

A Pictorial Field Guide

Flora of Phrumsengla National Park

Rinchen Wangchuk • Ugyen Namgyel • Phuntscho Wangdi



Phrumsengla National Park
Ura : Bumthang



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Dedicated to
the Royal Birth of
His Royal Highness Gyalsey Jigme Namgyel Wangchuck,
with wholehearted dedication and prayers

Phrumsengla National Park
Ura : Bumthang

A Pictorial Field Guide: *Flora of Phrumsengla National Park*

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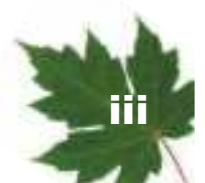
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Foreword

It is my great pleasure to write a foreword of first ever guide book titled “A pictorial field guide of flora of Phrumsengla National Park”. Phrumsengla National Park though small with 905.05 km² is rich in plant diversity because of wide range of altitude and varied vegetation zones. Out of 625 plant species 154 species have been recognized for carrying medicinal values, 21 species as endemic to Bhutan, one globally threatened *Rhododendron dalhousiae* and critically endangered *Podocarpus neriifolius* species. The park also harbors large tracts of growth of old East Himalayan Silver Fir forest and extensive cover of pristine cool broadleaved forests in the central region of the country.

Rich diversity of flora forms a best refuge for wildlife and simultaneously supports more than 6500 people residing in and around the park. I urge that strategic area for sustainable harvest of timber and non-wood forest products (NWFPS) that vastly include medical plants, rattans, mushroom, etc. be designated in benefit of both conservation and socio-economic development of the park residents. For instance NWFPS collections by park residents under prescribed guidelines in designated areas will augment ecological requirement of particular plant species to thrive therein while sale of NWFPS on other hand will help income generation for local people. Similarly, harvest of timber under scientific prescription will also help to maintain ecological integrity. I also advise the park to initiate wildlife habitat rehabilitation thereby planting fruit bearing trees and grassland management to supplement the natural stock. This intervention is going to increase food availability in the wild and entail to curb crop depredation by wildlife. Therefore, if we are to pursue wildlife conservation I strongly urge to strike the balance for welfare of wildlife and socio-economic aspirations of local people.



A Pictorial Field Guide: *Flora of Phrumsengla National Park*

Lastly, I congratulate all park staffs for their concerted effort in coming up with this first ever publication that presents 562 plant species with images of its part, flowers and fruits for easy identification.

Tashi Delek



Phento Tshering

DIRECTOR

Department of Forests and Park Services



Acknowledgement

Enormous thanks to Ngawang Gyeltshen, Botanist, WCD and Dorji Gyaltshen, Forest Officer of Watershed Management Division, DoFPS for his authenticative review of this field guide book.

Sincere gratitude for all former and present staffs of PNP whoever contributed pictures of flora in the data management section of the park. Amongst these special thanks is also extended to Mr. Phurpa Dorji, Forester and Sonam Choeda, Forester for the picture of *Neopicrorhiza scrophulariiflora* got during the zonation survey in June 2016. Similarly, we also thank Mr. Pema Tobgay, Ranger II, Central Park Range, Lingmithang, Tashi Samdrup, Forester, Western Park Range and Sangayla, Officer Incharge of Zangkhar Sub-Range for the pictures of *Meconopsis sinuata* got during zonation survey in June 2016 as well. Both these species are new list to PNP.

Heartfelt gratitude is also extended to WWF Bhutan Program for the generous funding support provided through Ecolife project.



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Introduction

The order of information arrangement followed here in this book is based on the Engler and Prantl system which is followed in the Flora of Bhutan book. The specific species information is arranged in such a way that the field personnel can understand to use it with a brief family description followed by genus and photo of the species, common name, scientific name, author, different local names referred in Bhutan, habit, status and its range of common growing areas in PNP. The specific species photo images tries to tell about the different morphological features of individual plant species. .

Gymnosperm

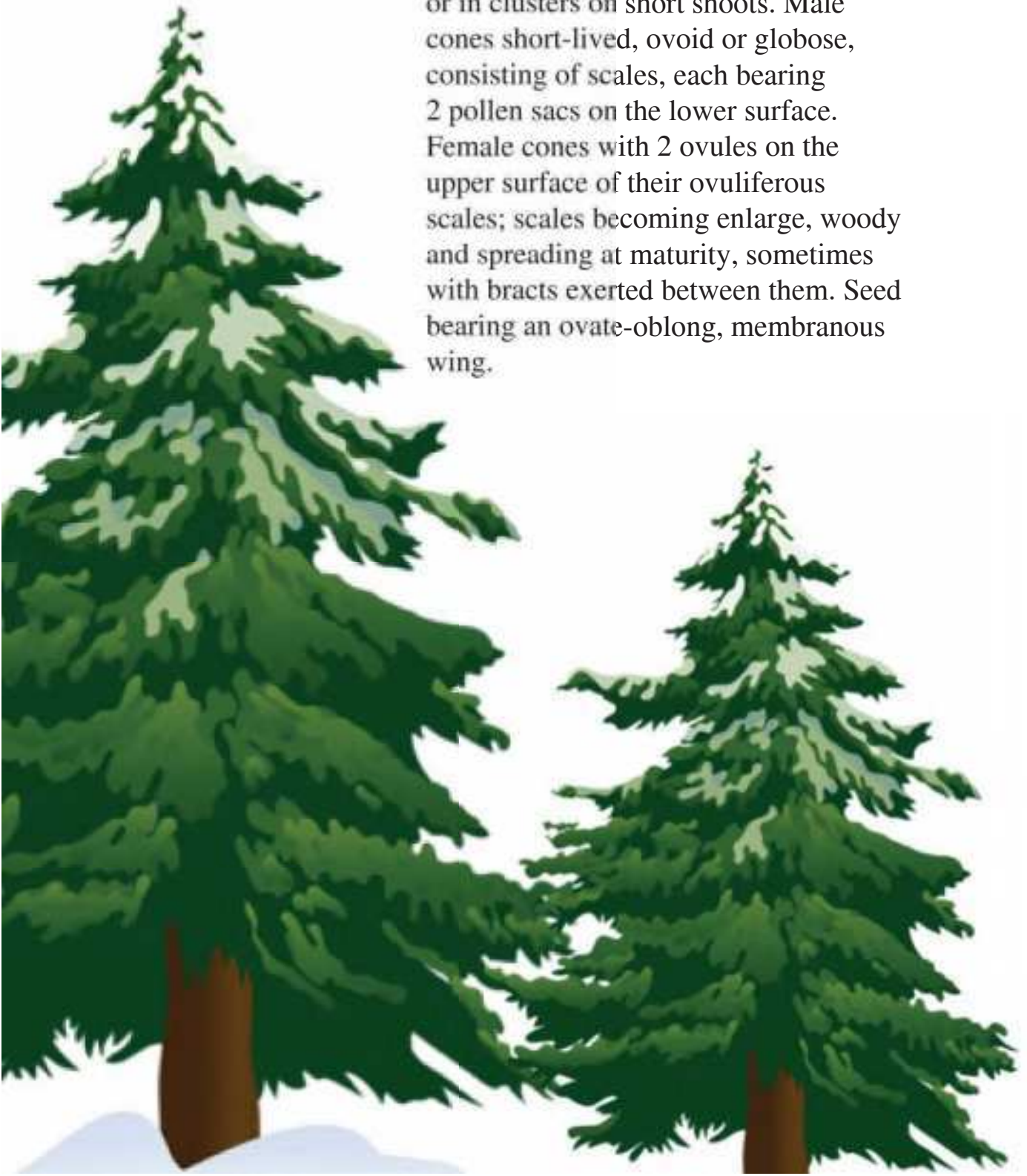
Gymnosperms are seed-bearing vascular plants, such as cycads, ginkgo, yews and conifers, in which the ovules or seeds are not enclosed in an ovary. The word “gymnosperm” comes from the Greek word gymnospermos, meaning “naked seeds”. Gymnosperm seeds develop either on the surface of scale or leaf-like appendages of cones, or at the end of short stalks.

The largest group of living gymnosperms are the conifers (pines, cypresses and relatives) and the smallest is ginkgo, a single living plant species found in China. There are around 1000 species of gymnosperm. (<http://www.theplantlist.org>)

PINACEAE

(Pine Family)

Monoecious, occasionally dioecious, evergreen or deciduous trees. Leaves linear, sometimes needle-like, borne singly or in clusters on short shoots. Male cones short-lived, ovoid or globose, consisting of scales, each bearing 2 pollen sacs on the lower surface. Female cones with 2 ovules on the upper surface of their ovuliferous scales; scales becoming enlarge, woody and spreading at maturity, sometimes with bracts exerted between them. Seed bearing an ovate-oblong, membranous wing.



1. *Pinus L.*

Pinus wallichiana A.B.Jacks. Himalayan Blue Pine (Eng),
སྟོངཔུ་ཤིང་/Tongphu (Dzo), Dogseng (Ura), Changshing (Sha),
Dhupi (Nep)

Habit: Tree (12-45m), **Status:** LC ver 3.1, **Habitat:** Temperate mixed conifer and pure blue pine forest & **Flowering:** April-May.



2. *Larix Miller*

Larix griffithiana Carriere. Sikkim Larch (Eng),
ཟ་ཤིང་/Zashing (Dzo), Chunseng (Ura/Sengor), Barge salla
(Nep).

Habit: Tree (10-20 m), **Status:** Not yet assessed,
Habitat: Hemlock, Spruce and cool- temperate mixed Forests &
spruce & **Flowering:** April-May.



3. *Picea A. Dietrich*

Picea spinulosa (Griff.) A.Henry. Eastern Himalayan Spruce (Eng), བ་ཤིང་/Bashing (Dzo), Nagseng (Ura), Kallo salla (Nep).

Habit: Tree (Upto 60 m), **Status:** LC ver 3.1, **Habitat:** Moist coniferous and mixed forest often as pure stands and sometimes with Fir and Blue pine & **Flowering:** April-May.



4. *Tsuga Carriere*

Tsuga dumosa (D.Don) Eichler. Himalayan Hemlock (Eng), སེ་ཤིང་/Seyshing (Dzo), Peyseng (Ura), Threngre salla (Nep).

Habit: Tree (12-40 m), **Status:** LC ver 3.1, **Habitat:** Forming pure stands or mixed with Fir and Rhododendron & **Flowering:** May-June.



5. *Abies* Miller

Abies densa Griff. East Himalayan Silver Fir (Eng),

གདུང་ཤིང་/Dhungshing (Dzo), Wangseng (Ura) Gobre salla (Nep)

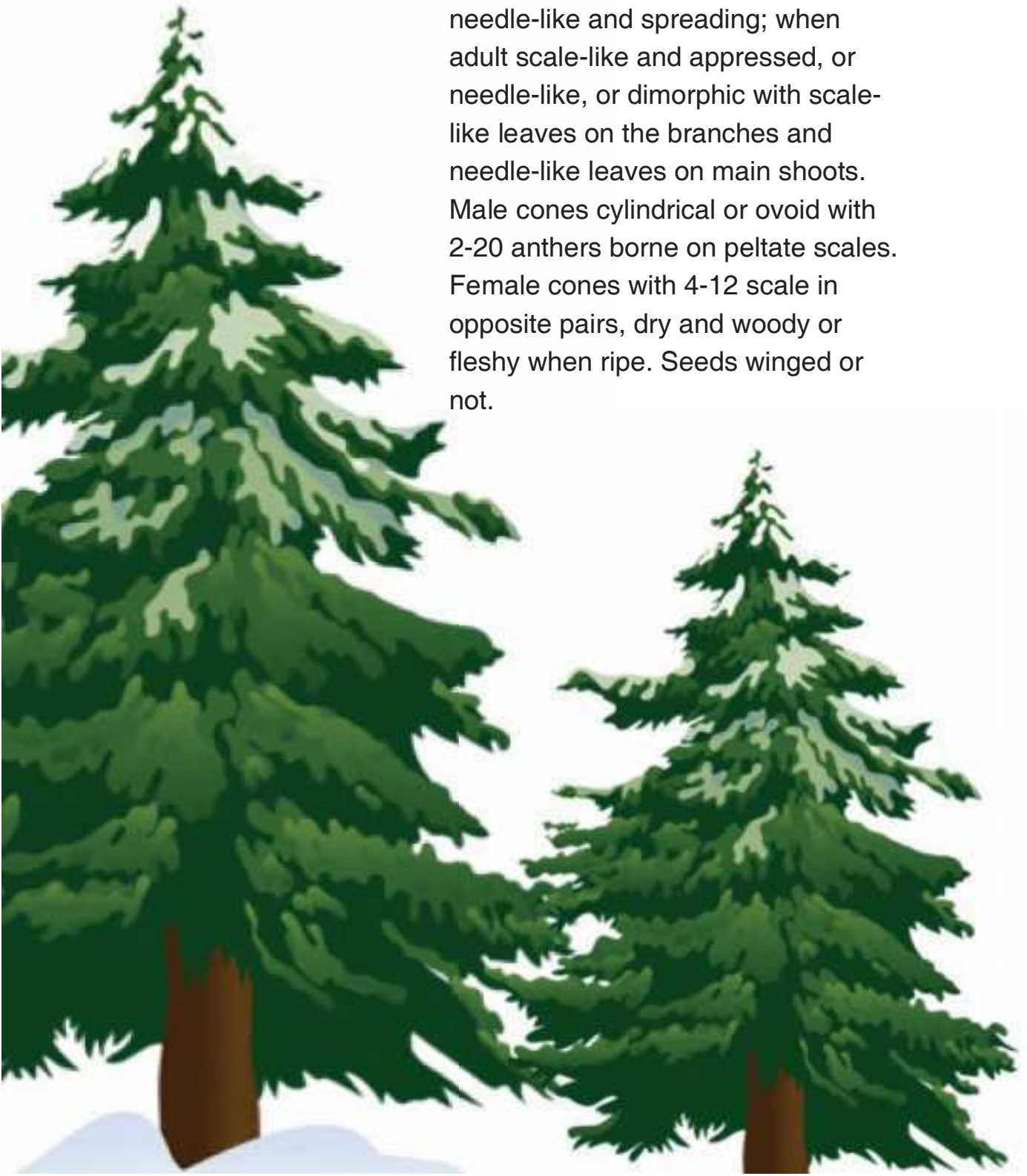
Habit: Tree (Upto 40 m), **Status:** LC ver 3.1, **Habitat:** Moist coniferous forests, commonly forming pure stands over extensive areas, often with an understory of *Rhododendron* and bamboo; at lower levels mixed with Hemlock, at higher levels mixed with Juniper & **Flowering:** April-May.



