *edgeworthii*, *S. laxantha*, *Syringa emodi*, *Trollius acaulis* and *Wulfeniopsis amherstiana* are endemic to western Himalaya, one of the mega endemic centres in India (Nayar 1996). *Acer caesium*, *Cypripedium cordigerum*, *C. himalaicum*, *Dioscorea deltoidea* and *Hedysarum microcalyx* included in the Red Data Book of Indian Plants (Nayar & Sastry 1987, 1990), were also collected from the study area. The images of live plants of some important species are shown in Images 1–55.

Dactylorhiza hatagirea and *Malaxis muscifera* (Critically Endangered); *Angelica glauca*, *Betula utilis*, *Meconopsis aculeata*, *Paris polyphylla* and *Polygonatum cirrhifolium* (Endangered); *Polygonatum verticillatum*, *Rhodiola heterodonta*, *Rhododendron anthopogon*, and *R. lepidotum* (Vulnerable) were also located in the study area as assessed regionally for Himachal Pradesh (Ved et al. 2003). *Taxus wallichiana* is assessed as Endangered and *Abies spectabilis* is assessed as Near Threatened by the IUCN Red List of Threatened Species (Thomas & Farjon 2011).

Though Churdhar Wildlife Sanctuary is a small study area when compared to the total geo-geographical area of Sirmaur District, it is certainly a potential hunting ground for continued floristic investigations so as to unearth new species and new distribution records. A knowledge of its flora and fauna is certainly of utmost significance in addition to other aspects of ecosystem functioning for better management of this protected area. This study also indicates the positive response of in situ

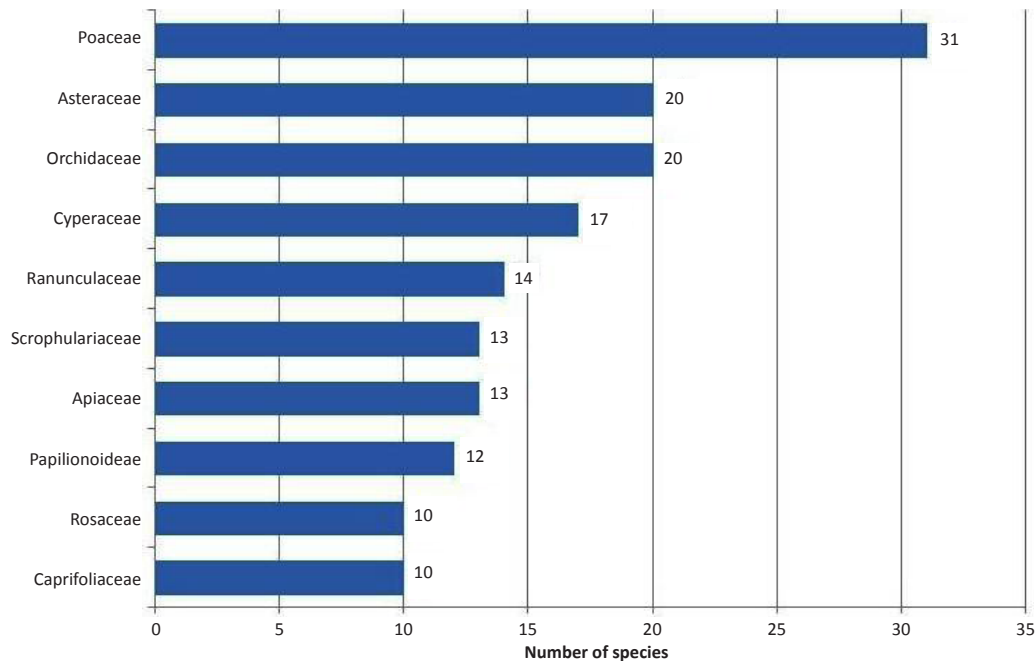


Figure 2. Ten dominant families with respect to species of the additions to the flora of Sirmaur District, Himachal Pradesh

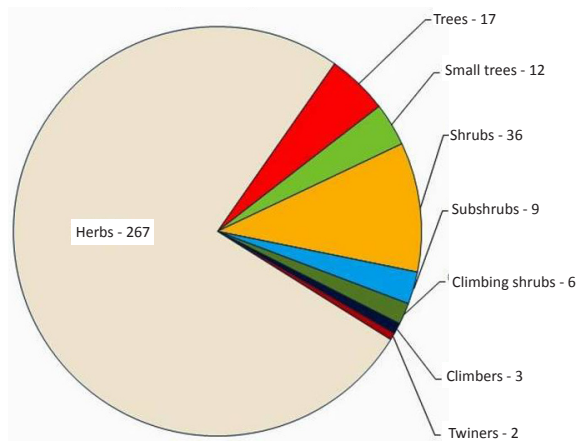


Figure 3. Habit wise break up of the additions to the flora of Sirmaur District, Himachal Pradesh (352 taxa)

conservation of ecosystems and natural habitats under protected area networking (Singh 2002) in Convention on Biological Diversity's (CBD) Article 8 which is one of the most widely accepted and practically approachable strategies to biodiversity conservation.

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Table 1. List of the plant species which are additions to the Flora of Sirmaur District, Himachal Pradesh.

	Botanical Name	Habit	HFRI collection no.	Flowering & fruiting	Altitudinal range (m)	Forest area	Remarks
Dicotyledons							
Ranunculaceae							
1	<i>Aconitum laeve</i> Royle	H	SPS 3526	July–Sept.	2950–3000	CT	Rare, in humus rich soil, under Fir, Oak forests
2	<i>Actaea spicata</i> L. var. <i>acuminata</i> (Wall. ex Royle) H. Hara	H	SPS 4173	June–Sept.	3200–3600	N, C	Rare, in subalpine meadows
3	<i>Aquilegia pubiflora</i> Wall. ex Royle	H	SPS 3583, 3675, 3779	May–July	2900–3200	CT	Occasional in mixed conifer forests
4	<i>Clematis barbellata</i> Edgew.	CS	SPS 4151	April–July	2600–3100	N	Occasional along waysides
5	<i>Delphinium vestitum</i> Wall. ex Royle	H	SPS 3960, 4042	June–Sept.	2800–3600	N	Frequent, in subalpine meadows
6	<i>Ranunculus adoxifolius</i> Hand.-Mazz.	H	SPS 3841	May–Aug.	3000–3450	N, CT	Occasional, in damp places of alpine and subalpines
7	<i>Ranunculus pulchellus</i> C.A. Mey.	H	SPS 4383	May–July	2900–3450	N	Common, in wet and marshy habitats
8	<i>Ranunculus trichophyllus</i> Chaix ex Vill.	H	SPS 4301	May–Sep.	2300–2600	C	Rare, in marshy habitats
9	<i>Thalictrum alpinum</i> L.	H	SPS 3708, 4007	June–July	3150–3550	N, C	Frequent, in alpinus below Chur peak
10	<i>Thalictrum cultratum</i> Wall.	H	SPS 3858	June–Sep.	3000–3640	N	Common, among boulders below Chur peak
11	<i>Thalictrum minus</i> L.	H	SPS 3723	May–July	2800–3100	C	Rare, among rocky crevices, Churas beat
12	<i>Thalictrum pedunculatum</i> Edgew.	H	SPS 3574	April–Aug.	2900–3400	N	Rare, among boulders, below Chur peak
13	<i>Thalictrum reniforme</i> Wall.	H	SPS 4052, 4302	June–Oct.	2600–3150	N, CT	Rare, inhabits damp places
14	<i>Trollius acaulis</i> Lindl.	H	SPS 3630	June–Aug.	3300–3600	CT	Rare, in alpine slopes
Berberidaceae							
15	<i>Berberis aristata</i> DC.	S	SPS 4021	April–May	2000–2600	C	Occasional, in the outskirts of forests
16	<i>Berberis coriaria</i> Royle ex Lindl.	S	SPS 3518	April–June	1900–2400	CT	Occasional, in the outskirts of forests
17	<i>Berberis jaeschkeana</i> C.K. Schneid.	S	SPS 3617, 3714	May–July	2900–3400	N, C	Frequent, above timber–line and in sub–alpine scrub
Papaveraceae							
18	<i>Meconopsis aculeata</i> Royle	H	SPS 3695, 3727	June–Sep.	2900–3400	N, C	Rare, found in moist, rock crevices
Fumariaceae							
19	<i>Corydalis vaginans</i> Royle	H	SPS 3752, 3974	April–June	3200–3500	C, CT	Occasional, in subalpine meadows
Brassicaceae							
20	<i>Arabis pterosperma</i> Edgew.	H	SPS 4435	Mar.–June	2900–3300	N, CT	Occasional, in moist localities
21	<i>Cardamine macrophylla</i> Willd.	H	SPS 3872	May–July	2900–3300	N	Rare, in moist places, stony slopes
22	<i>Crucihimalaya stricta</i> (Cambess.) Al-Shehbaz, O’Kane & R.A. Prince	H	SPS 3847	June–July	1500–3000	N	Frequent, in shady places along waysides
23	<i>Thlaspi arvense</i> L.	H	SPS 4305	April–July	2600–2900	CT	Occasional, in exposed slopes, outskirts of forests
24	<i>Thlaspi cochleariforme</i> DC.	H	SPS 4033	June–Aug.	2900–3200	C	Occasional, under Kharshu oak forests
Violaceae							
25	<i>Viola betonicifolia</i> Sm.	H	SPS 4009	July–Aug.	2650–2900	N	Rare, in exposed stony slopes
26	<i>Viola pilosa</i> Blume	H	SPS 3666	April–Sep.	2800–3050	N	Occasional, in shady places, stony slopes
Polygalaceae							
27	<i>Polygala crotalaroides</i> Buch.-Ham. ex DC.	H	SPS 4446	July–Sep.	1900–2200	C	Common, in grassy slopes, and in foothills
28	<i>Polygala hottentotta</i> C.Presl.	H	SPS 3903	May–Sep.	2100–2300	CT	Occasional, in exposed stony slopes