CUPRESSACEAE

(Cypress family)

Monoecious or dioecious evergreen trees or shrubs. Leaves opposite and 4-ranked or in 3s, when juvenile needle-like and spreading; when adult scale-like and appressed, or needle-like, or dimorphic with scale-like leaves on the branches and needle-like leaves on main shoots. Male cones cylindrical or ovoid with 2-20 anthers borne on peltate scales. Female cones with 4-12 scale in opposite pairs, dry and woody or fleshy when ripe. Seeds winged or not.



1. *Cupressus* L.

Cupressus corneyana Carriere. Himalayan Weeping Cypress
(Eng), ཙན་དན་ཤིང་/Tsendhen (Dzo), Tsanzanseng (Ura), Dhupi
(Nep)

Habit: Tree (Up to 30 m), **Status:** Endangered in Bhutan (Not yet assessed as per IUCN), **Habitat:** Moist forest with Hemlock, Fir and Juniper & **Flowering:** May-July.



2. *Juniperus* L.

Juniperus recurva. D.Don. Weeping/Dropping Blue Juniper
(Eng), ལུགས་ཤིང་/Shukp (Dzo), Moshrok (Ura), Dhupi (Nep).

Habit: Tree (20 m), **Status:** LC ver 3.1, **Habitat:** Moist Fir forest and in Montane shrub heath with Rhododendron & **Flowering:** April-August.



Juniperus squamata D.Don. Himalayan Black Juniper (Eng),
བྱུག་པ་ཤིང་/Shukpshing (Dzo), Shrok (Ura), Dhupi (Nep)
Habit: Shrubby 30-100 cm, **Status:** LC ver 3.1, **Habitat:**
Montane dwarf shrub heath & **Flowering:** May-June.



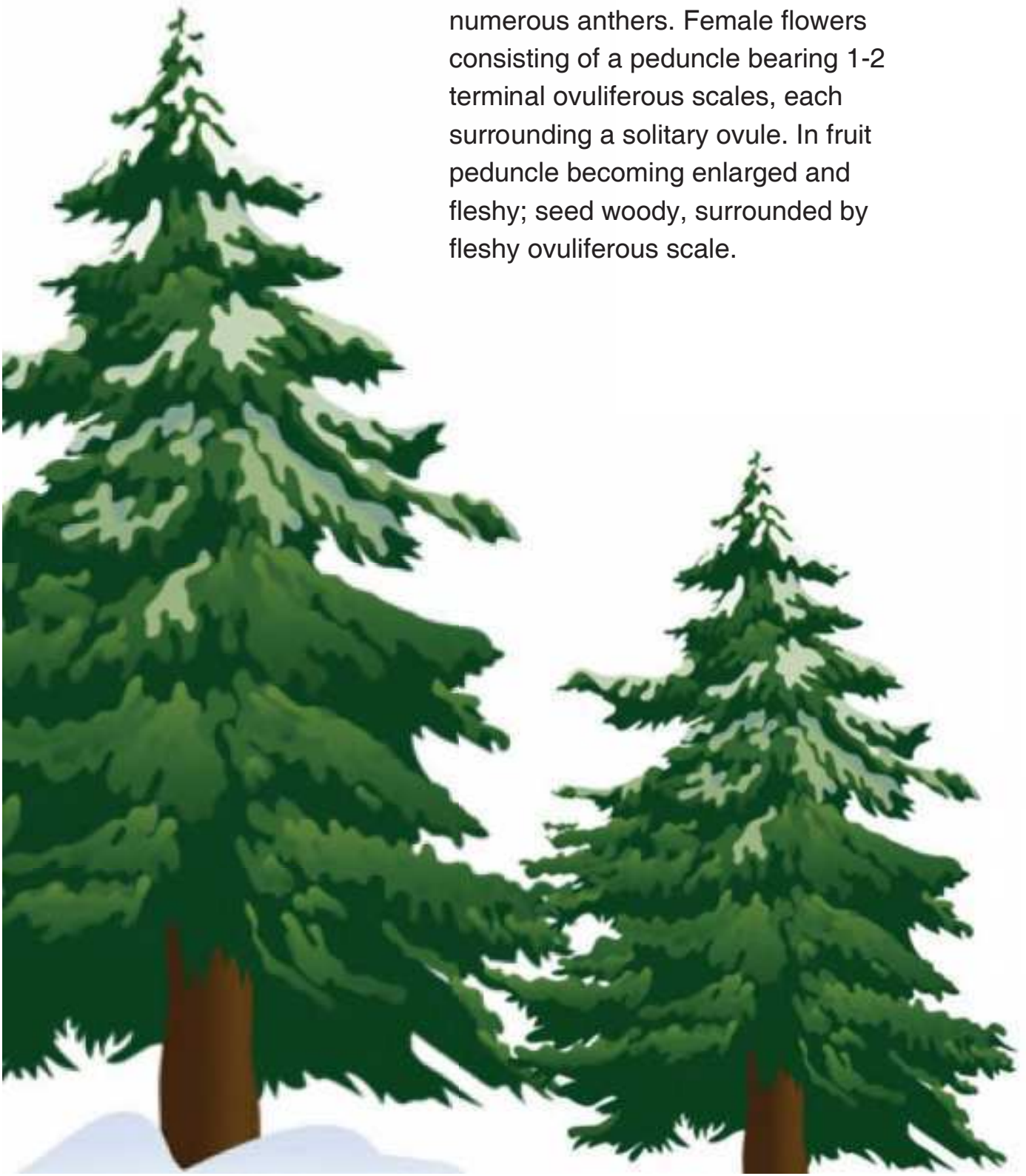
Juniperus sp.
བྱུག་པ་ཤིང་/Shukpshing (Dzo), Pho-shrok (Ura), Dhupi (Nep).
Habit: Shrubby 30-100 cm, **Status:** LC ver 3.1, **Habitat:**
Montane dwarf shrub heath & **Flowering:** May-June.



PODOCARPACEAE

(Podocarp family)

Dioecious evergreen trees. Leaves coriaceous, spirally arranged. Male cones solitary or clustered, catkin-like, containing numerous anthers. Female flowers consisting of a peduncle bearing 1-2 terminal ovuliferous scales, each surrounding a solitary ovule. In fruit peduncle becoming enlarged and fleshy; seed woody, surrounded by fleshy ovuliferous scale.



1. *Podocarpus* Persoon

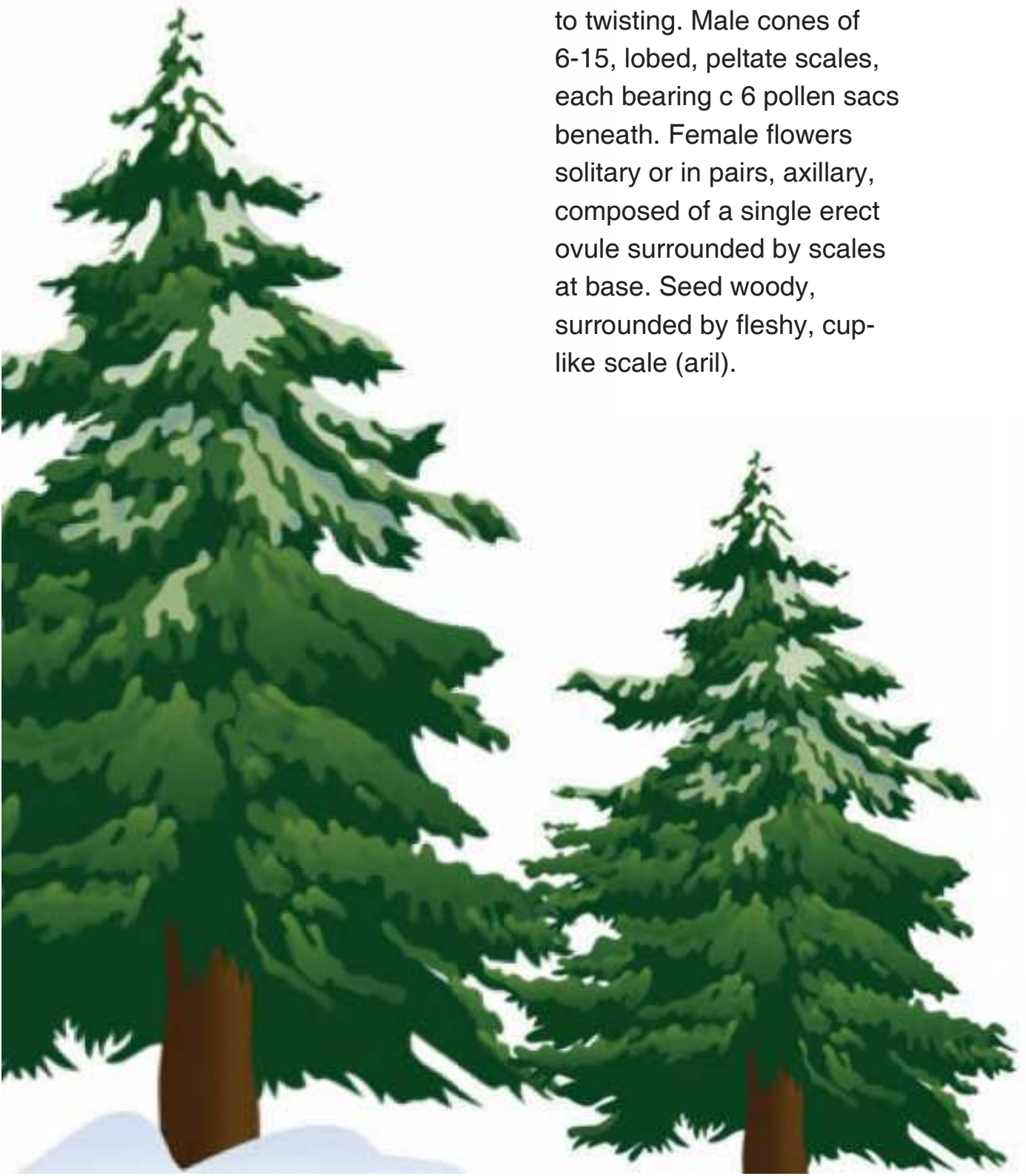
Podocarpus neriifolius D.Don. Brown Pine/Yellowwood (Eng),
Habit: Tree (5-30 m), **Alt.:** 1000-1800 masl, **Status:** CE (LC-IUCN), **Habitat:** Warm broad-leaved and Sub-tropical, region
& **Flowering:** No data available as of now.



TAXACEAE

(Yew family)

Dioecious evergreen trees. Leaves linear, spirally arranged but distichous due to twisting. Male cones of 6-15, lobed, peltate scales, each bearing c 6 pollen sacs beneath. Female flowers solitary or in pairs, axillary, composed of a single erect ovule surrounded by scales at base. Seed woody, surrounded by fleshy, cup-like scale (aril).



1. *Taxus* Tournefort

Taxus baccata L. Subsp. *wallichiana* Zuccarini. Himalayan Yew (Eng), ཧ་ཤེང/Hashing (Dzo), Kirangseng (Sengor/Ura), Dhengre Salla (Nep). **Habit:** Tree (5-12 m), **Status:** NT (IUCN- LC), **Habitat:** Temperate and Cool Broadleaved forest & **Flowering:** March-April.



EPHEDRACEAE

(Joint-Pine family)

Dioecious shrubs with creeping rhizomes and erect branches. Stems cylindrical, striate.

Leaves opposite, decussate, scale-like. Male flowers 3-8, in opposite clusters, with a perianth of 2 united, rounded scales; anthers 6-10, subsessile on a short column. Female flowers in opposite, sessile pairs or several at each node, consisting of 2 ovoid ovules enveloped by two coats, the inner prolonged into a styliform tube.



1. Ephedra L.

Ephedra gerardiana Stapf. Var. *sikkimensis* Stapf. Somlata (Eng), མེ་རྩུམ/Tsedhum (Dzo), Tsey (Ura), Tshe (Med). **Habit:** Shrub 15-30 m, **Status:** NT, **Habitat:** Dry rocky montane slopes and screes in the sub-alpine forest & **Flowering:** April-June.



Angiosperm

Angiosperms are seed-bearing vascular plants. Their reproductive structures are flowers in which the ovules are enclosed in an ovary. Angiosperms are found in almost every habitat from forests and grasslands to sea margins and deserts. Angiosperms display a huge variety of life forms including trees, herbs, submerged aquatics, bulbs and epiphytes. The largest plant families are Orchids, and Compositae (daisies) and Legumes (beans). It is further classified down to Dicots and Monocots. There are an estimated 352,000 species of flowering plants or angiosperms. (<http://www.theplantlist.org>)

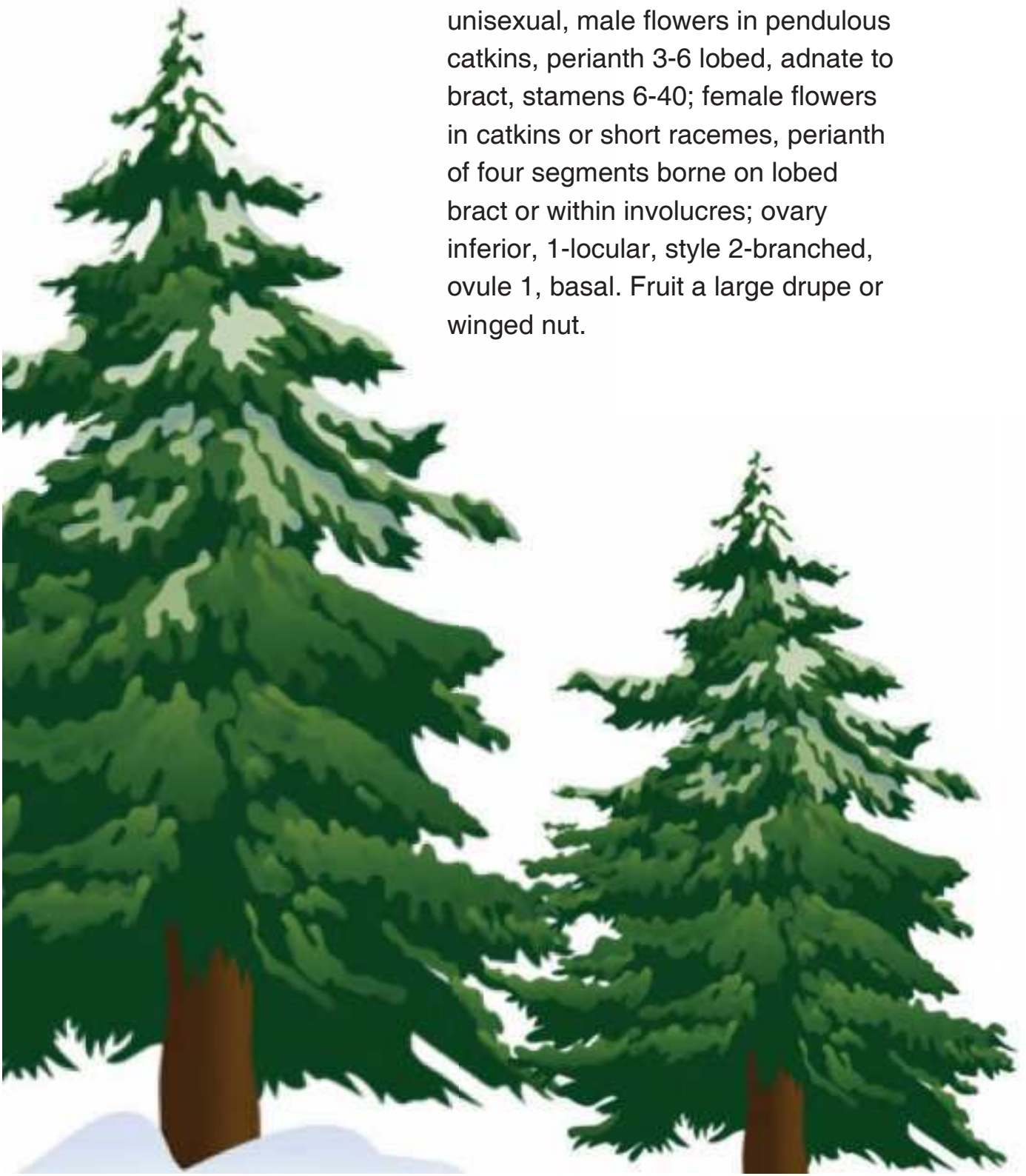
Dicotyledons

Dicotyledon, byname dicot, any member of the flowering plants that has a pair of leaves, or cotyledons, in the embryo of the seed. There are about 175,000 known species of dicots. Most common garden plants, shrubs and trees, and broad-leaved flowering plants such as magnolias, roses, geraniums, and hollyhocks are dicots (<http://www.britannica.com/plant/dicotyledon>).

JUGLANDACEAE

(Walnut family)

Monoecious rarely dioecious trees. Leaves deciduous, alternate, even- or odd-pinnate, exstipulate. Flowers unisexual, male flowers in pendulous catkins, perianth 3-6 lobed, adnate to bract, stamens 6-40; female flowers in catkins or short racemes, perianth of four segments borne on lobed bract or within involucre; ovary inferior, 1-locular, style 2-branched, ovule 1, basal. Fruit a large drupe or winged nut.



1. *Engelhardia* Blume

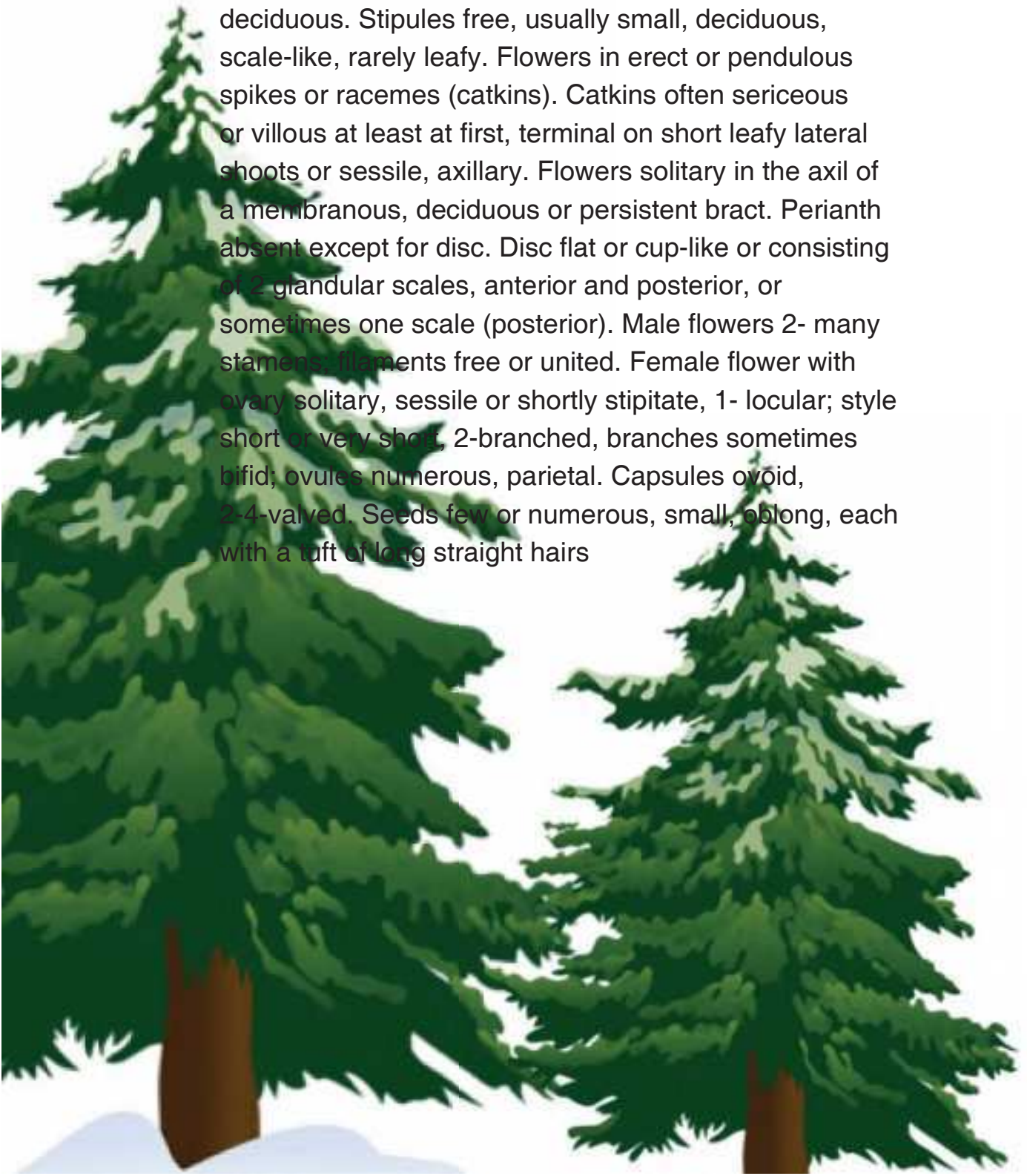
***Engelhardia spicata* Blume.** ཚོ་ཤིང་/Tshoshee (Dzo), Orka (Kurtoed/Kheng), Tshos shing/ Murr shing (Sha), Mauwa (Nep). **Habit:** Tree (8-20 m), **Status:** LC ver 3.1 as per IUCN, **Habitat:** Warm Temperate and Subtropical forest & **Flowering:** April-May.



SALICACEAE

(Willow family)

Dioecious or rarely bisexual trees and shrubs. Leaves alternate or rarely subopposite, entire or serrulate, teeth usually gland-tipped, pinnately-veined, sometimes palmately 3-5 veined at base, deciduous. Stipules free, usually small, deciduous, scale-like, rarely leafy. Flowers in erect or pendulous spikes or racemes (catkins). Catkins often sericeous or villous at least at first, terminal on short leafy lateral shoots or sessile, axillary. Flowers solitary in the axil of a membranous, deciduous or persistent bract. Perianth absent except for disc. Disc flat or cup-like or consisting of 2 glandular scales, anterior and posterior, or sometimes one scale (posterior). Male flowers 2- many stamens; filaments free or united. Female flower with ovary solitary, sessile or shortly stipitate, 1- locular; style short or very short, 2-branched, branches sometimes bifid; ovules numerous, parietal. Capsules ovoid, 2-4-valved. Seeds few or numerous, small, oblong, each with a tuft of long straight hairs



1. *Populus L.*

Populus ciliata Wall. ex.Royle. Himalayan Poplar (Eng), ཀ་ཤིང་
/Kashing (Dzo), **Habit:** Tree (20-25 m), **Alt.:** 2100-3000 masl,
Status: Not yet assessed as per the IUCN red list, **Habitat:**
Temperate forest & **Flowering:** April.



Populus jacquemontiana Haines Var.*glauca*
Pipalpatte/Dude Malata (Nep). **Habit:** Tree (8-25 m) similar to
P.ciliata, **Status:**Not evaluated, **Habitat:** Hemlock and Cool
Temperate forest & **Flowering:** April-June.



2. *Salix* L.

Salix longiflora Andersson. ལྷང་མ་ཤིང་/Langmashing (Sha), Zhrangmai (Ura). **Habit:** Shrub (1-3 m), **Status:** LC, **Habitat:** Agriculture field edges with dwarf bamboo in Sub-alpine regions & **Flowering:** May.



Salix babylonica L. Weeping Willow (Eng), ལྷང་མ་ཤིང་/Changmashing (Dzo), Trangmaiseng (Ura). **Habit:** Tree (4-20 m), **Status:** Not evaluated, **Habitat:** Settlement and field edges in Temperate and Sub-alpine regions & **Flowering:** April.



Salix sp.

Habit: Shrub (1-3 m),

Habitat: Sub-alpine forest (Spruce forest Shingkhar 3500 msl)



Salix daltoniana

Habit: Higher Shrub, (Below Phrumsengla Top) **Status:** Unknown, **Habitat:** Along roadsides and forest clearings in Fir and Rhododendron forest.



Salix sp.