	Botanical Name	Habit	HFRI collection no.	Flowering & fruiting	Altitudinal range (m)	Forest area	Remarks
Caryophyllaceae							
29	<i>Arenaria festucoides</i> Benth.	H	SPS 3533	July–Sep.	3150–3450	N	Occasional, in dripping slopes at alpine meadows
30	<i>Lepyrodiclis holosteoides</i> (C.A. Mey.) Fenzl ex Fisch. & C.A. Mey.	H	SPS 3746	June–July	3000–3400	N	Frequent, moist, shady places in subalpine scrub
31	<i>Myosoton aquaticum</i> (L.) Moench	H	SPS 4503	May–Oct.	2200–3200	N	Common, in moist, shady localities
32	<i>Silene indica</i> (Roxb.) Roxb. ex Otth	H	SPS 3722, 3627	July–Oct.	2900–3250	CT	Frequent, under shrubberies of temperate forests
33	<i>Silene indica</i> (Roxb.) Roxb. ex Otth var. <i>edgeworthii</i> (Bacquet) Y.J. Nasir	H	SPS 3783	Aug.–Oct.	2100–3000	N	Frequent, under shrubberies of Deodar forests
34	<i>Silene laxantha</i> Majumdar	H	SPS 3778, 3862	June–Aug.	3000–3250	N	Rare, under <i>Rhododendron</i> forests
35	<i>Silene viscosa</i> (L.) Pers.	H	SPS 3782	May–Aug.	3050–3300	CT	Frequent, in subalpine slopes
36	<i>Silene vulgaris</i> (Moench) Garcke	H	SPS 3674	April–Aug.	2800–3050	N, CT	Occasional, in exposed slopes, shady places
37	<i>Stellaria monosperma</i> Buch.-Ham. ex D. Don	H	SPS 3784	July–Aug.	2800–3100	N	Frequent, in humus covered grounds under conifer forests
Hypericaceae							
38	<i>Hypericum choisianum</i> Wall. ex N. Robson	S	SPS 3957	June–Sep.	2400–2900	N, C	Rare, in outskirts of forests
39	<i>Hypericum dyeri</i> Rehder	SS	SPS 3504	April–Aug.	2200–2450	CT	Rare, in deep slopes, rocky places
40	<i>Hypericum perforatum</i> L.	H	SPS 3997	April–Sep.	2100–2500	CT	Rare, in shady places under shrubberies
Malvaceae							
41	<i>Malva neglecta</i> Wallr.	H	SPS 4542	May–Sep.	2200–3100	CT	Frequent, in waysides, heavy grazed forest areas
Geraniaceae							
42	<i>Erodium cicutarium</i> (L.) L' Her.	H	SPS 4561	July–Aug.	3000–3200	C	Occasional, in damp places
43	<i>Geranium robertianum</i> L.	H	SPS 4512	June–Sep.	2200–2450	C, CT	Occasional, in moist slopes
Balsaminaceae							
44	<i>Impatiens amplexicaulis</i> Edgew.	H	SPS 3834, 3956	July–Sep.	2900–3200	N	Frequent, a moisture loving plant, on dripping slopes
45	<i>Impatiens arguta</i> Hook.f. & Thomson	H	SPS 4069	July–Sep.	2600–3100	N, CT	Occasional, in shady places and on decayed woods
46	<i>Impatiens brachycentra</i> Kar. & Kir.	H	SPS 3895	Aug.–Sep.	1900–2100	N	Common, along water channels
47	<i>Impatiens glandulifera</i> Royle	H	SPS 3973	July–Sep.	2400–3100	N, CT	Common, along water channels, damp places
48	<i>Impatiens glauca</i> Hook.f. & Thomson	H	SPS 3534	July–Aug.	3200–3350	C	Rare, recorded only few individuals at dry alpine slopes
49	<i>Impatiens laxiflora</i> Edgew.	H	SPS 3587	June–Sep.	2800–3200	N	Frequent, in moist, shady places
50	<i>Impatiens racemosa</i> DC.	H	SPS 4514	July–Oct.	2500–3000	N	Frequent, in moist, shady places
51	<i>Impatiens sulcata</i> Wall.	H	SPS 3800	July–Sep.	2700–3100	N	Occasional, in moist places
Rutaceae							
52	<i>Skimmia laureola</i> (DC.) Sieb. & Zucc. ex Walp.	S	SPS 4022, 4311	April–June	2600–3100	N, C, CT	Rare, under conifer forests
Simaroubaceae							
53	<i>Ailanthus altissima</i> (Mill.) Swingle	ST	SPS 4511	May–Sep.	1900–2200	C, CT	Occasional, along nallahs
Celastraceae							
54	<i>Euonymus echinatus</i> Wall.	CS	SPS 3928	April–Oct.	2400–3450	C	Frequent, creeping over dead trees, moist rocks
55	<i>Euonymus hamiltonianus</i> Wall.	ST	SPS 3877, 3942, 4010	June–Sep.	2900–3200	N, CT	Occasional, under conifer forests
56	<i>Euonymus lucidus</i> D. Don	T	SPS 3901	April–July	2600–3000	N	Occasional, under Oak forests
Rhamnaceae							
57	<i>Rhamnus procumbens</i> Edgew.	S	SPS 3642	May–Oct.	2400–2650	C, CT	Occasional, on exposed rocky slopes
58	<i>Rhamnus purpurea</i> Edgew.	S	SPS 3532, 3656, 4008	May–July	1900–2200	N	Rare, under Oak forests

	Botanical Name	Habit	HFRI collection no.	Flowering & fruiting	Altitudinal range (m)	Forest area	Remarks
Vitaceae							
59	<i>Tetrastigma serrulatum</i> (Roxb.) Planch.	CS	SPS 4441	Aug.–Nov.	1900–2150	C	Frequent, spreading over on moist rocks in slopes
Leeaceae							
60	<i>Leea asiatica</i> (L.) Ridsdale	D	SPS 4318	July–Dec.	1900–2000	C	Occasional, foothills along water-bodies
Hippocastanaceae							
61	<i>Aesculus indica</i> (Wall. ex Cambess.) Hook.	T	SPS 4088	June–Sep.	2650–2900	CT	Rare, along water channels
Aceraceae							
62	<i>Acer acuminatum</i> Wall. ex D. Don	ST	SPS 4029	Feb.–May	2450–2900	N, C	Rare, under conifer forests
63	<i>Acer caesium</i> Wall. ex Brandis	T	SPS 3915	Mar.–Oct.	2650–3150	N	Rare, under Oak forests
64	<i>Acer cappadocicum</i> Gled.	ST	SPS 4030	Mar.–June	2700–3200	C	Rare, in open hilly slopes
65	<i>Acer pentapomicum</i> Stewart ex Brandis	T	SPS 3659, 3869	April–July	2650–2900	N	Rare, under Oak forests
Staphyleaceae							
66	<i>Staphylea emodi</i> Wall.	S	SPS 3581	April–July	2900–3200	N	Occasional, associated with <i>Rhododendron campanulatum</i> and Kharshu oaks
Anacardiaceae							
67	<i>Toxicodendron wallichii</i> (Hook. f.) Kuntze	T	SPS 4549	June–Oct.	1900–2150	C	Occasional, in conifers and broad leaved mixed forests
Papilionoideae							
68	<i>Caragana brevispina</i> Benth.	S	SPS 4535	June–Aug.	2550–2800	CT	Occasional, under Deodar forests
69	<i>Hedysarum microcalyx</i> Baker	H	SPS 3906	June–Aug.	2700–3000	CT	Rare, along stream sides, wet slopes
70	<i>Indigofera heterantha</i> Brandis	SS	SPS 3898	May–Sep.	1900–2500	N	Common, in open slopes
71	<i>Indigofera hebeptala</i> Baker	SS	SPS 3810	May–Aug.	2400–2650	N	Occasional, in shady places
72	<i>Lathyrus emodi</i> (Fritsch) Ali	H	SPS 4034	April–May	2400–2650	CT	Occasional, in foothills and with waysides
73	<i>Piptanthus nepalensis</i> (Hook.) D. Don	S	SPS 4086	Mar.–May	2700–2950	C	Occasional, under mixed conifer forests
74	<i>Sophora mollis</i> (Royle) Baker	S	SPS 4313	May–July	1900–2150	C	Rare, in foothills, hill slopes, associated with Ban oak forests
75	<i>Trifolium dubium</i> Sibth.	H	SPS 3711	April–July	2400–3000	N	Common, in moist, shady places
76	<i>Trifolium pratense</i> L.	H	SPS 3672, 3678	May–Sep.	2300–3400	N	Common, in moist, shady places
77	<i>Trigonella emodi</i> Benth.	H	SPS 4567	June–Sep.	3150–3370	CT	Common, along pathways
78	<i>Trigonella gracilis</i> Benth.	H	SPS 4527	July–Sep.	3200–3450	N, C	Common, along pathways
79	<i>Vicia tenera</i> Benth.	Cl	SPS 3921	April–June	2200–2450	N	Occasional, in the forest outskirts
Caesalpinioideae							
80	<i>Chamaecrista nomame</i> (Sieber) H. Ohashi	H	SPS 3950	July–Oct.	1900–2200	N	Common, in exposed hilly slopes
Rosaceae							
81	<i>Agrimonia pilosa</i> Ledeb.	H	SPS 4163	July–Sep.	1900–2200	N	Common, under shrubberies in conifers and Oak forests.
82	<i>Cerasus cerasoides</i> (Buch.-Ham. ex D. Don) S.Y. Sokolov	ST	SPS 4423	April–May	1900–2550	C, CT	Occasional, in open hilly sides, associated with <i>Lyonia</i> and Ban oaks.
83	<i>Cotoneaster bacillaris</i> Wall. ex Lindl.	S	SPS 3565	May–Oct.	2450–2900	N	Occasional, along with waysides
84	<i>Cotoneaster roseus</i> Edgew.	S	SPS 3616	May–Aug.	2950–3400	C	Occasional, associated with <i>Rosa macrophylla</i> , <i>Viburnum</i> spp.
85	<i>Filipendula vestita</i> (Wall. ex G. Don) Maxim.	H	SPS 4357	July–Sep.	3400–3650	N	Occasional, in subalpine shrubbies open slopes below Chur peak
86	<i>Potentilla fruticosa</i> L. var. <i>arbuscula</i> (D. Don) Maxim.	H	SPS 3698	June–Sep.	2950–3500	N	Frequent, in open alpine slopes below Chur peak
87	<i>Potentilla supina</i> L.	H	SPS 3507, 3641	July–Aug.	3000–3400	C	Frequent, in open alpine slopes below Chur peak
88	<i>Rosa macrophylla</i> Lindl. var. <i>minor</i> Lindl. ex Wall.	CS	SPS 3609	May–Oct.	2650–3150	N	Rare, with shrubberies under Kharshu oak and conifer forests