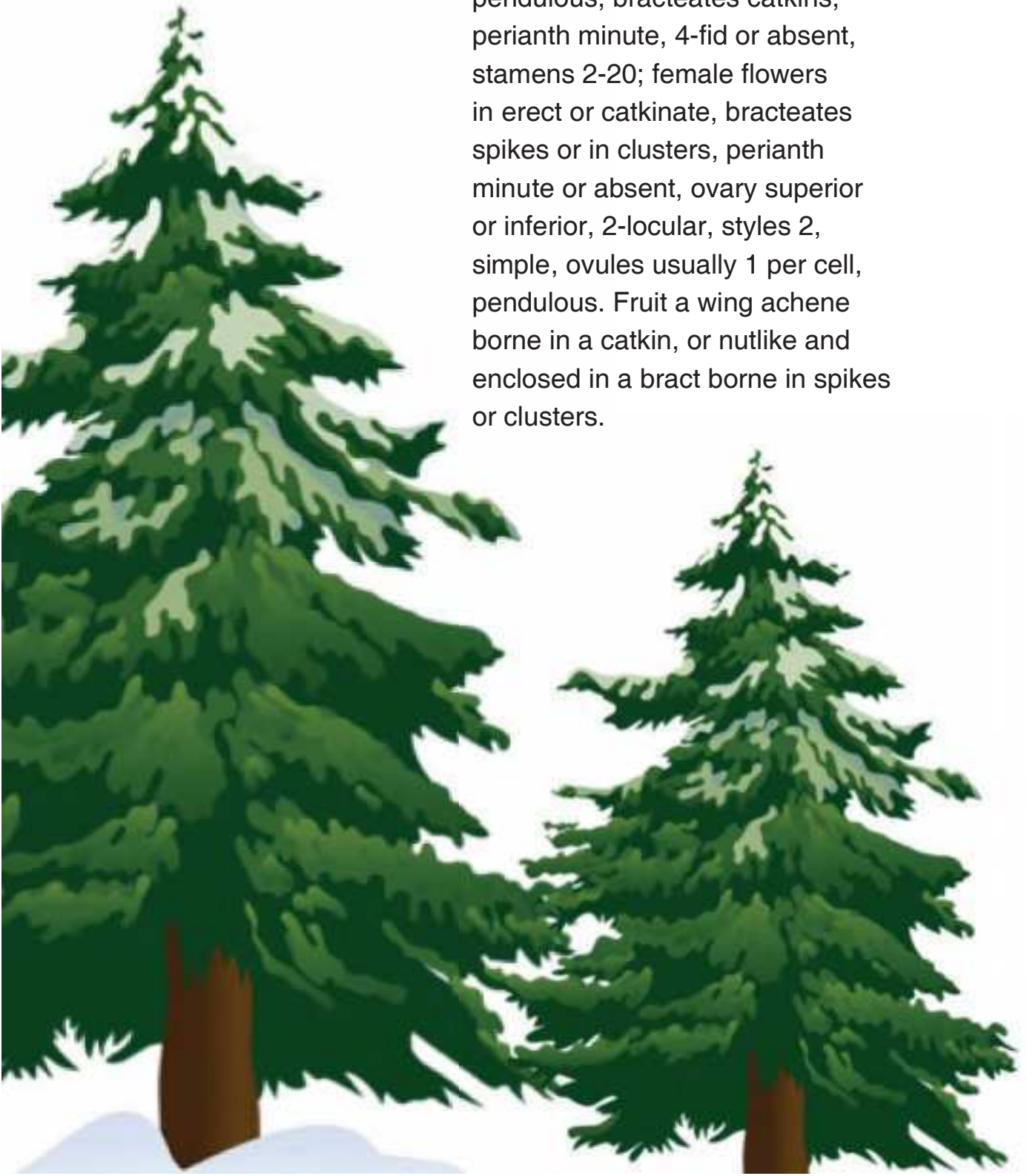
Habit: Small Tree, (Near Geyzamchu 3450 msl), **Status:** Unknown, **Habitat:** Along roadsides and forest clearings in Fir and Rhododendron forest.



BETULACEAE

(Birch family)

Monoecious, deciduous trees or shrubs. Leaves alternate, simple, stipulate. Male flowers in pendulous, bracteates catkins, perianth minute, 4-fid or absent, stamens 2-20; female flowers in erect or catkinate, bracteates spikes or in clusters, perianth minute or absent, ovary superior or inferior, 2-locular, styles 2, simple, ovules usually 1 per cell, pendulous. Fruit a wing achene borne in a catkin, or nutlike and enclosed in a bract borne in spikes or clusters.



1. *Betula L.*

Betula utilis D.Don **Birch(Eng)**

ལ་ཏག་པ་ཤིང་/La Tagp (Dzo), Cleek (Ura), Bhojpat (Nep/Hindi)

Habit: Tree (15 m), **Status:** LC, **Habitat:** Moist coniferous forest esp. Fir and Rhododendron forest & **Flowering:** April-June.



2. *Alnus Miller*

Alnus nepalensis D.Don. Alder (Eng),

སྐ་མ་ཤིང་/Gamashing (Dzo), Gamaseng/Gamashing (Ura/

Kurtoed), Utis (Nep). **Habit:** Tree (Up to 20 m), **Status:**LC,

Habitat: Cool broad-leaved and Warm broad-leaved forest &

Flowering: July-October.



FAGACEAE

(Oak family)

Monoecious, trees or shrubs. Leaves alternate, simple, pinnately veined, stipulate. Male flowers in spikes, sometimes catkinate, perianth 4-6 lobed, united at base, stamens 6-20, rudimentary ovary (pistillode) sometimes present. Female flowers solitary in a scaly involucre, perianth minute or absent, 4-6-lobed, tube adnate to apparently inferior ovary, ovary 3-7 celled, ovules 1-2 per cell, staminodes sometimes present. Fruit a nut (acorn), wholly or partially enveloped by an involucre (cupule) of connate woody bracts.



1. *Quercus* L.

Quercus lamellosa Smith.

བང་ཀ་ཤིང་/Bangkashing (Dzo), Phangkhoimashing (Sha), Phangmaiseng (Ura/Sengor), Bajrant (Nep). **Habit:** Tree (7-20 m), **Status:** LC, **Habitat:** Cool broad-leaved forest & **Flowering:** April-May.



2. *Lithocarpus* Blume

Lithocarpus elegans (Roxb.) Rehder.

Bamegpa (Kurtoed/Kheng), Shakorshing (Sha), Arkaula (Nep). **Habit:** Tree (10-20 m), **Status:** LC, **Habitat:** Subtropical and Warm Broadleaved forest & **Flowering:** April - July.



3. *Castanopsis* Spach

Castanopsis tribuloides A.DC.

སོ་ཀེ་འཁོར་/Sokey (Dzo), Sothrey (Med), Tsaishing/Sonag (Sha), Katus (Nep). **Habit:** Tree (3-20 m), Alt.: 2000-2500 masl, **Status:** LC, **Habitat:** Cool broad-leaved forest & **Flowering:** April-June.

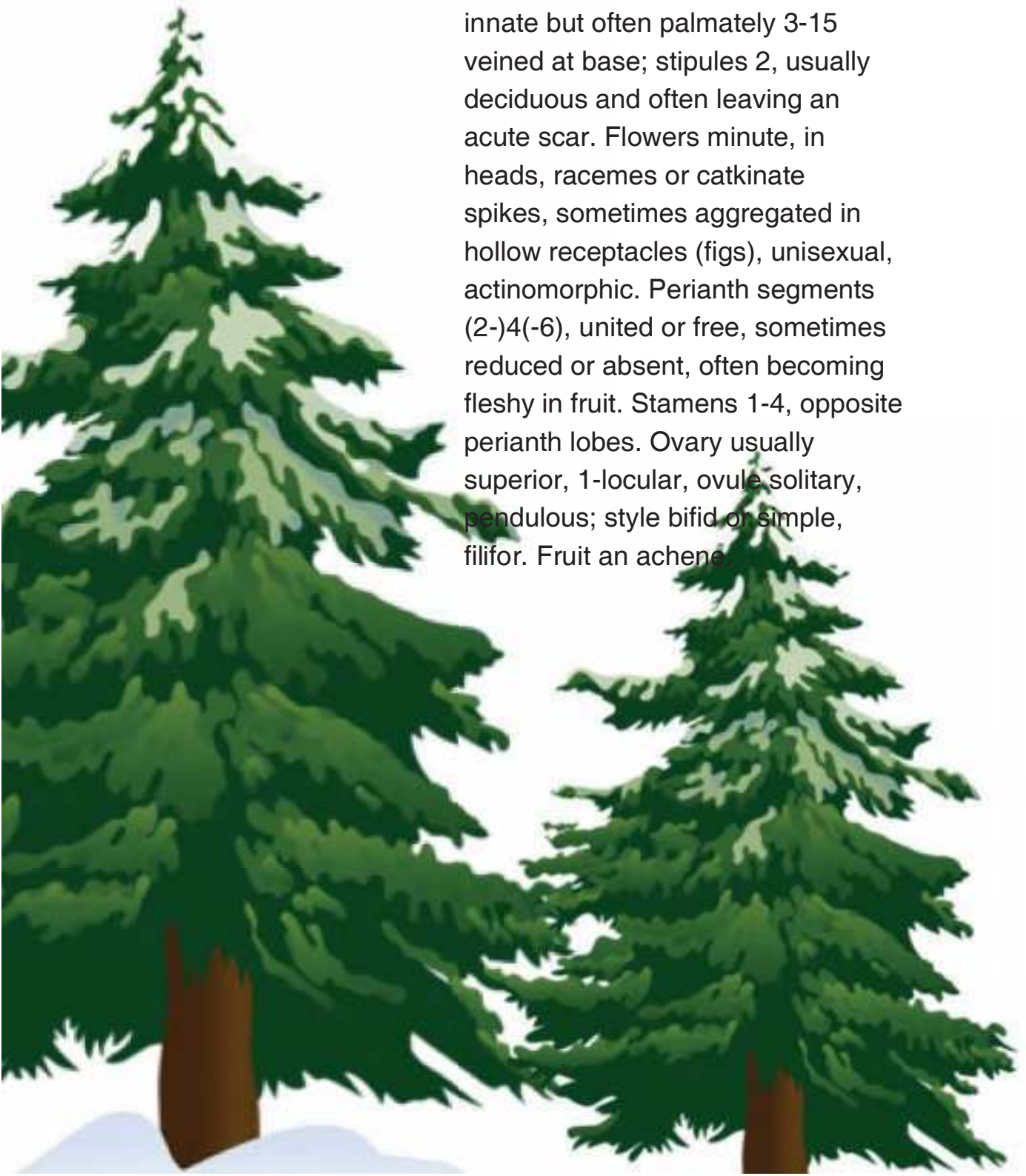


MORACEAE

(Fig Family)

Monoecious or deciduous trees or shrubs or woody climbers with milky latex.

Leaves alternate, rarely opposite, simple, sometimes lobed, venation innate but often palmately 3-15 veined at base; stipules 2, usually deciduous and often leaving an acute scar. Flowers minute, in heads, racemes or catkinete spikes, sometimes aggregated in hollow receptacles (figs), unisexual, actinomorphic. Perianth segments (2-)4(-6), united or free, sometimes reduced or absent, often becoming fleshy in fruit. Stamens 1-4, opposite perianth lobes. Ovary usually superior, 1-locular, ovule solitary, pendulous; style bifid or simple, filiform. Fruit an achene.



1. Ficus L.

Ficus semicordata J.E. Smith

Barachongma (Sha), Khaniun (Nep). **Habit:** Small Tree to 6 m, **Status:** LC, **Habitat:** Subtropical forest and dry Chirpine forest.



Ficus auriculata Loureiro Synm. *F. roxburghii* Miquel

Chongmashing (Sha), Khomdangseng (Kurtoed/Kheng/Ura), Nebaro (Nep). **Habit:** Tree (3-10 m), **Status:** Not evaluated, **Habitat:** Subtropical and Warm Broadleaved forest, Figs edible & leaves used as fodder (cultivated).



Ficus oligodon Miquel.

Borangchongmashing (Sha), Timil (Nep). **Habit:** Tree (3-10 m), **Status:** LC, **Habitat:** Dry valleys and Chirpine forest. Figs edible & leaves used as fodder.



Ficus glaberrima Blume.

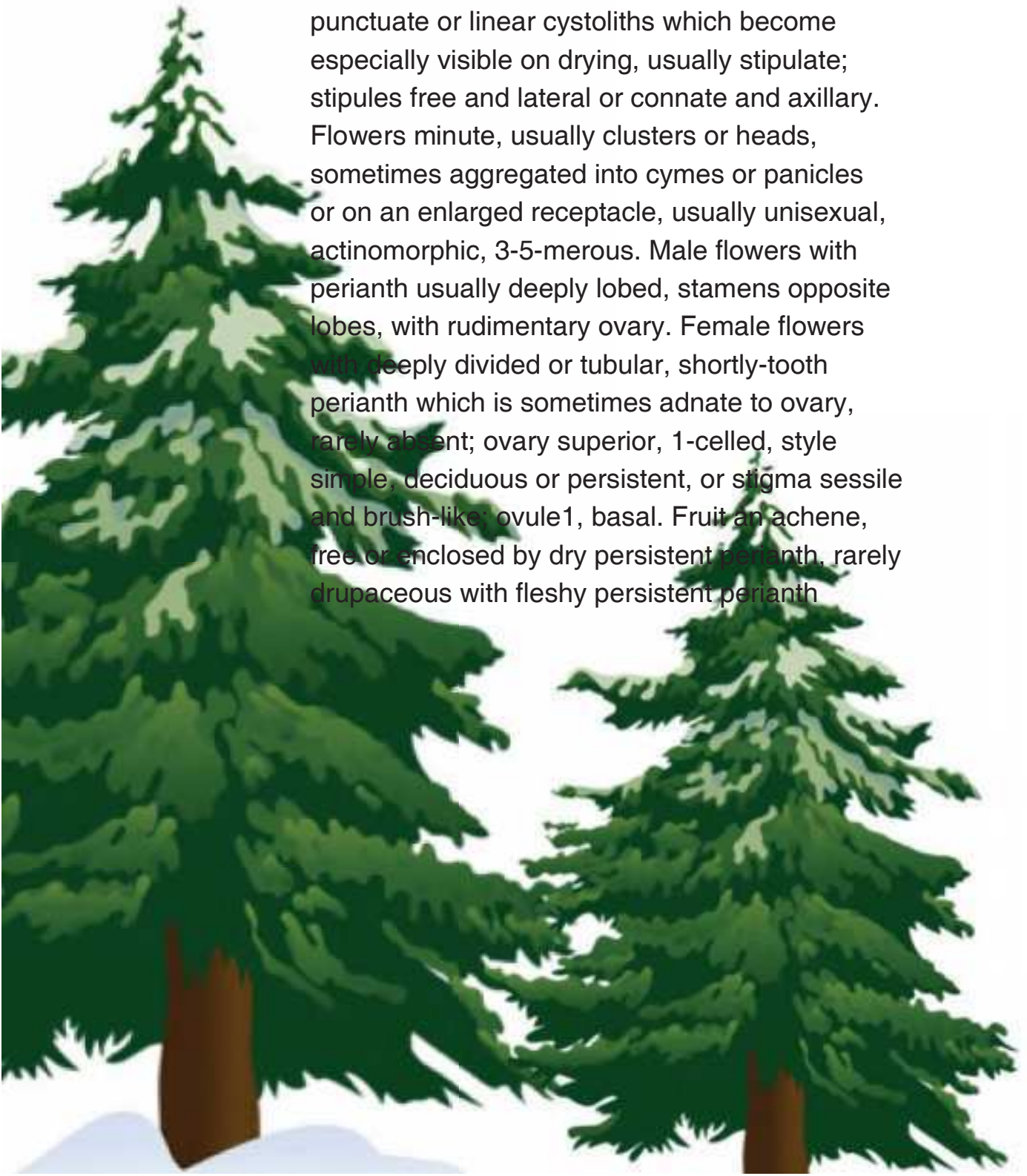
Phoseng (Kurtoed/Ura/Kheng), Karpoa (Nep), **Habit:** Tree (up to 25 m), **Status:** LC, **Habitat:** Warm broad-leaved forest. Leaves used as fodder.



URTICACEAE

(Nettle family)

Herbs or shrubs, rarely trees, sometimes bearing stinging hairs, stems often fibrous. Leaves simple, alternate or opposite, rarely whorled, palmately 3-veined at base or pinnately veined, surface with punctate or linear cystoliths which become especially visible on drying, usually stipulate; stipules free and lateral or connate and axillary. Flowers minute, usually clusters or heads, sometimes aggregated into cymes or panicles or on an enlarged receptacle, usually unisexual, actinomorphic, 3-5-merous. Male flowers with perianth usually deeply lobed, stamens opposite lobes, with rudimentary ovary. Female flowers with deeply divided or tubular, shortly-tooth perianth which is sometimes adnate to ovary, rarely absent; ovary superior, 1-celled, style simple, deciduous or persistent, or stigma sessile and brush-like; ovule 1, basal. Fruit an achene, free or enclosed by dry persistent perianth, rarely drupaceous with fleshy persistent perianth



1. *Girardinia* Gaudichaud

Girardinia diversifolia (Link) Friis.

ཟོ་ཆག་/Zocha (Dzo), Zangroo Jazoo (Sha), Bangre sisnu (Nep).

Habit: Perennial herb up to 2 m tall, **Status:** LC, **Habitat:** Subtropical and Warm broadleaved with rare presence in Temperate forest & **Flowering:** July-September.



2. *Elatostema* J.R. & J.G.A. Forster

Elatostema platyphyllum Wedbell.

Phagpa Jaroma (Sha), Gaglata (Nep). **Habit:** Large perennial herb (1-2 m), **Status:** LC, **Habitat:** Subtropical and Warm broadleaved forest on shady slopes by streams.



Elatostema lineolatum Wight.

དམ་བོར/Damboor (Dzo), Drimom (Sha), Dambarug (Ura/Kheng), Chotey Gaglata (Nep). **Habit:** Herb, **Status:** LC, **Habitat:** Subtropical and Warm broadleaved forest, shady slopes and rocky river banks & **Flowering:** May-June.



Elatostema sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Subtropical & Warm BL forest.



Elatostema sp.

Habit: Herb. **Habitat:** Rocky areas in Subtropical and Warm BL forest.



PROTEACEAE

Evergreen trees, sometimes dioecious. Leaves alternate, simple, pinnately veined, glabrous, exstipulate, entire or serrate on mature plants, sometimes deeply pinnatisect on juvenile plants. Flowers actinomorphic, hermaphrodite or functionally unisexual, in slender, unbranched, axillary racemes. Perianth tubular and clavate in bud, segments 4, reflexing and separating to base. Stamens 4, adnate to perianth lobes. Ovary superior with 4 basal disk-glands. 1-locular; style long and slender with clavate stigma; ovules 2, basal or apical. Fruit a globose or ellipsoid drupe or nut.



1. *Helicia* Loureiro

Helicia nilagirica Beddome. *Sym. H.erratica* Hook.f.

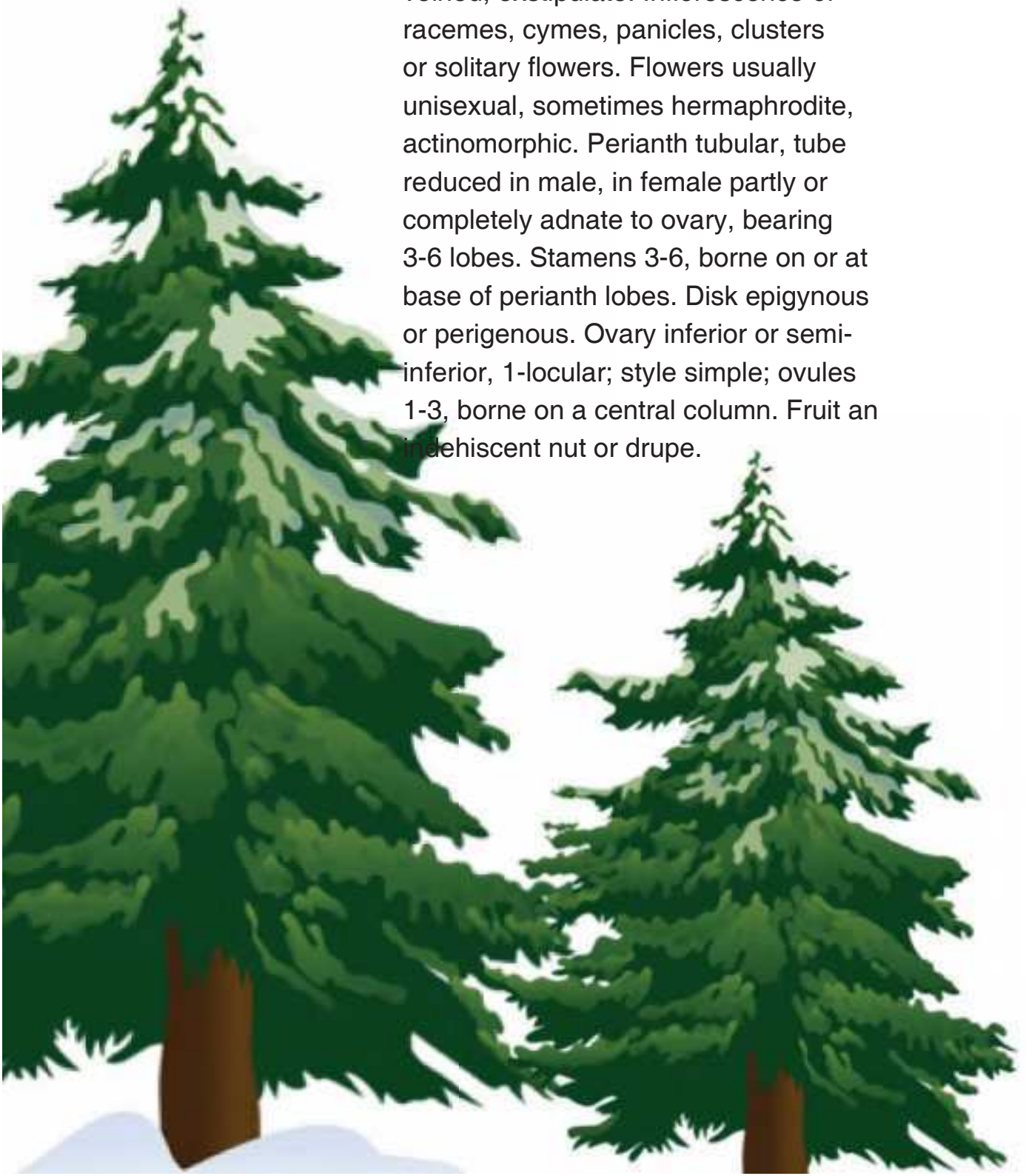
Potorshing (Sha), Bandre (Nep). **Habit:** Small tree up to 10 m tall, **Status:** LC, **Habitat:** Subtropical and Warm broadleaved forest & **Flowering:** May-July.



SANTALACEAE

(Sandalwood family)

Trees, shrubs or herbs, sometimes stem- root-parasites, often dioecious. Leaves alternate, simple, entire, pinnately or palmately veined, exstipulate. Inflorescence of racemes, cymes, panicles, clusters or solitary flowers. Flowers usually unisexual, sometimes hermaphrodite, actinomorphic. Perianth tubular, tube reduced in male, in female partly or completely adnate to ovary, bearing 3-6 lobes. Stamens 3-6, borne on or at base of perianth lobes. Disk epigynous or perigenous. Ovary inferior or semi-inferior, 1-locular; style simple; ovules 1-3, borne on a central column. Fruit an indehiscent nut or drupe.



1. *Osyris* L.

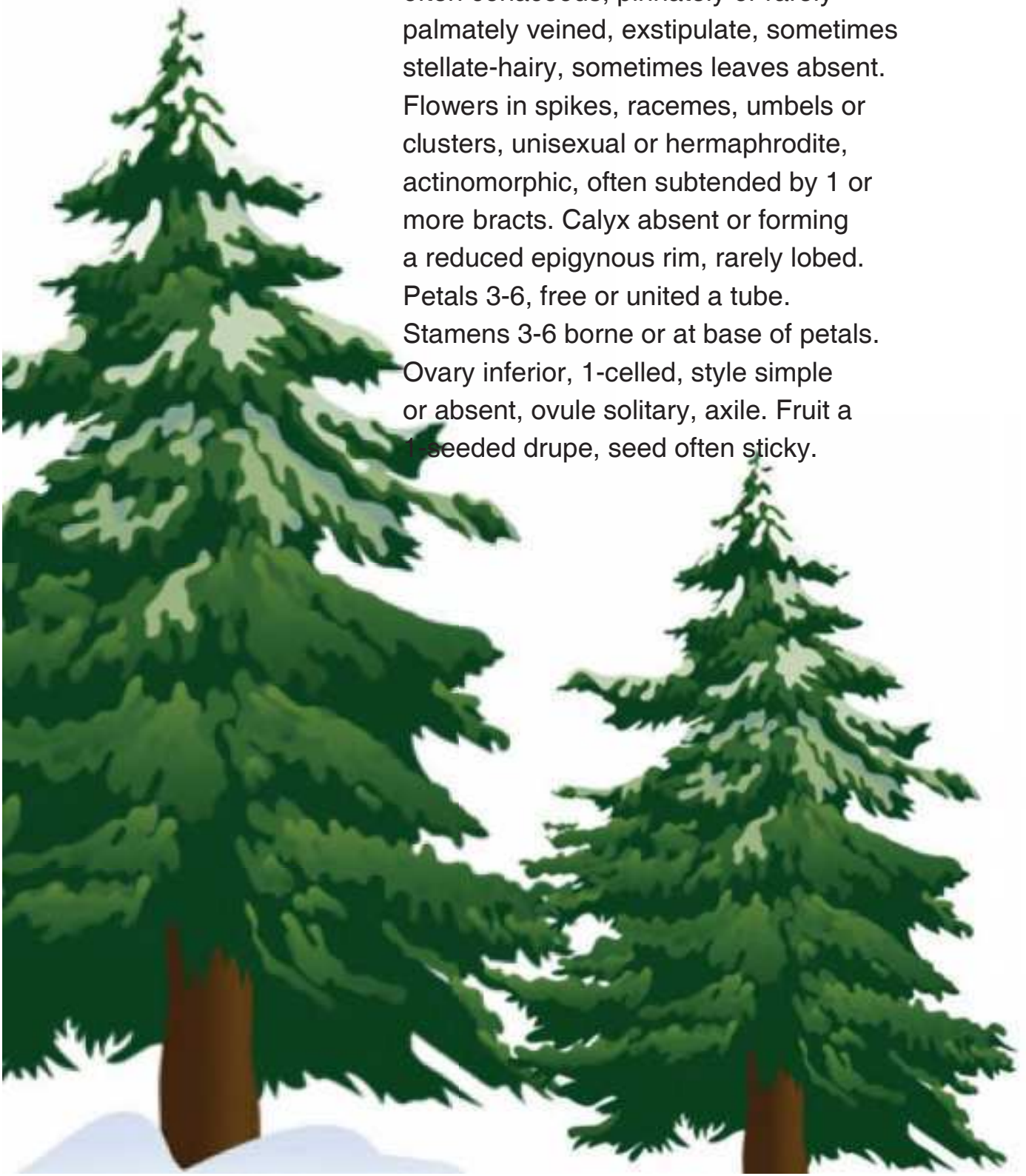
Osyris lanceolata Hochstetter & Steudel. *Synm: O.arborea* DC.
Gogotsalu (Sha), Ja Amaseng (Kheng). **Habit:** Shrub (1-3 m),
Status: LC, **Habitat:** Scrub forest in dry valleys & **Flowering:**
April-June.