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89	<i>Rubus paniculatus</i> Sm.	CS	SPS 4454	April–July	2300–2550	C	Occasional, in forest outskirts, Ban oak forests
90	<i>Sorbaria tomentosa</i> (Lindl.) Rehder	S	SPS 3867	May–July	2200–2550	N	Frequent, in foothills, moist slopes
Saxifragaceae							
91	<i>Astilbe rivularis</i> Buch.-Ham. ex D. Don	H	SPS 4534	June–Aug.	3050–3300	N, C, CT	Frequent, as shrubbies in moist, shady places
92	<i>Saxifraga brachypoda</i> D. Don	H	SPS 4000	June–Sep.	3400–3600	N	Rare, on wet rocks and in alpine meadows
93	<i>Saxifraga brunonis</i> Wall. ex Ser.	H	SPS 4040, 3806	July–Sep.	2900–3200	N, CT	Occasional, in moist, shady places
94	<i>Saxifraga moorcroftiana</i> (Ser.) Wall. ex Sternb.	H	SPS 3594	July–Sep.	3200–3600	N, C	Rare, in alpine meadows below Chur peak
95	<i>Saxifraga mucronulata</i> Royle	H	SPS 3540	July–Sep.	3200–3600	N	Rare, in alpine meadows
96	<i>Saxifraga pallida</i> Wall. ex Ser.	H	SPS 3739	June–Aug.	3000–3200	N	Occasional, on wet rocks
97	<i>Saxifraga sibirica</i> L.	H	SPS 4142	June–Aug.	2700–3400	N	Occasional, on dripping rocky slopes
Philadelphaceae							
98	<i>Deutzia corymbosa</i> R.Br. ex G. Don	S	SPS 4420	May–Aug.	2450–2900	C	Rare, in exposed, hilly slopes
Grossulariaceae							
99	<i>Ribes alpestre</i> Wall. ex Decne.	S	SPS 3603	Aug.–Sep.	2950–3200	N	Rare, spreading over on exposed rocks below Chur peak
100	<i>Ribes glaciale</i> Wall.	S	SPS 3568, 3717, 3853, 3863	June–July	2950–3600	N, C	Rare, spreading over on exposed rocks below Chur peak
101	<i>Ribes orientale</i> Desf.	S	SPS 3572	July–Sep.	3200–3450	CT	Rare, on spreading over exposed rocks below Chur peak
Crassulaceae							
102	<i>Hylotelephium ewersii</i> (Ledeb.) H. Ohba	H	SPS 4003, 4183	July–Sep.	2900–3600	N	Frequent, on wet rocks in alpine and subalpine meadows
103	<i>Rhodiola heterodonta</i> (Hook. f. & Thomson) Boriss.	H	SPS 3852	June–Aug.	2900–3600	N	Rare, in alpine meadows
104	<i>Rhodiola himalensis</i> (D. Don) S.H. Fu	H	SPS 3619	June–Sep.	3200–3640	N	Rare, in alpine meadows
105	<i>Rhodiola tibetica</i> (Hook. f. & Thomson) S.H. Fu	H	SPS 3947	July–Sep.	3150–3400	CT	Rare, in alpine meadows below Chur peak
106	<i>Rhodiola wallichiana</i> (Hook.) S.H. Fu	H	SPS 3988	July–Sep.	3000–3550	N, CT	Rare, in alpine meadows below Chur peak
107	<i>Rosularia adenotricha</i> (Wall. ex Edgew.) C.A. Jansson	H	SPS 3892	May–June	2700–3450	N	Occasional, on wet rocks
Lythraceae							
108	<i>Rotala rotundifolia</i> (Buch.-Ham. ex Roxb.) Koehne	H	SPS 4501	Mar.–June	1900–2300	N	Occasional, in damp places
Onagraceae							
109	<i>Circaea alpina</i> L. subsp. <i>imaicola</i> (Asch. & Magnus) Kitam.	H	SPS 4074, 4343	July–Sep.	2900–3400	N, C	Occasional, along water courses
110	<i>Epilobium brevifolium</i> D. Don	H	SPS 3769	June–Aug.	2450–3500	N	Occasional, in degraded forest slopes
111	<i>Epilobium cylindricum</i> D. Don	H	SPS 4448	Aug.–Oct.	2400–3200	N	Frequent, in exposed slopes, grazed areas
112	<i>Epilobium latifolium</i> L.	H	SPS 4368	June–Sep.	2150–3200	N	Common, along water courses in alpine meadows
113	<i>Epilobium laxum</i> Royle	H	SPS 3721, 3726, 3986	July–Oct.	3150–3600	N	Occasional, in shady places, under shrubberies
114	<i>Epilobium royleanum</i> Hausskn.	H	SPS 4317	Aug.–Nov.	2400–3600	N	Frequent, in damp places
Cucurbitaceae							
115	<i>Solena amplexicaulis</i> (Lam.) Gandhi	Cl	SPS 4444	May–Aug.	1900–2100	C	Frequent, on thickets, forest outskirts
Apiaceae							
116	<i>Acronema hookeri</i> (C.B. Clarke) H. Wolff	H	SPS 4161	June–July	3400–3550	N	Rare, in alpine meadows
117	<i>Angelica glauca</i> Edgew.	H	SPS 3843	July–Aug.	2900–3400	C	Rare, in subalpine slopes
118	<i>Bupleurum aitchisonii</i> H. Wolff	H	SPS 3991, 4072	July–Sep.	3000–3400	C	Rare, among rock boulders, below Chur peak

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119	<i>Bupleurum falcatum</i> L.	H	SPS 4299	May–Sep.	2150–3200	N	Common, in shady places under Deodar forests
120	<i>Bupleurum lanceolatum</i> Wall. ex DC.	H	SPS 3516	July–Oct.	2150–2900	N	Frequent, in shady places under Deodar forests
121	<i>Bupleurum maddenii</i> C.B. Clarke	H	SPS 3505	May–July	3150–3400	N, C, CT	Rare, between boulders, below Chur peak
122	<i>Chaerophyllum reflexum</i> var. <i>acuminatum</i> (Lindl.) Hedge & Lamond	H	SPS 4364	June–Sep.	2700–3370	N	Frequent, in moist, exposed slopes
123	<i>Chaerophyllum villosum</i> Wall. ex DC.	H	SPS 3912	June–Aug.	2450–3150	N	Common, in moist, exposed slopes
124	<i>Pleurospermum brunonis</i> Benth. ex C.B. Clarke	H	SPS 3967, 4024, 4066	July–Sep.	3150–3600	N	Rare, in alpine meadows and in open rocky crevices
125	<i>Pleurospermum candollei</i> Benth. ex C.B. Clarke	H	SPS 3512	July–Sep.	3400–3640	N	Rare, in alpine slopes, between boulders, Nohra beat
126	<i>Pleurospermum stellatum</i> (D. Don) Benth. ex C.B. Clarke	H	SPS 3924	July–Sep.	3400–3640	N	Rare, in alpine meadows
127	<i>Selinum vaginatum</i> C.B. Clarke	H	SPS 3976, 4038	July–Sep.	2900–3300	N, C	Rare, in subalpine scrub and slopes
128	<i>Seseli libanotis</i> (L.) Koch	H	SPS 3859	July–Sep.	2900–3200	N	Occasional, among boulders below Chur peak
Cornaceae							
129	<i>Cornus macrophylla</i> Wall.	T	SPS 3547, 3555	July–Aug.	2400–2700	N, CT	Occasional, along water channels at foothills
Alangiaceae							
130	<i>Alangium chinense</i> (Lour.) Harms	ST	SPS 4185	Mar.–July	2150–2400	C	Occasional, in outskirts of forests
Caprifoliaceae							
131	<i>Leycesteria formosa</i> Wall.	S	SPS 4087, 4319	May–July	2650–2900	N, CT	Frequent, shrubbies under Oak forests
132	<i>Lonicera angustifolia</i> Wall. ex DC.	SS	SPS 4565	May–Oct.	2500–3100	C	Occasional, in exposed forests
133	<i>Lonicera asperifolia</i> Hook. f. & Thomson	S	SPS 3562	May–July	2900–3300	N	Occasional, spreading over rocks at subalpine meadows
134	<i>Lonicera hispida</i> Pall. ex Roem. & Schult. var. <i>bracteata</i> (Royle) Rehder ex Airy Shaw	S	SPS 3530	July–Sep.	2900–3200	N	Occasional, spreading over rocks at subalpine meadows
135	<i>Lonicera hypoleuca</i> Decne.	S	SPS 3710	June–Oct.	2550–2900	N, C	Frequent, hanging over on stony slopes
136	<i>Lonicera obovata</i> Royle	S	SPS 3613, 3741, 4141	Mar.–July	2950–3600	N	Rare, on spreading over rocks in alpine meadows
136	<i>Lonicera orientalis</i> Lam.	S	SPS 4116	June–Aug.	2700–3300	N	Occasional, in exposed stony slopes
137	<i>Lonicera quinquelocularis</i> Hardw.	S	SPS 3593	June–Sep.	2400–2900	N, CT	Frequent, in Oaks & conifer forest slopes
139	<i>Lonicera webbiana</i> Wall. ex DC.	S	SPS 4559	July–Aug.	2650–3200	N, C	Rare, in forest outskirts
140	<i>Viburnum mullaha</i> Buch.-Ham. ex D. Don	S	SPS 3543, 3586, 3873, 3899	Sep.–Oct.	2100–2400	N, CT	Frequent, along water–channels
Rubiaceae							
141	<i>Argostemma verticillatum</i> L.	H	SPS 4361	Aug.–Oct.	2150–2500	C	Common, in moist stony slopes
142	<i>Neanotis hirsuta</i> (L.f.) W.H. Lewis	H	SPS 4416	July–Oct.	1900–2100	N, C	Common, foothills and in open grasslands
Valerianaceae							
143	<i>Valeriana hardwickii</i> Wall.	H	SPS 4098, 4362, 4089, 4341	May–Sep.	2400–2700	N	Rare, in shady places under conifer forests
Asteraceae							
144	<i>Ainsliaea aptera</i> DC.	H	SPS 3914	Mar.–Sep.	2650–3100	N	Rare, in humus rich soils, under shrubberies
145	<i>Ainsliaea latifolia</i> (D. Don) Sch. Bip.	H	SPS 4366	Mar.–May	2000–3100	N	Frequent, in humus rich soils, under Deodar & Kharshu oak forests
146	<i>Anaphalis nepalensis</i> (Spreng.) Hand.-Mazz.	H	SPS 3990	June–Sep.	3300–3600	N	Frequent, in alpine meadows
147	<i>Anaphalis triplinervis</i> (Sims) Sims ex C.B. Clarke	H	SPS 4294	July–Sep.	2900–3600	N	Common, in alpine meadows