LORANTHACEAE

(Mistletoe family)

Shrubby, rarely herbaceous, stem-parasites of trees, shrubs or other Loranthaceae. Leaves opposite, sometimes alternate, simple, entire, often coriaceous, pinnately or rarely palmately veined, exstipulate, sometimes stellate-hairy, sometimes leaves absent. Flowers in spikes, racemes, umbels or clusters, unisexual or hermaphrodite, actinomorphic, often subtended by 1 or more bracts. Calyx absent or forming a reduced epigynous rim, rarely lobed. Petals 3-6, free or united a tube. Stamens 3-6 borne or at base of petals. Ovary inferior, 1-celled, style simple or absent, ovule solitary, axile. Fruit a 1-seeded drupe, seed often sticky.



1. *Loranthus* Jacquin

Loranthus odoratus Wall. Synm: *Hyphear odoratum* (Wall) Danser. **Habit:** Small Shrub, **Status:** DD, **Habitat:** Cool-broad-leaved and Warm broad-leaved forest & **Flowering:** May-June.



2. *Scurrula* L.

Scurrula elata (Edgeworth) Danser. Synm: *Loranthus elatus* Edgeworth.

ཇཱ་ཤིང་/Jashing (Dzo), Khaining shing (Sha). **Habit:** Shrub 1-3 m, **Status:** LC, **Habitat:** Cool-broad-leaved and Evergreen Oak forest & **Flowering:** April-June.



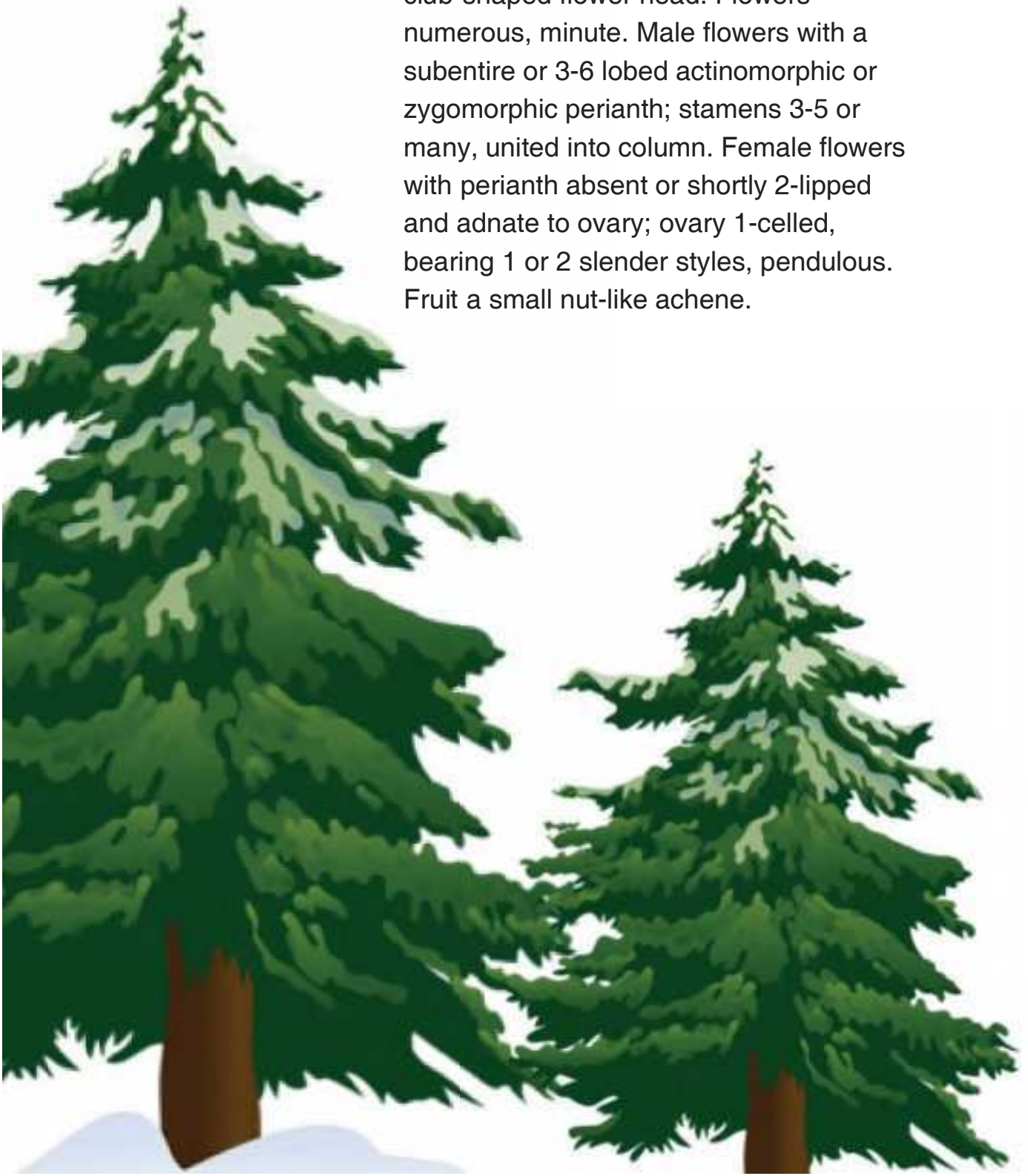
3. *Taxillus* van Tieghem

Taxillus kaempferi (DC) Danser. Synm: *Viscum kaempferi* DC.
ལམ་དཀའ་ལམ་/Lam Deka (Dzo). **Habit:** Shrub up to 1 m, **Status:** LC,
Habitat: Blue Pine, Hemlock and Mixed Coniferous forest &
Flowering: May-July.



BALANOPHORACEAE

Monoecious or dioecious, glabrous, fleshy herbs with tuberous rootstocks, lacking chlorophyll, parasitic on roots of trees. Stems stout, short, erect, naked or bearing scale-like leaves, with terminal club-shaped flower head. Flowers numerous, minute. Male flowers with a subentire or 3-6 lobed actinomorphic or zygomorphic perianth; stamens 3-5 or many, united into column. Female flowers with perianth absent or shortly 2-lipped and adnate to ovary; ovary 1-celled, bearing 1 or 2 slender styles, pendulous. Fruit a small nut-like achene.



1. *Balanophora* J.R. & J.G.A. Forster

Balanophora involucrata Hook.f.

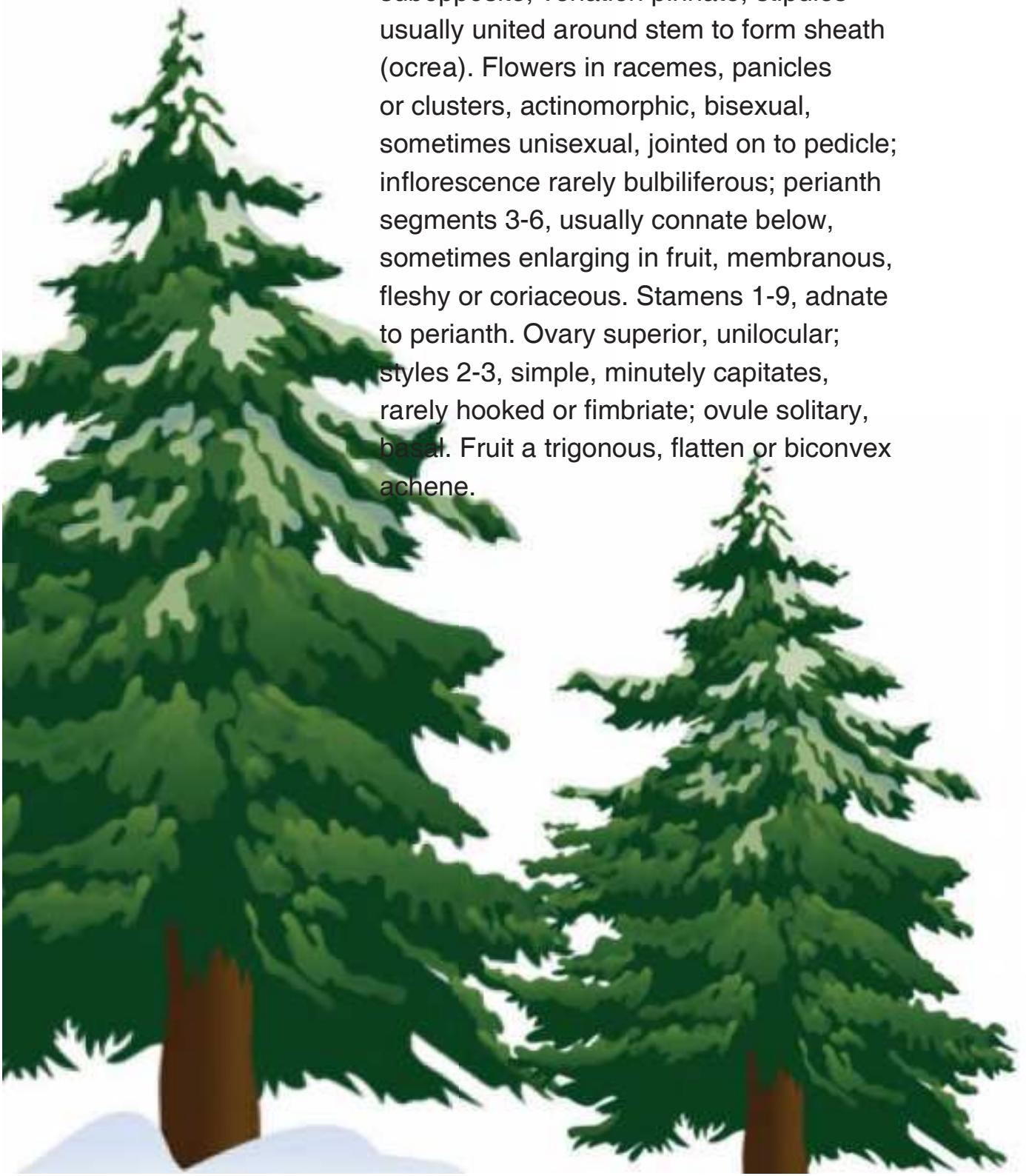
Habit: Herb, **Status:** LC, **Habitat:** Spruce and mixed coniferous forest & **Flowering:** June-October.



POLYGONACEAE

(Knotweed family)

Herbs, subshrubs or climbers, sometimes spinous. Leaves simple, entire, margins rarely sinuate or serrulate, alternate or rarely subopposite, venation pinnate; stipules usually united around stem to form sheath (ocrea). Flowers in racemes, panicles or clusters, actinomorphic, bisexual, sometimes unisexual, jointed on to pedicle; inflorescence rarely bulbiferous; perianth segments 3-6, usually connate below, sometimes enlarging in fruit, membranous, fleshy or coriaceous. Stamens 1-9, adnate to perianth. Ovary superior, unilocular; styles 2-3, simple, minutely capitate, rarely hooked or fimbriate; ovule solitary, basal. Fruit a trigonous, flatten or biconvex achene.



1. *Aconogonon* (Meisner) Reichenbach

Aconogonon molle (D.Don) Harra var. *molle* Meisner. Synm: *Polygonum molle*.

ཅུ་ཅུམ་ཤི་དོ་/Chuchum/Shido (Dzo), Thrumpai (Ura), Thrumbula (Trongsa) Kochoma (Sha), Thothney (Nep). **Habit:** Subshrub, **Status:** LC, **Habitat:** Warm and cool broad-leaved forest & **Flowering:** May-November.



2. *Persicaria* L.

Persicaria hydropiper (L.) Spach. Synm: *Polygonum hydropiper* L.

Habit: Weak ascending perennial herb, **Status:** LC, **Habitat:** Marshy area in Warm broad-leaved forest & **Flowering:** April - September.



Persicaria runcinata (D.Don) H.Gross. Synm: *Polygonum runcinatum* D.Don. Jongroma (Nep).

Habit: Prostrate or ascending herb, **Status:** LC, **Habitat:** Roadsides and cliff faces & **Flowering:** May-October.



Persicaria nepalensis (Meisner) H. Gross. Synm: *Polygonum nepalense* Meisner, *Polygonum alatum* Sprengel.

Habit: Prostrate or suberect annual herb, **Status:** LC, **Habitat:** Roadsides and damp places in Temperate and cool broad leaved forest & **Flowering:** April - October.



Persicaria humilis (Meisner) Harra. Synm: *Polygonum humile* Meisner.

Habit: Prostrate or suberect annual herb, **Status:** LC, **Habitat:** Fir and Mixed Conifer forest & **Flowering:** May-November.



Persicaria capitata (D.Don.) H. Gross. Synm: *Polygonum capitatum* D.Don.

Habit: Prostrate suberect annual herb, **Status:** LC, **Habitat:** Roadside areas in Warm and cool broadleaved forest & **Flowering:** March - September.



Persicaria sp.

Habit: Annual herb, **Status:** Unknown, **Habitat:** Stream side in Temperate forest & **Flowering:** July. (Below Phrumsengla top)



Persicaria sp.

Habit: Biannual herb, **Alt.:** 2000-2500 masl, **Status:** Unknown, **Habitat:** Warm Broadleaved forest. Below Saling village



3. *Bistorta* (L.) Adanson

Bistorta emodi (Meisner) Hara Synm: *Polygonum emodi* Meisner. Curled-Leaf Knotweed (Eng).

Habit: Weak prostrate subherb, with slender elongate branches,
Status: LC, **Habitat:** Rocky slopes and stream sides in the Sub-alpine forest & **Flowering:** July-September.



Bistorta amplexicaulis (D.Don) Greene var. *pendula* Hara. Synm: *Polygonum amplexicaule* D.Don.

Habit: Erect herb with thick rhizomes, **Status:** LC, **Habitat:** Stream sides and Meadows in Sub-alpine forest & **Flowering:** July-September.



Bistorta vivipara (L.) S. F. Gray. Synm: *Polygonum viviparum* L. Alpine Bistort/ Alpine Knotweed (Eng),

Habit: Erect herb with thick, fibrous rhizomes, **Status:** LC,

Habitat: Hill sides and forest clearings in alpine and Temperate forest & **Flowering:** May - September.



4. *Rheum L.*

Rheum australe D.Don. Synm: *Rheum emodi* sensu F.B.I. p.p. on Meisner. Himalayan rhubarb (Eng), Chauwa (Ura) Chutsa (Med)

Habit: Perennial herb with thick roots, **Status:** LC, **Habitat:** Rocky cliffs and slopes in Alpine and Sub-alpine forest &

Flowering: May-August.



5. *Rumex* L.

Rumex nepalensis Sprengel. Nepal Dock (Eng),
ཤོམ་བདེན/Shomda (Dzo), Sheylempa (Sha), Shampali (Ura/
Sengor), Shambali (Trongsa). **Habit:** Perennial herb, **Status:**
LC, **Habitat:** Open grazing grounds and agriculture fields in
Temperate forest recognized as weed & **Flowering:** May-July.

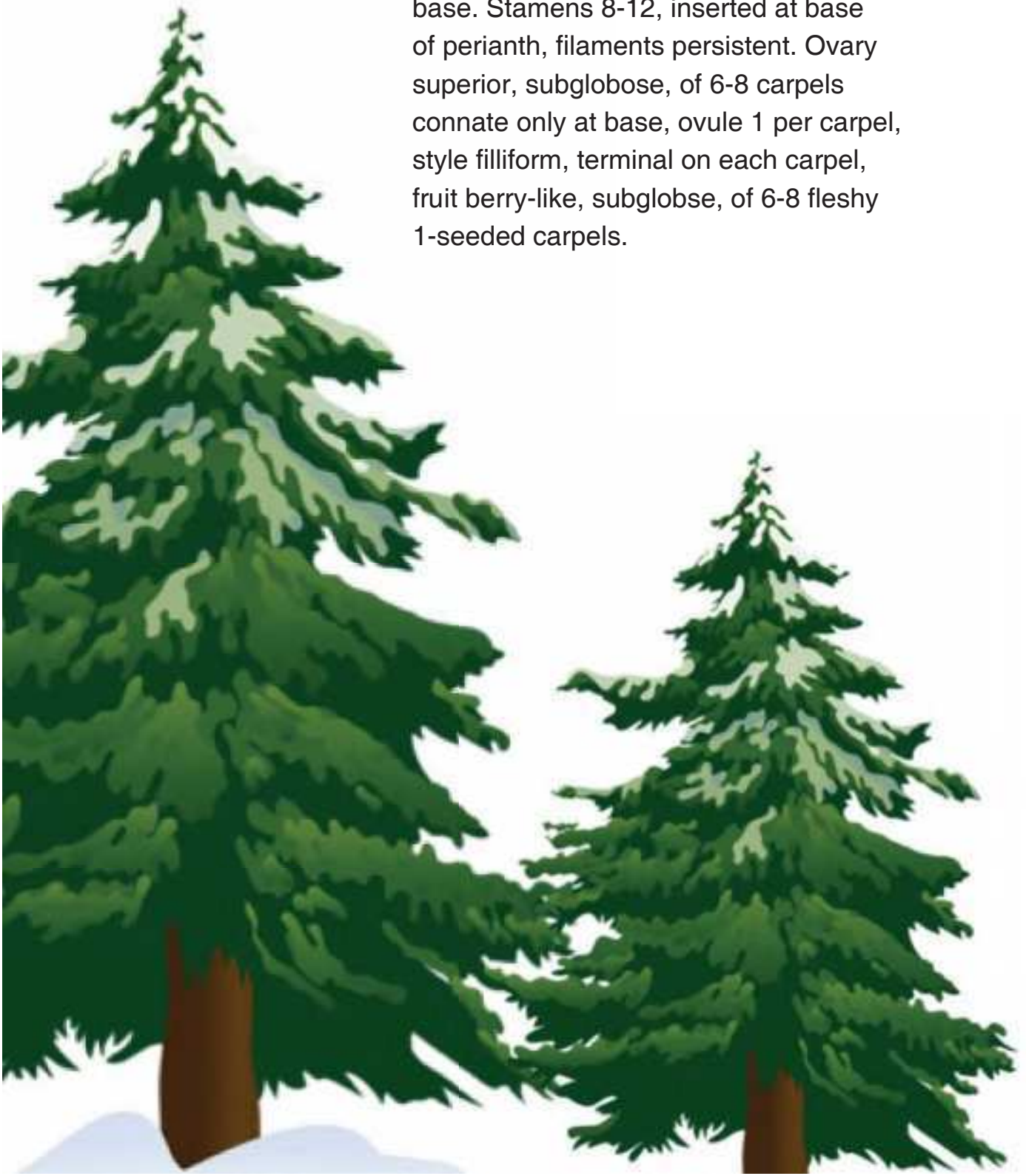


Rumex acetosella L. Sheep's Sorrel/Weed Sorrel (Eng).
Habit: Dioecious perennial herb with creeping root stock,
Status: LC, **Habitat:** River banks and cultivation field edges in
Temperate forest & treated as weed & **Flowering:** May-August.



PHYTOLACACEAE

Fleshy perennial herbs. Leaves alternate, pinnately veined, entire, exstipulate. Flowers in leaf-opposed or terminal bracteates racemes, bisexual, actinomorphic. Perianth of 4-5 segments, connate at base. Stamens 8-12, inserted at base of perianth, filaments persistent. Ovary superior, subglobose, of 6-8 carpels connate only at base, ovule 1 per carpel, style filliform, terminal on each carpel, fruit berry-like, subglobose, of 6-8 fleshy 1-seeded carpels.



1. *Phytolaca* L.

Phytolaca acinosa Roxb. Indian Poke (Eng),

ཀ་ཤ་ཀ་ཞི་བ་ཀ/ Kashakani/ Baka (Dzo), Omshalasoma (Sha),
Pawokarpo (Med)

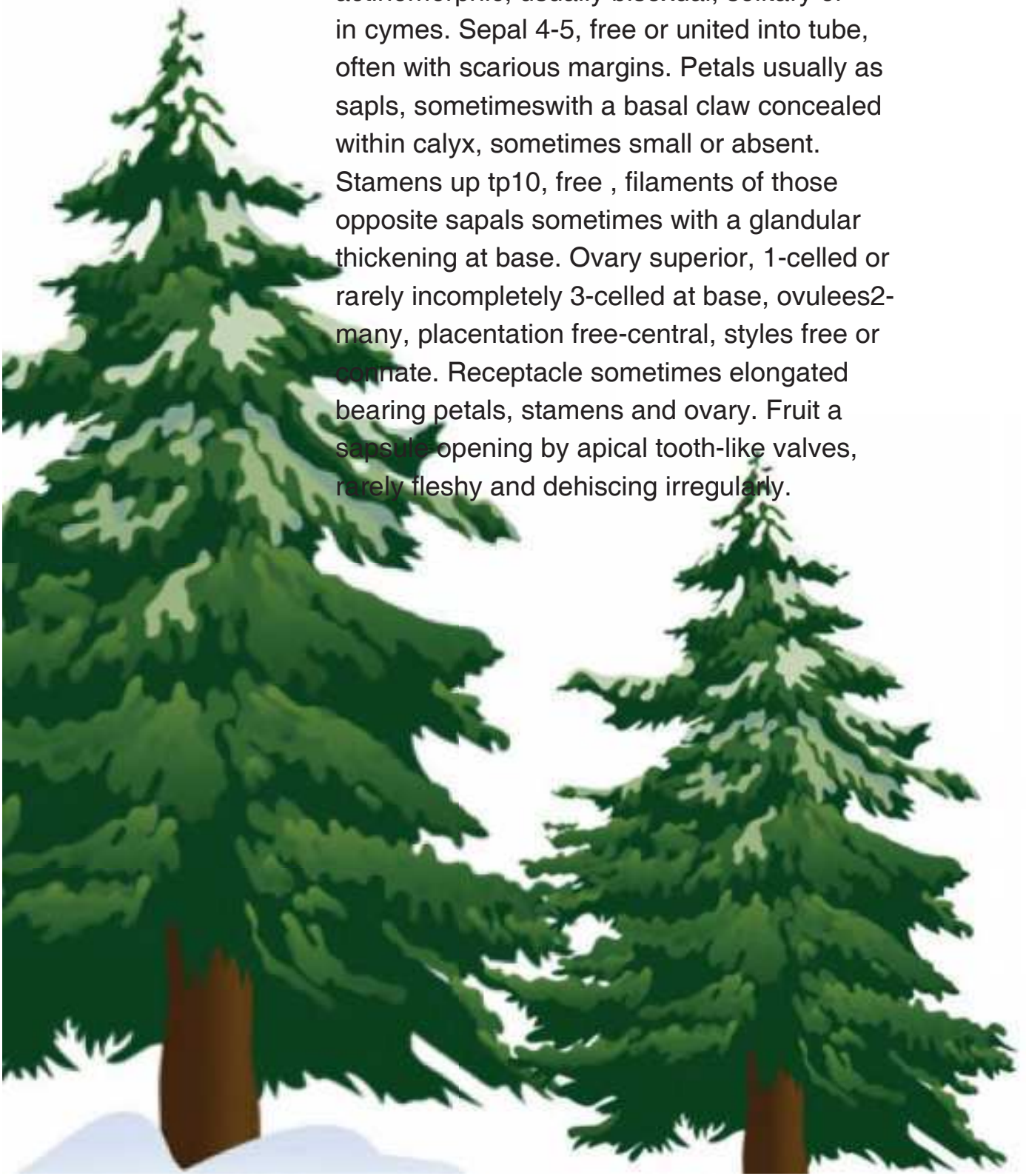
Habit: Fleshy perennial herb, **Status:** LC,
Habitat: Clearings and roadsides in Warm broad-leaved forests
around cultivation & habitation & **Flowering:** April-September.



CARYOPHYLLACEAE

(Carnation Family)

Annual, biennial or perennial herbs. Leaves opposite, simple, entire, rarely serrulate, often narrowly connate at base; stipules scarious or absent. Flowers actinomorphic, usually bisexual, solitary or in cymes. Sepal 4-5, free or united into tube, often with scarious margins. Petals usually as saps, sometimes with a basal claw concealed within calyx, sometimes small or absent. Stamens up to 10, free, filaments of those opposite sepals sometimes with a glandular thickening at base. Ovary superior, 1-celled or rarely incompletely 3-celled at base, ovules 2-many, placentation free-central, styles free or connate. Receptacle sometimes elongated bearing petals, stamens and ovary. Fruit a capsule opening by apical tooth-like valves, rarely fleshy and dehiscent irregularly.



1. *Stellaria* L.

Stellaria vestita Kurz. Synm: *S.saxatilis* D.Don non Scopoli, *S.hamiltoniana* Majumdar.

Habit: Diffuse herbs, **Status:** LC, **Habitat:** Grows with shrubs, in open grazing grounds and cultivated ground margins & **Flowering:** April-July.



Stellaria congestiflora Hara.

Habit: Net forming herbs, **Status:** DD, **Habitat:** Mountain cliffs and stone boulders & **Flowering:** July - September.



2. *Drymaria* Schultes

Drymaria sp.

Habit: Suberect annual herb, **Status:** LC, **Habitat:** Marshy area in the Warm broadleaved and Subtropical forest & **Flowering:** May - August.



3. *Spergula* L.

Spergula arvensis L. Corn Spurrey(Eng)

Habit: Erect or spreading annual herb upto 30cm, **Status:** LC, Common dryland weed of winter crops & **Flowering:** August - October.



CHENOPODIACEAE

(Cat tail/Goosefoot family)

Annual herbs. Leaves alternate, simple, exstipulate, sometimes gland-dotted, mealy with white scales or stellate-pubescent. Flowers axillary clusters, sometimes forming cymes or terminal panicles, unisexual or bisexual, actinomorphic. Perianth segments 3-5, free or connate, herbaceous or membranous, persistent (absent in female flowers in *Microgynoecium*). Stamens 2-5, opposite perianth segments, filaments free or connate at base. Ovary superior, 1-celled, ovule 1; styles usually 2, linear. Fruit an achene, often enclosed by persistent perianth



1. *Chenopodium* L.

Chenopodium album L. Fat Hen/ Lamb's-quarters (Eng),
Bathua (Hindi).