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148	<i>Artemisia indica</i> Willd.	H	SPS 3994	July–Oct.	1900–2800	C	Frequent, in exposed hilly slopes, grazed areas
149	<i>Aster molliusculus</i> (Lindl. ex DC.) C.B. Clarke	H	SPS 3668	May–Sep.	2200–2900	N	Common, in exposed waste places
150	<i>Bidens tripartita</i> L.	H	SPS 4293	Aug.–Oct.	1900–2400	N	Common, in waste places and in exposed slopes
151	<i>Carpesium cernuum</i> L.	H	SPS 4187	July–Sep.	1900–2150	C	Frequent, along roadsides and pathways
152	<i>Cephalorrhynchus macrorhizus</i> (Royle) Tuisl	H	SPS 3962, 4047	June–Sep.	2900–3600	N	Rare, in alpine slopes, rocky crevices
153	<i>Erigeron alpinus</i> L.	H	SPS 4252	May–Sep.	2900–3600	N, C	Common, in exposed slopes and in subalpine meadows
154	<i>Erigeron multiradiatus</i> (Lindl. ex DC.) C.B. Clarke	H	SPS 4320	April–Sep.	2200–2900	N, C, CT	Common in exposed slopes and in shady places
155	<i>Gerbera gossypina</i> (Royle) Beauv.	H	SPS 4412	May–Sep.	2000–2900	N, C, CT	Common, in moist, open hilly slopes
156	<i>Lactuca brunoniana</i> (Wall. ex DC.) C.B. Clarke	H	SPS 4084	June–Oct	2450–3100	N, C, CT	Frequent, in humus rich soils, shady places
157	<i>Ligularia amplexicaulis</i> DC.	H	SPS 4064, 4291	July–Oct	2650–3100	N, C, CT	Common, under <i>Abies spectabilis</i> forests
158	<i>Saussurea auriculata</i> (DC.) Sch. Bip.	H	SPS 3519	July–Sep.	2950–3400	N,	Frequent, in alpine slopes
159	<i>Saussurea piptathera</i> Edgew.	H	SPS 4045	July–Sep.	3200–3600	N	Common, in alpine and subalpine meadows below Chur peak
160	<i>Saussurea taraxacifolia</i> Wall. ex DC.	H	SPS 3520, 4063	July–Sep.	3150–3640	N, C	Common, in alpine meadows below Chur peak
161	<i>Senecio kunthianus</i> Wall. ex DC.	H	SPS 4044	July–Sep.	3150–3640	N, C, CT	Common, in alpine meadows below Chur peak
162	<i>Senecio rufinervis</i> DC.	H	SPS 3508	Aug.–Oct.	2400–3150	N, C, CT	Frequent, in Conifer–Kharshu oak forests
163	<i>Tanacetum longifolium</i> Wall. ex DC.	H	SPS 4458	July–Oct.	2900–3600	N, C, CT	Common, in alpine meadows
Campanulaceae							
164	<i>Campanula argyrotricha</i> Wall. ex A. DC.	H	SPS 3876	May–Sep.	2950–3400	N	Rare, on rocky crevices below Chur peak
165	<i>Campanula latifolia</i> L.	H	SPS 3808	June–Sep.	2400–2900	N, C, CT	Frequent, under shrubberies in conifer forests
Ericaceae							
166	<i>Cassiope fastigiata</i> (Wall.) D. Don	H	SPS 3701, 3992	June–Sep.	3000–3600	N	Frequent, on wet rocks in alpine scrub
167	<i>Gaultheria trichophylla</i> Royle	H	SPS 3954	June–Aug.	3150–3600	N	Common, in alpine slopes
168	<i>Lyonia ovalifolia</i> (Wall.) Drude	T	SPS 3998	May–July	1900–2800	N, C, CT	Common, in association with Ban oaks & <i>Rhododendron arboreum</i>
169	<i>Rhododendron anthopogon</i> D. Don	S	SPS 3558, 3980, 4028	June–Sep.	3150–3500	N	Rare, in subalpine scrub
170	<i>Rhododendron lepidotum</i> Wall. ex G. Don	S	SPS 3622, 3706	June–Oct.	3150–3600	N	Rare, in subalpine scrub, rocky crevices
Primulaceae							
171	<i>Androsace sempervivoides</i> Jacq. ex Duby	H	SPS 4288	April–July	2400–2700	N	Occasional, in subalpine, alpine slopes
172	<i>Cortusa brotheri</i> Pax ex Lipsky	H	SPS 3513	July–Aug.	3000–3300	N	Rare, in shady places, in ledges of rocks below Chur peak
173	<i>Lysimachia ferruginea</i> Edgew.	H	SPS 3628, 3918, 3936	June–Aug.	1900–2450	N, C	Frequent, in dripping slopes, along rivulets
174	<i>Primula involucrata</i> Wall. ex Duby	H	SPS 3522	July–Sep.	3200–3600	N	Occasional, wet places, in alpine meadows
175	<i>Primula petiolaris</i> Wall.	H	SPS 3502, 3932	April–Sep.	2900–3400	N, C	Occasional, in wet places, alpine meadows
176	<i>Primula reidii</i> Duthie	H	SPS 3734, 4048	June–Aug.	3000–3400	N, CT	Rare, shady places in subalpine scrub
Myrsinaceae							
177	<i>Myrsine semiserrata</i> Wall.	H	SPS 3734, 4048	Sep.–Nov.	2000–2300	C, CT	Occasional, in foothills and in Ban oak forests
Oleaceae							
178	<i>Chionanthus ramiflorus</i> Roxb.	ST	SPS 3689	April–Aug.	2600–2800	C	Rare, along rivulets

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179	<i>Syringa emodi</i> Wall. ex Royle	ST	SPS 4337	May–July	2900–3400	N	Common, associated with <i>Betula–Rhododendron</i> forests
Asclepiadaceae							
180	<i>Pergularia roylei</i> (Wight) D. Dietr.	CS	SPS 3913	May–Sep.	2000–2200	CT	Occasional, at foothills on thickets, Deodar and Ban oak forests
Gentianaceae							
181	<i>Comastoma tenellum</i> (Rottb.) Toyok.	H	SPS 4523	July–Sep.	2950–3300	N	Common in alpine meadows
182	<i>Gentianopsis paludosa</i> (Hook.f.) Ma	H	SPS 3523	July–Sep.	2900–3400	N	Frequent, in open alpine slopes
183	<i>Halenia elliptica</i> D.Don	H	SPS 3794, 4051	Aug.–Sep.	2400–3300	N, CT	Frequent, in alpine and subalpine slopes
184	<i>Jaeschkea canaliculata</i> (Royle ex G.Don) Knobl.	H	SPS 4287	July–Sep.	2950–3200	N	Frequent, in subalpine slopes
185	<i>Swertia alternifolia</i> Royle	H	SPS 3750	Aug.–Sep.	3150–3370	N	Rare, in subalpines under <i>Rhododendron campanulatum</i> forests
186	<i>Swertia ciliata</i> (D.Don ex G. Don) B.L. Burt	H	SPS 3549, 3550	Aug.–Nov.	2150–3300	N, CT	Common, in grassy slopes and in exposed places
187	<i>Swertia cuneata</i> Wall. ex D.Don	H	SPS 3748, 4157	Aug.–Sep.	3150–3600	N, C	Frequent, in alpine meadows, below Chur peak
188	<i>Swertia speciosa</i> D.Don	H	SPS 3535	Aug.–Sep.	2900–3600	N	Common, in subalpine and alpine meadows
Polemoniaceae							
189	<i>Polemonium caeruleum</i> L.	H	SPS 3538, 3751, 3849	July–Sep.	2900–3300	N, C, CT	Frequent, under <i>Rhododendron–Betula</i> forests
Boraginaceae							
190	<i>Cynoglossum microglochin</i> var. <i>nervosum</i> (Benth. ex C.B. Clarke) Y.J. Nasir	H	SPS 3720, 4061	June–Sep.	2400–3300	N, C	Frequent, in alpine slopes, below Chur peak
191	<i>Hackelia uncinata</i> (Benth.) C.E.C. Fisch.	H	SPS 3985	July–Sep.	2400–3100	N, C, CT	Common, humus rich soil, under shrubberies in conifer forests
192	<i>Lindelofia longiflora</i> (Benth.) Baill.	H	SPS 4254	July–Sep.	2600–3300	N, C, CT	Common, in alpine meadows
193	<i>Mertensia racemosa</i> Benth. ex C.B. Clarke	H	SPS 4037	June–Sep.	2900–3200	N	Frequent, in subalpine scrub
194	<i>Myosotis sylvatica</i> Ehrh. ex Hoffm.	H	SPS 3770	April–Sep.	2650–3150	N, C, CT	Common, in shrubberies under <i>Abies spectabilis</i> forests
Solanaceae							
196	<i>Solanum pseudocapsicum</i> L.	H	SPS 4375	July–Sep.	1900–2200	C	Occasional, along roadsides and waysides
Scrophulariaceae							
196	<i>Hemiphragma heterophyllum</i> Wall.	H	SPS 3524, 4140	June–Sep.	2200–2900	N, C, CT	Frequent, in shady places under conifer forests
197	<i>Leptorhabdos parviflora</i> (Benth.) Benth.	H	SPS 4536	July–Oct.	1900–2300	N	Frequent, at foothills and grazed areas
198	<i>Pedicularis bicornuta</i> Klotzsch	H	SPS 3729	July–Aug.	3100–3400	N	Frequent, in damp places below Chur peak
199	<i>Pedicularis gracilis</i> Wall. ex Benth.	H	SPS 3977, 4168	July–Sep.	2800–3100	N, C, CT	Common, in subalpine slopes under shrubberies
200	<i>Pedicularis hoffmeisteri</i> Klotzsch	H	SPS 4060, 3768, 4166	July–Sep.	2900–3500	N, C, CT	Frequent, in damp places below Chur peak
201	<i>Pedicularis longiflora</i> Rudolph var. <i>tubiformis</i> (Klotzsch) Tsoong	H	SPS 4071	June–Sep.	3100–3300	CT	Rare, in alpine meadows
202	<i>Pedicularis pectinata</i> Wall. ex Benth.	H	SPS 3715, 4059, 4136	July–Sep.	2900–3500	N, C, CT	Common, in open alpine slopes, damp places
203	<i>Pedicularis punctata</i> Decne.	H	SPS 4150	July–Sep.	3100–3500	N	Common, in alpine slopes, wet habitats
204	<i>Pedicularis pyramidata</i> Royle ex Benth.	H	SPS 3743, 4137	July–Sep.	3400–3600	N, C, CT	Frequent, under subalpine scrub
205	<i>Veronica alpina</i> L. subsp. <i>pumila</i> (All.) Dostal	H	SPS 3728	June–Aug.	2900–3400	CT	Common, in subalpine slopes
206	<i>Veronica biloba</i> L.	H	SPS 4505	May–Sep.	2400–3300	N, C	Common, in moist places, along water channels
207	<i>Veronica melissifolia</i> Desf. ex Poir.	H	SPS 4569	June–Aug.	2700–3000	N, C, CT	Common, in subalpine slopes and shrubberies

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208	<i>Wulfeniopsis amherstiana</i> (Benth.) D.Y. Hong	H	SPS 4171	June–Aug.	2700–3150	CT	Frequent, in humus rich soils under conifers, Oak forests
Orobanchaceae							
209	<i>Orobanche alba</i> Stephan	H	SPS 3822	July–Sep.	2400–3000	N, CT	Frequent, in humus rich soils under conifer, Oak forests
Gesneriaceae							
210	<i>Chirita bifolia</i> D. Don	H	SPS 4286	July–Sep.	2200–2500	N, C	Frequent, in damp places at foot hills
Acanthaceae							
211	<i>Strobilanthes atropurpureus</i> Nees	SS	SPS 3631	July–Oct.	2600–2950	N, CT	Common, as undergrowth in the forests
212	<i>Strobilanthes wallichii</i> Nees	SS	SPS 4546	July–Oct.	1900–2700	N, C	Occasional, as undergrowth in Fir and Kharshu oak forests
Lamiaceae							
213	<i>Elsholtzia ciliata</i> (Thunb.) Hyl.	H	SPS 3866	July–Sep.	2200–2650	N, C, CT	Common, in waysides and grazed areas
214	<i>Lamium album</i> L.	H	SPS 4531	April–Oct.	2400–2700	N, C, CT	Frequent, in waysides and forest margins
215	<i>Leonurus cardiaca</i> L.	H	SPS 3789	June–Sep.	2100–2800	C, CT	Common, in moist and shady places
216	<i>Nepeta connata</i> Royle ex Benth.	H	SPS 4548	July–Sep.	2900–3300	N, C, CT	Frequent, in subalpine scrub
217	<i>Nepeta laevigata</i> (D. Don) Hand.-Mazz.	H	SPS 3993, 4143	July–Oct.	2900–3150	N, C, CT	Frequent, in moist and shady places, forest shrubberies
218	<i>Phlomis macrophylla</i> Benth.	H	SPS 3625	July–Sep.	3400–3640	CT, C	Rare, in alpine meadows
219	<i>Scutellaria scandens</i> D. Don	H	SPS 3773	April–July	2300–3050	N, C, CT	Common, in open slopes, shady places, shrubberies
220	<i>Stachys melissifolia</i> Benth.	H	SPS 4566	July–Sep.	2200–3150	N, C, CT	Common, in shady places under conifer forests
Phytolaccaceae							
221	<i>Phytolacca acinosa</i> Roxb.	SS	SPS 3796, 3935	May–Sep.	2400–2800	CT, C	Frequent, in shrubberies under Deodar forests
Polygonaceae							
222	<i>Aconogonon rumicifolium</i> (Royle ex Bab.) H. Hara	H	SPS 3647, 3724, 3963	July–Sep.	3150–3600	N, CT	Common, in alpine slopes, damp places
223	<i>Bistorta affinis</i> (D. Don) Greene	H	SPS 4335	June–Sep.	3050–3300	N, CT	Common in moist, shady places
224	<i>Bistorta emodi</i> (Meisn.) H. Hara	H	SPS 4027	July–Sep.	3000–3500	N, C, CT	Occasional, in moist slopes of alpine, subalpines
225	<i>Persicaria vivipara</i> (L.) Ronse Decr.	H	SPS 3660, 3732	June–Sep.	3150–3600	N, CT	Common, in alpine meadows, below Chur peak
226	<i>Persicaria wallichii</i> Greuter & Burdet	SS	SPS 4395	July–Oct.	3050–3450	N, C, CT	Common, in wet places, in degraded areas
227	<i>Polygonum delicatulum</i> Meisn.	H	SPS 4139	July–Sep.	2300–3500	N, C, CT	Common, in wet rocky slopes, along water courses
228	<i>Polygonum filicaule</i> Wall. ex Meisn.	H	SPS 4281	July–Sep.	2400–3000	N, C, CT	Common, in wet rocky slopes, along water courses
229	<i>Polygonum paronychioides</i> C.A. Mey.	H	SPS 4530	June–Oct.	2650–2900	N, C, CT	Common, in wet places, along watercourses
Lauraceae							
230	<i>Neolitsea lanuginosa</i> (Nees) Gamble	ST	SPS 3600	Mar.–June	2400–2650	C, CT	Occasional, along river beds
231	<i>Neolitsea umbrosa</i> (Nees) Gamble	T	SPS 4378	Sep.–Oct.	2150–2700	C	Occasional, along river beds and in Ban oak forests
232	<i>Persea odoratissima</i> (Nees) Kosterm.	T	SPS 3596, 3545, 3905	Mar.–July	1900–2200	C, CT	Occasional, along river beds and in Ban oak forests
Thymelaeaceae							
233	<i>Wikstroemia canescens</i> Wall. ex Meisn.	H	SPS 3579, 3894	July–Sep.	2550–3150	N, C, CT	Common, in shady places under Deodar forests
Elaeagnaceae							
234	<i>Elaeagnus parvifolia</i> Wall. ex Royle	S	SPS 4279	April–July	1900–2400	N	Common, in dry open slopes
Loranthaceae							
235	<i>Scurrula cordifolia</i> G. Don	P	SPS 4427	Aug.–Oct.	1900–2300	C, CT	Frequent, on branches of <i>Pyrus</i> , <i>Prunus</i> and <i>Quercus</i> spp.

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	Euphorbiaceae						
236	<i>Euphorbia maddenii</i> Boiss.	H	SPS 3548	May–Aug.	2150–2400	CT, C	Occasional, in degraded and grazing areas
237	<i>Euphorbia parviflora</i> L.	H	SPS 4538	May–Aug.	1900–2450	N, C, CT	Common in open slopes, pathways, forest margins
238	<i>Euphorbia stracheyi</i> Boiss.	H	SPS 3699, 3733, 4025	May–June	2950–3600	N, CT	Common in alpine meadows, slopes
	Buxaceae						
239	<i>Buxus wallichiana</i> Baill.	ST	SPS 4354	Mar.–May	2100–2500	C	Occasional, along ravines and other shady places
	Urticaceae						
240	<i>Lecanthus peduncularis</i> (Wall. ex Royle) Wedd.	H	SPS 3984, 3774	July–Sep.	2300–3200	N, C, CT	Common, in moist rocky crevices, along water courses
241	<i>Pouzolzia sanguinea</i> (Blume) Merr.	H	SPS 4543	June–Sep.	1900–2550	N, C, CT	Occasional, on drier slopes
	Moraceae						
242	<i>Ficus neriifolia</i> Sm.	T	SPS 4400	May–Sep.	1900–2400	N, C, CT	Occasional, in Ban oak forests and in waysides
243	<i>Ficus sarmentosa</i> Buch.-Ham. ex Sm.	S	SPS 4408	May–Aug.	2200–2450	N, C, CT	Common, creeping over rocks and trees
244	<i>Ficus semicordata</i> Buch.-Ham. ex Sm.	ST	SPS 4466	Aug.–Sep.	1900–2150	C	Occasional, in steep rocky slopes
	Juglandaceae						
245	<i>Juglans regia</i> L.	T	SPS 4351	Mar.–Sep.	2400–2700	N, C	Occasional, planted along field bunds
	Betulaceae						
246	<i>Betula utilis</i> D. Don	T	SPS 3961	May–Sep.	2900–3450	N, C, CT	Common, along tree-lines, associated with Kharsu oak and <i>Rhododendron campanulatum</i> forests
	Corylaceae						
247	<i>Corylus jacquemontii</i> Decne.	T	SPS 3542, 3870	Mar.–Aug.	2300–2800	C, CT	Occasional, associated with Kharsu oak forests
	Salicaceae						
248	<i>Salix alba</i> L.	T	SPS 4085, 4275	April–June	2150–3150	CT	Frequent, along ravines
249	<i>Salix denticulata</i> Andresson	S	SPS 3694	Mar.–June	2650–3050	N, C	Common, along water courses
250	<i>Salix flagellaris</i> Hultén	SS	SPS 3626, 3745	June–Aug.	2950–3400	N	Common, along water courses, in grassy alpine slopes
251	<i>Salix lindleyana</i> Wall. ex Andresson	S	SPS 4545	June–July	2900–3300	N, CT	Occasional, in moist watery slopes at alpine
	Monocotyledons						
	Orchidaceae						
252	<i>Calanthe tricarinata</i> Lindl.	H	SPS 3680, 3777	May–July	2400–3150	N, C, CT	Frequent, in humus rich soil under conifer forests
253	<i>Cephalanthera longifolia</i> (L.) Fritsch	H	SPS 3944, 4005	May–July	2400–2650	N, C, CT	Frequent, in shady places among boulders
254	<i>Cypripedium cordigerum</i> D. Don	H	SPS 3556	May–July	2300–3150	N, CT	Rare, in conifer forests
255	<i>Cypripedium himalaicum</i> Rolfe	H	SPS 3602	June–July	3450–3600	N	Rare, in alpine meadows below Chur peak
256	<i>Dactylorhiza hatagirea</i> (D. Don) Soo	H	SPS 3571, 3747, 3883, 4054	June–July	2900–3450	N	Rare, in subalpine and alpine meadows
257	<i>Dienia cylindrostachya</i> Lindl.	H	SPS 4070	July–Aug.	2900–3300	N, CT	Frequent, under shrubberies of <i>Rhododendron</i> forests
258	<i>Epipactis helleborine</i> (L.) Crantz	H	SPS 3787	June–Aug.	2450–2950	N, CT	Rare, under shrubberies of <i>Abies spectabilis</i>
259	<i>Goodyera biflora</i> (Lindl.) Hook. f.	H	SPS 3785	July–Sep.	2400–3000	N, C, CT	Common, in humus rich soils under Deodar forests
260	<i>Goodyera fusca</i> (Lindl.) Hook. f.	H	SPS 3978	July–Oct.	3150–3400	N	Occasional, in moist rock crevices below Chur peak
261	<i>Goodyera repens</i> (L.) R.Br.	H	SPS 3589, 3910	July–Sep.	2300–2900	N, C, CT	Frequent, in moist slopes under conifer forests

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262	<i>Habenaria commelinifolia</i> (Roxb.) Wall. ex Lindl.	H	SPS 3879	Aug.–Sep	2150–2650	N	Occasional, in grasslands
263	<i>Habenaria marginata</i> Colebr.	H	SPS 3854, 4160	Aug.–Sep.	2200–2950	N	Rare, in grassy slopes
264	<i>Habenaria pectinata</i> D.Don	H	SPS 4156	July–Sep.	2000–2400	N, C, CT	Frequent, in grassy slopes
265	<i>Herminium monorchis</i> (L.) R. Br.	H	SPS 4513	July–Oct.	2000–2900	N, C	Frequent, in open slopes
266	<i>Malaxis acuminata</i> D.Don	H	SPS 3510	July–Aug	2150–3200	N, C, CT	Common, as undergrowth of <i>Rhododendron</i> forests
267	<i>Malaxis muscifera</i> (Lindl.) Kuntze	H	SPS 3738, 3890, 3916, 4068	July–Aug	2900–3300	N	Rare, under Oaks-conifer forests
268	<i>Platanthera clavigera</i> Lindl.	H	SPS 3671	Aug.–Sep.	2150–2500	N, C	Occasional, under Deodar forests
269	<i>Platanthera edgeworthii</i> (Hook. f. ex Collett) R.K. Gupta	H	SPS 4155	July–Aug	2150–2500	CT, N	Occasional, in open grassy slopes
270	<i>Ponerorchis chusua</i> (D.Don) Soó	H	SPS 3736	July–Aug.	3400–3600	N	Rare, in alpine meadows
271	<i>Satyrium nepalense</i> D. Don	H	SPS 3506, 3981	July–Sep.	2200–2650	N, C, CT	Frequent, under exposed conifer forests
	Zingiberaceae						
272	<i>Roscoea alpina</i> Royle	H	SPS 3509, 3646	June–Aug.	2900–3400	N, CT	Frequent, on dripping rock boulders, in moist localities
273	<i>Roscoea purpurea</i> Sm.	H	SPS 4330	June–Sep.	2150–2450	N, C, CT	Frequent, in open grassy slopes
	Iridaceae						
274	<i>Iris kemaonensis</i> Wall. ex D.Don	H	SPS 4561	Apr.–Aug.	2150–2300	C, CT	Occasional, as patches in grazing grounds and in subalpine
	Hypoxidaceae						
275	<i>Hypoxis aurea</i> Lour.	H	SPS 3637	July–Sep.	1900–2450	C, CT	Common, grassy slopes at foothills
	Dioscoreaceae						
276	<i>Dioscorea deltoidea</i> Wall. ex Griseb.	Tw	SPS 4193	May–July	2150–2400	C	Rare, on shrubberies along forest margins
277	<i>Dioscorea melanophyma</i> Prain & Burkill	Tw	SPS 3871	July–Sep.	2150–2400	C, CT	Rare, on shrubberies along forest margins
	Alliaceae						
278	<i>Allium humile</i> Kunth	H	SPS 3648, 3702, 4006, 4026	July–Sep.	3050–3640	N, C	Rare, in alpine meadows
279	<i>Allium victorialis</i> L.	H	SPS 4017	July–Sep.	2800–3000	N, CT	Rare, in dripping slopes
280	<i>Allium wallichii</i> Kunth	H	SPS 3953, 3857, 4041	July–Sep.	2900–3400	N, CT	Rare, in subalpine meadows, rocky crevices
	Liliaceae						
281	<i>Cardiocrinum giganteum</i> (Wall.) Makino	H	SPS 4381	June–Aug.	2150–2400	N, CT	Rare, damp places under dense forests
282	<i>Clintonia udensis</i> var. <i>alpina</i> (Kunth ex Baker) H. Hara	H	SPS 3886	July–Sep.	3150–3400	N, CT	Occasional, damp places under <i>Betula</i> forests
283	<i>Disporum cantoniense</i> (Lour.) Merr.	H	SPS 3875	May–Aug.	2150–2450	N, CT	Rare, at margins of Mohru oak forests, slopes
284	<i>Gagea lutea</i> (L.) Ker Gawl.	H	SPS 3580, 4012	Apr.–June	3050–3500	N, C, CT	Frequent, in alpine meadows
285	<i>Lloydia serotina</i> (L.) Rchb.	H	SPS 4013	May–June	3050–3500	N, C	Occasional, in alpine meadows
286	<i>Paris polyphylla</i> Sm.	H	SPS 4272	June–Aug.	2900–3150	N, CT	Rare, under shrubberies in dense forests
287	<i>Polygonatum cirrhifolium</i> (Wall.) Royle	H	SPS 3608	May–June	2900–3400	N, CT	Rare, under conifers dominated forests
288	<i>Polygonatum verticillatum</i> (L.) All.	H	SPS 3713, 3887	June–Sep.	2450–3500	N, C, CT	Common, in all type of forest vegetations
	Trilliaceae						
289	<i>Trillium govianum</i> Wall. ex D.Don	H	SPS 3552, 4015	May–July	2300–3400	N, C, CT	Common, under <i>Rhododendron</i> – <i>Betula</i> forests, subalpine meadows
	Smilacaceae						
290	<i>Smilax elegans</i> Wall. ex Kunth	Cl	SPS 3511	May–Sep.	2400–2700	N, C, CT	Frequent, in forest margins and on thickets

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	Haemodoraceae						
291	<i>Aletris pauciflora</i> (Klotzsch) Hand.-Mazz.	H	SPS 3707, 3731, 3850	July–Aug.	3150–3600	N, C, CT	Common, in alpine meadows
292	<i>Ophiopogon intermedius</i> D. Don	H	SPS 3633	May–Nov.	2000–2300	N, C, CT	Common, in open grasslands.
	Juncaceae						
293	<i>Juncus concinnus</i> D. Don	H	SPS 3661	June–Sep.	2650–3300	N, C, CT	Common, in alpine meadows, marshy habitats
294	<i>Juncus himalensis</i> Klotzsch	H	SPS 3712, 4125	June–Oct.	3050–3500	N, C, CT	Common, in alpine meadows, marshy habitats
295	<i>Juncus thomsonii</i> Buchen	H	SPS 3754, 4126	June–Sep.	2700–3400	N, C, CT	Common, in alpine meadows, marshy habitats
	Araceae						
296	<i>Arisaema flavum</i> (Forssk.) Schott	H	SPS 4329	June–Sep.	1900–2950	N, C, CT	Common, in exposed sunny places
297	<i>Arisaema intermedium</i> Blume	H	SPS 3821	June–Aug.	2300–3050	N, C	Rare, in shady places
298	<i>Arisaema utile</i> Hook. f. ex Engl.	H	SPS 3537	June–Aug.	2800–3150	N, CT	Occasional, in conifer dominated forests
299	<i>Remusatia pumila</i> (D. Don) H. Li & A. Hay	H	SPS 4405	June–July	1900–2450	N, C, CT	Frequent, rock crevices and in shady slopes
	Alismataceae						
300	<i>Alisma plantago-aquatica</i> L.	H	SPS 4159	May–Sep.	2300–2550	N, C	Common, in marshy places
	Cyperaceae						
301	<i>Carex norvegica</i> Retz.	H	SPS 3826	June–Aug.	2900–3400	N, C, CT	Common, in alpine meadows
302	<i>Carex filicina</i> Nees	H	SPS 4463	June–Aug.	2150–2900	N, C, CT	Common, in marshy and open grassy slopes
303	<i>Carex wallichiana</i> Spreng.	H	SPS 3833	June–July	2200–2900	N, C, CT	Common, in shady places, forest margins
304	<i>Carex haematostoma</i> Nees	H	SPS 4149	June–Aug.	2400–3000	N, C, CT	Common, in open slopes
305	<i>Carex hebecarpa</i> C.A. Mey. subsp. <i>ligulata</i> (Nees) T. Koyama	H	SPS 4464	June–Sep.	3150–3400	N, C, CT	Common, in marshy places
306	<i>Carex nivalis</i> Boott	H	SPS 3282	June–Aug.	2900–3370	N, C, CT	Occasional, in alpine slopes
307	<i>Carex obscura</i> Nees	H	SPS 3813, 3827	July–Sep.	2400–3000	N, C, CT	Frequent, in marshy places
308	<i>Carex remota</i> L.	H	SPS 3836	July–Sep.	2900–3400	N, C, CT	Occasional, in alpine slopes
309	<i>Cyperus niveus</i> Retz.	H	SPS 4268	May–Sep.	2400–2900	N, C, CT	Common, in grasslands
310	<i>Eleocharis congesta</i> D. Don	H	SPS 4270	Apr.–Aug.	2900–3350	N, C, CT	Common, in damp places
311	<i>Eleocharis palustris</i> (L.) Roem. & Schult.	H	SPS 3815	May–July	3050–3350	N, C, CT	Common, in damp places
312	<i>Kobresia capillifolia</i> (Decne.) C.B. Clarke	H	SPS 4131	July–Sep.	2900–3450	N, CT	Common, in alpine meadows
313	<i>Kobresia duthiei</i> C.B. Clarke	H	SPS 3709, 3737	July–Sep.	3400–3640	N	Frequent in alpine meadows
314	<i>Kobresia laxa</i> Nees	H	SPS 3693	June–Aug.	2900–3640	N, C	Frequent, in alpine meadows
315	<i>Kobresia nepalensis</i> (Nees) Kük.	H	SPS 4129	June–Sep.	2900–3600	N, C, CT	Frequent, in alpine meadows
316	<i>Kobresia pygmaea</i> (C.B. Clarke) C.B. Clarke	H	SPS 3830	July–Aug.	2900–3600	N, C, CT	Frequent, in alpine meadows
317	<i>Schoenoplectiella juncoides</i> (Roxb.) Lye	H	SPS 4541	June–Sep.	2000–2600	N, C, CT	Common, in damp places, along water bodies
	Poaceae						
318	<i>Agrostis munroana</i> Aitch. & Hemsl.	H	SPS 4118	June–Sep.	2800–3250	N, C, CT	Common, in moist slopes, subalpine, alpine meadows
319	<i>Agrostis stolonifera</i> L.	H	SPS 3824	July–Sep.	2400–3400	N, C, CT	Common, in moist slopes, subalpine, alpine meadows
320	<i>Arundinella nepalensis</i> Trin.	H	SPS 4406, 4102	Aug.–Nov.	1900–2900	N, C, CT	Frequent, in shady places, grassy slopes
321	<i>Brachiaria villosa</i> (Lam.) A. Camus	H	SPS 4575	Aug.–Nov.	1900–2950	N, C, CT	Frequent, along pathways
322	<i>Bromus ramosus</i> Huds.	H	SPS 4109, 4169	July–Sep.	2900–3200	N, C, CT	Frequent, in alpine slopes
323	<i>Calamagrostis emodensis</i> Griseb.	H	SPS 3755, 3758, 4146	July–Sep.	2650–3600	N, C, CT	Common, in alpine and subalpine, rocky slopes

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324	<i>Calamagrostis pseudophragmites</i> (Haller) Koeler	H	SPS 3654, 3756, 4145, 4154	July–Sep.	3150–3600	N, C, CT	Common, in alpine and subalpines, rocky slopes
325	<i>Chrysopogon serrulatus</i> Trin.	H	SPS 4112	July–Sep.	1900–2650	N, C, CT	Common, in forest margins, grasslands.
326	<i>Cynodon dactylon</i> (L.) Pers.	H	SPS 3831	Mar.–Oct.	1900–2550	N, C, CT	Common, along roadsides and in cultivated fields
327	<i>Digitaria cruciata</i> (Nees) A. Camus	H	SPS 3651	July–Oct.	2150–2900	N, C, CT	Common, shady places along watercourses
328	<i>Echinochloa colona</i> (L.) Link	H	SPS 4165	Mar.–Oct.	1900–2200	N, C, CT	Common, in moist places, waysides and rocky slopes
329	<i>Echinochloa crusgalli</i> (L.) P. Beauv.	H	SPS 4585	July–Nov.	1900–2200	N, C, CT	Frequent, in moist places, roadsides, foothills
330	<i>Eragrostis pilosa</i> (L.) P. Beauv.	H	SPS 4328	Mar.–Oct.	1900–2650	N, C, CT	Common, in open rocky slopes
331	<i>Festuca kashmiriana</i> Stapf	H	SPS 4389	June–Aug.	2900–3600	N, C, CT	Common, in alpine and subalpine grassy slopes
332	<i>Festuca valesiaca</i> Schleich. ex Gaudin	H	SPS 3761, 3829, 4153	June–Sep.	2900–3600	N, C, CT	Common, in alpine and subalpine grassy slopes
333	<i>Muhlenbergia himalayensis</i> Hack. ex Hook. f.	H	SPS 3946	July–Oct.	3450–3640	C, N	Occasional, in alpine grassy slopes
334	<i>Phacelurus speciosus</i> (Steud.) C.E. Hubb.	H	SPS 3760	July–Sep.	2150–2400	N, CT	Occasional, in shady places
335	<i>Phleum alpinum</i> L.	H	SPS 3757, 4121, 4130	June–Oct.	2950–3600	N, C, CT	Common, in alpine meadows
336	<i>Phleum himalaicum</i> Mez.	H	SPS 3807, 3840	June–Sep.	2900–3600	N, C	Common, in rocky crevices, alpine meadows
337	<i>Poa alpina</i> L.	H	SPS 4105	June–Sep.	2900–3600	N, C, CT	Common, in alpine grassy slopes
338	<i>Poa nemoralis</i> L.	H	SPS 3762, 4104	May–Aug.	2900–3600	N, C, CT	Common, in alpine grassy slopes
339	<i>Poa stapfiana</i> Bor	H	SPS 3759, 4108	July–Aug.	2900–3600	N, C, CT	Frequent, in alpine below Chur peak
340	<i>Saccharum rufipilum</i> Steud.	H	SPS 4113	June–Sep.	2000–2400	N, C, CT	Frequent, in rocky slopes at foothills
341	<i>Saccharum spontaneum</i> L.	H	SPS 4091	Aug.–Oct.	1900–2100	N, C	Occasional, along rivulets
342	<i>Setaria palmifolia</i> (J. Koenig) Stapf	H	SPS 4471	Aug.–Oct.	2200–2450	N, C, CT	Common, in moist places along rivulets
343	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	H	SPS 4162	July–Sep.	1900–2650	N, C, CT	Frequent, in moist, shady places
344	<i>Sinarundinaria falcata</i> (Nees) C.S. Chao & Renvoize	S	SPS 4195	June–July	2000–2800	N, C, CT	Rare, in steep slopes, along nallahs
345	<i>Thamnocalamus spathiflorus</i> (Trin.) Munro	S	SPS 4200	July–Aug.	2850–3150	N, CT	Rare, in steep slopes of midhills, below subalpines
346	<i>Trisetum aeneum</i> (Hook.f.) R.R. Stewart	H	SPS 4106, 4117	June–Aug.	2150–3400	N, C, CT	Common, in alpine slopes below Chur peak
347	<i>Trisetum clarkei</i> (Hook.f.) R.R. Stewart	H	SPS 4110	July–Oct.	3150–3640	N, C, CT	Common, in alpine slopes below Chur peak
348	<i>Trisetum spicatum</i> (L.) K. Richt.	H	SPS 4147, 4163	July–Aug.	3150–3640	N, C, CT	Common, in alpine slopes below Chur peak
	Gymnosperms						
	Pinaceae						
349	<i>Abies spectabilis</i> (D. Don) Mirb.	T	SPS 3563, 4023	May–July	2900–3400	N, C, CT	Common, in subalpine slopes
350	<i>Picea smithiana</i> (Wall.) Boiss.	T	SPS 4265	Sep.–Oct.	2200–3300	N, C, CT	Common
351	<i>Pinus wallichiana</i> A.B. Jacks.	T	SPS 4266	Sep.–Oct.	1900–3000	N, C, CT	Common
	Taxaceae						
352	<i>Taxus wallichiana</i> Zucc.	ST	SPS 3557	Mar.–May	2600–3000	C, CT	Occasional

T - Trees; ST - Small trees; S - Shrub; SS - Subshrub; U - Undershrub; Cl - Climber; Tw - Twiner; P - Parasites; H - Herbs, N - Nauradhar beat; CT - Chhog Tali beat; C - Churas beat; SPS - S.P. Subramani



Image 1. *Meconopsis aculeata* Royle



Image 2. *Ailanthus altissima* (Mill.) Swingle



Image 3. *Acer acuminatum* Wall. ex D. Don

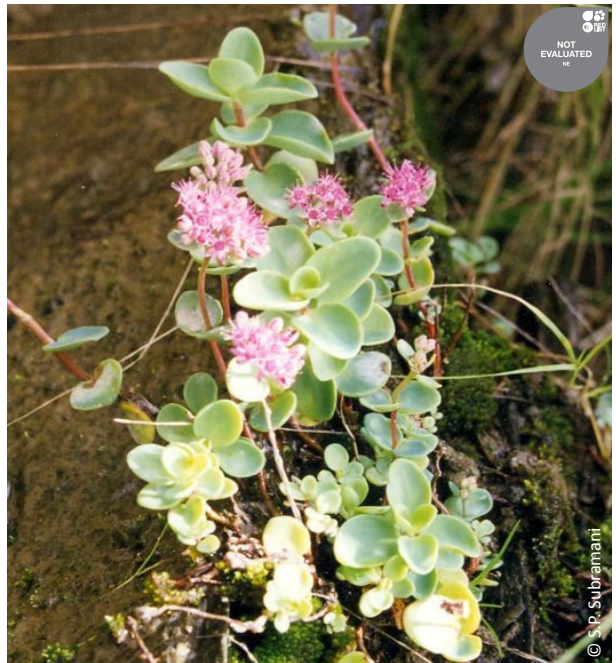


Image 4. *Hylotelephium ewersii* (Ledeb.) H. Ohbi



Image 5. *Pleurospermum brunonis* Benth. ex C.B. Clarke



Image 6. *Alangium chinense* (Lour.) Harms



Image 7. *Lonicera angustifolia* Wall. ex DC.



Image 8. *Senecio kunthianus* Wall. ex DC.



Image 9. *Lonicera obovata* Royle



Image 10. *Tanacetum longifolium* Wall. ex DC.



Image 11. *Saussurea taraxacifolia* Wall. ex DC.



Image 12. *Rhododendron anthopogon* D.Don



Image 13. *Rhododendron lepidotum* Wall. ex G. Don



Image 14. *Primula reidii* Duthie



Image 15. *Pergularia roylei* (Wight) D. Dietr.

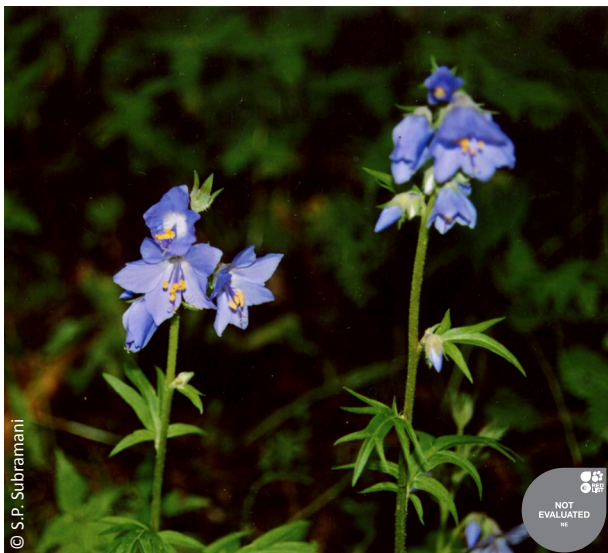


Image 16. *Polemonium caeruleum* L.



Image 17. *Swertia speciosa* D. Don



Image 18. *Aconogonon rumicifolium* (Royle ex Bab.) H.Hara



Image 19. *Elaeagnus parvifolia* Wall. ex Royle



Image 20. *Salix flagellaris* Hultén



Image 21. *Cypripedium cordigerum* D. Don



Image 22. *Euphorbia stracheyi* Boiss.



Image 23. *Dactylorhiza hatagirea* (D. Don) Soo



Image 24. *Goodyera fusca* (Lindl.) Hook. f.



Image 25. *Ponerorchis chusua* (D. Don) Soo



Image 26. *Iris kemaonensis* Wall. ex D. Don



Image 27. *Allium humile* Kunth



Image 28. *Paris polyphylla* Sm.

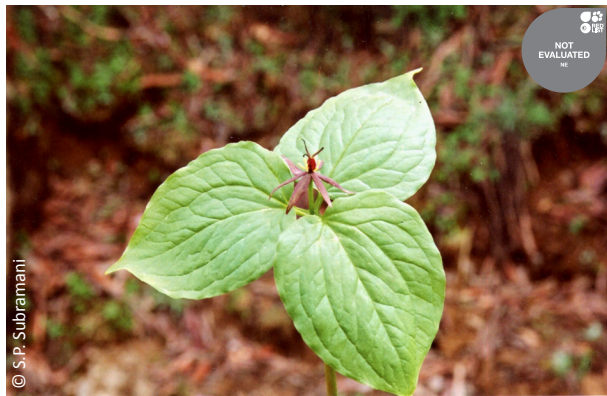


Image 29. *Trillium govianum* Wall. ex D. Don



Image 30. *Abies spectabilis* (D. Don) Mirb.

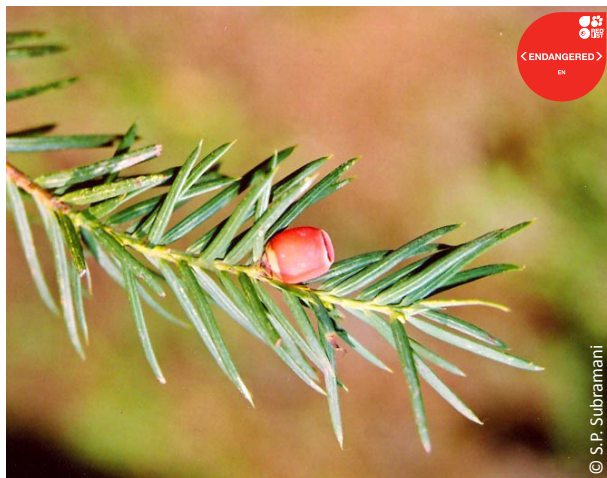


Image 31. *Taxus wallichiana* Zucc.



Image 32. *Berberis aristata* DC.



Image 33. *Acer caesium* Wall. ex Brandis



Image 34. *Aesculus indica* (Wall. ex Cambess.) Hook

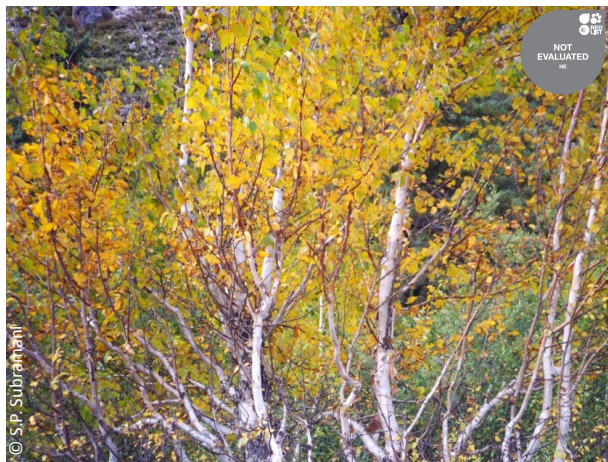


Image 35. *Betula utilis* D. Don

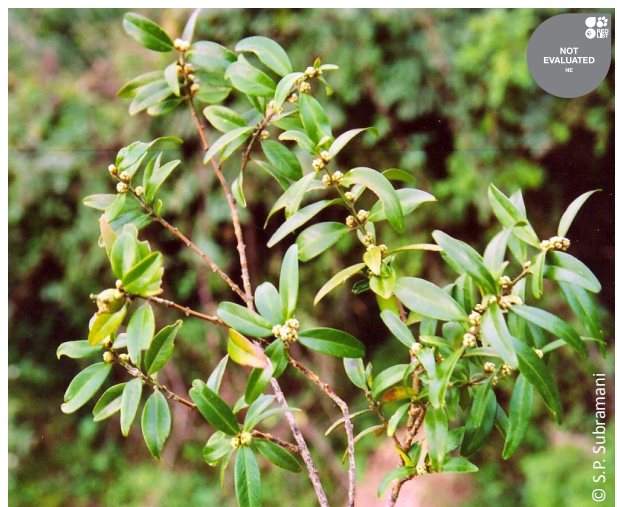


Image 36. *Buxus wallichiana* Baill.



Image 37. *Campanula argyrotricha* Wall. ex A. DC.

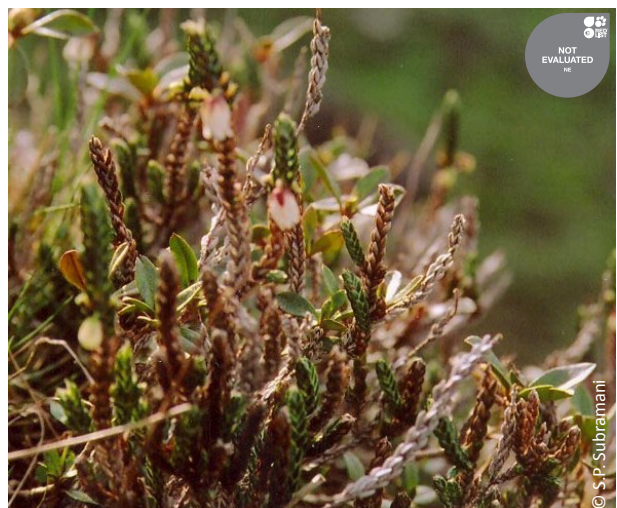


Image 38. *Cassiope fastigiata* (Wall.) D. Don



Image 39. *Cotoneaster bacillaris* Wall. ex Lindl.



Image 40. *Delphinium vestitum* Wall. ex Royle



Image 41. *Epipactis helleborine* (L.) Crantz



Image 42. *Euonymus hamiltonianus* Wall.



Image 43. *Solanum pseudocapsicum* L.



Image 44. *Euphorbia parviflora* L.



Image 45. *Gaultheria trichophylla* Royle



Image 46. *Juglans regia* L.



Image 47. *Lyonia ovalifolia* (Wall.) Drude



Image 48. *Pedicularis bicornuta* Klotzsch



Image 49. *Ligularia amplexicaulis* DC.



Image 50. *Phytolacca acinosa* Roxb.



Image 51. *Ribes glaciale* Wall.



Image 52. *Rosa macrophylla* Lindl.



Image 53. *Roscoea purpurea* Sm.



Image 54. *Swertia ciliata* (D. Don ex G. Don) B.L. Burt



Image 55. *Saxifraga brunonis* Wall. ex Ser.

Thomas, P. & A. Farjon (2011). *Taxus wallichiana*. The IUCN Red List of Threatened Species. Version 2014.2. <www.iucnredlist.org>. Downloaded on 11 October 2014.

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