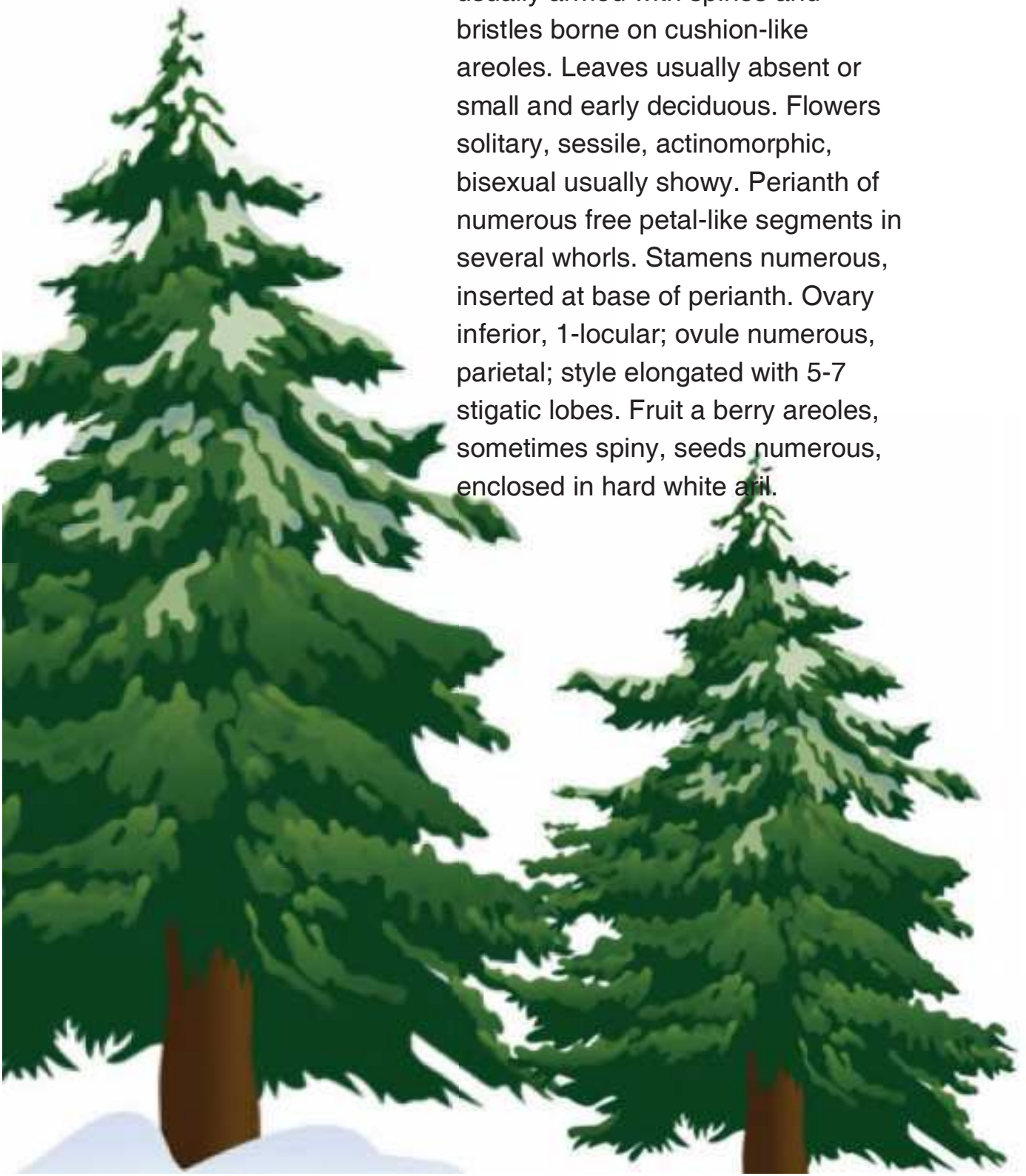
Habit: Erect herb, **Status:** Not evaluated (cultivated), **Habitat:**
Waste and burnt lands, cultivation grounds growing as weed &
Flowering: January - August.



CACTACEAE

(Cactus family)

Large succulent shrubs; stems cylindric; branches segmented, deeply longitudinally ribbed or compressed, usually armed with spines and bristles borne on cushion-like areoles. Leaves usually absent or small and early deciduous. Flowers solitary, sessile, actinomorphic, bisexual usually showy. Perianth of numerous free petal-like segments in several whorls. Stamens numerous, inserted at base of perianth. Ovary inferior, 1-locular; ovule numerous, parietal; style elongated with 5-7 stigmatic lobes. Fruit a berry areoles, sometimes spiny, seeds numerous, enclosed in hard white aril.



1. *Opuntia* Miller

Opuntia vulgaris Miller. Synm: *O.monacantha* (Willdenow) Haworth. Drooping Prickly Pear (Eng), ལྷུ་བ་རིགས་ལྗེའི་རྩང་/Gyalwarigngai Tsang (Dzo), Pegpaling zoo (Sha), Nag phani (Hindi)

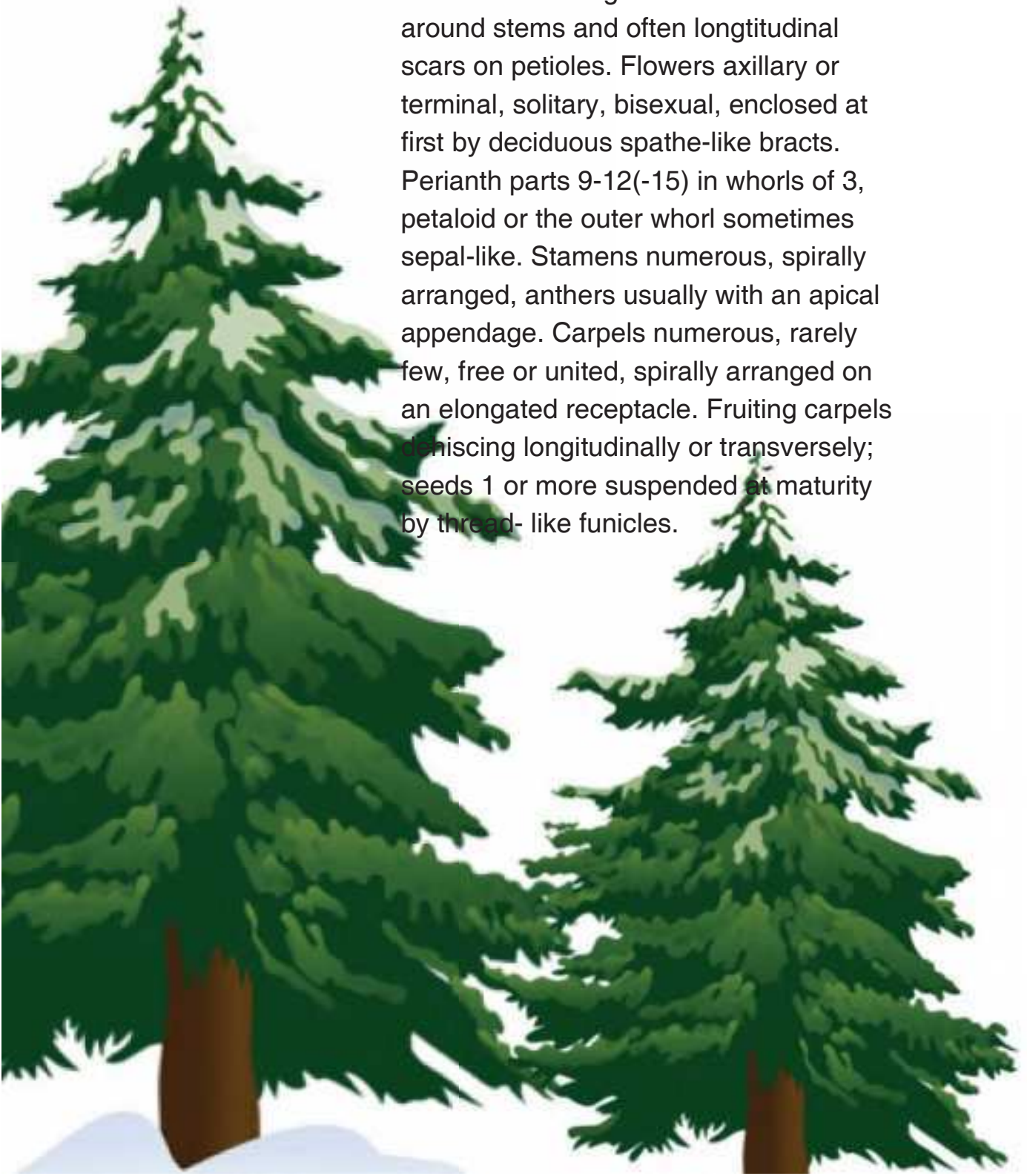
Habit: Suberect succulent and sprawling shrub 2-4 m, **Status:** Not evaluated, **Habitat:** Hillsides in dry valleys and field boundaries as vegetative fence & **Flowering:** April - June.



MAGNOLIACEAE

(Magnolia family)

Trees or shrubs. Leaves mostly coriaceous, alternate, simple, entire, pinnately veined; stipules large enclosing young growth, later deciduous leaving annular scars around stems and often longitudinal scars on petioles. Flowers axillary or terminal, solitary, bisexual, enclosed at first by deciduous spathe-like bracts. Perianth parts 9-12(-15) in whorls of 3, petaloid or the outer whorl sometimes sepal-like. Stamens numerous, spirally arranged, anthers usually with an apical appendage. Carpels numerous, rarely few, free or united, spirally arranged on an elongated receptacle. Fruiting carpels dehiscent longitudinally or transversely; seeds 1 or more suspended at maturity by thread-like funicles.



1. *Magnolia* L.

Magnolia campbellii Hook. f. & Thomson. Campbell's Magnolia (Eng),

ཧ་ལེ་མེ་རྟོག་/Haloy metog (Dzo), Dzambuling metog (Sha), Ghoge chanp/ Lal chanp (Nep).

Habit: Deciduous tree, 12-15 m, **Status:** LC, **Habitat:** Moist Hemlock and Rhododendron forest & **Flowering:** March - May.



Magnolia globosa Hook. f. & Thomson. Globe Magnolia (Eng), Kokre chanp (Nep).

Habit: Deciduous small tree, **Status:** LC, **Habitat:** Moist Hemlock and fir forest & **Flowering:** May - July.



2. *Talauma* Jussieu

Talauma hodgsonii Hook. f. & Thomson *Magnolia hodgsonii*
Hook. f. & Thomson.

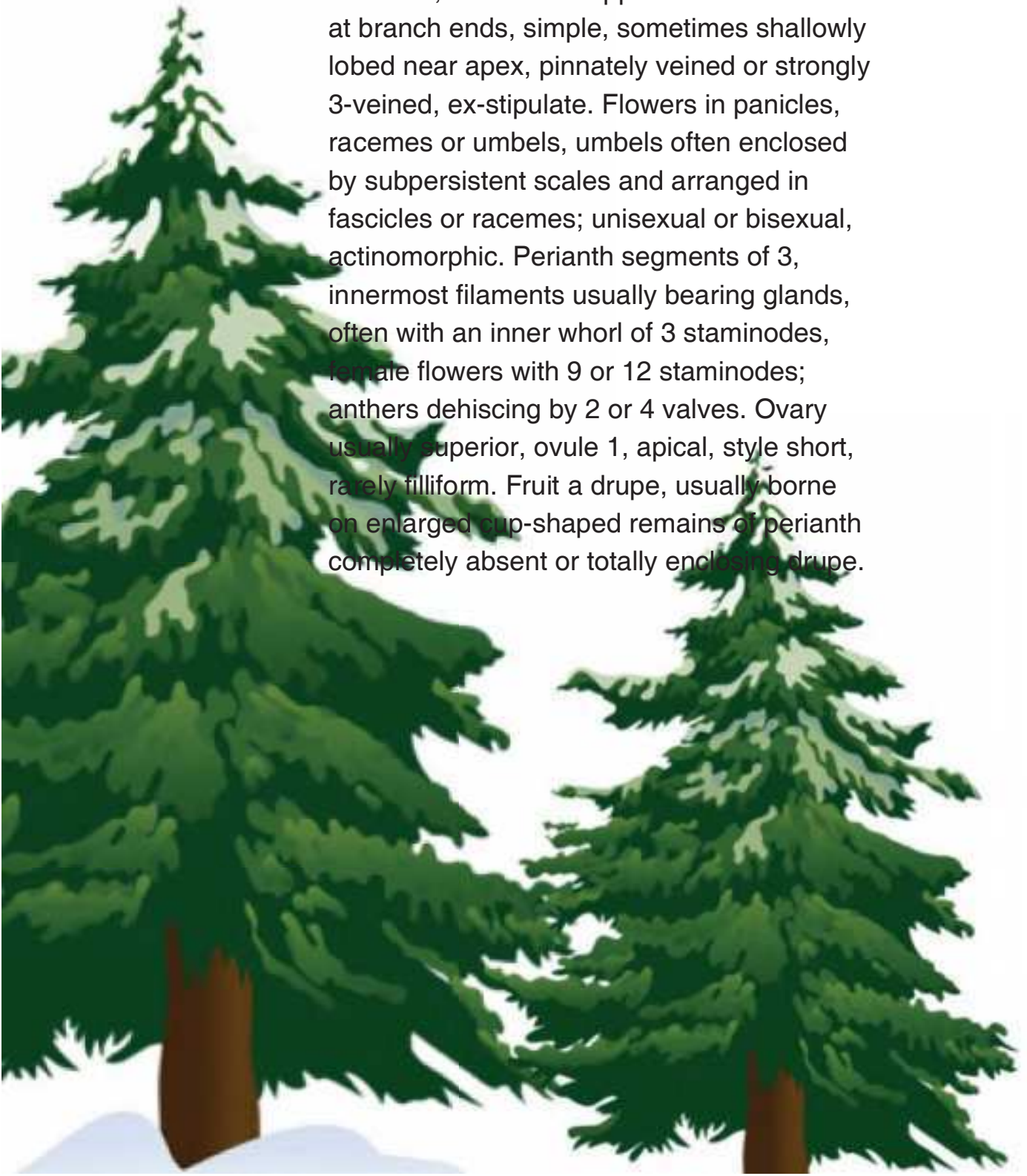
ཁེམ་/Khem (Dzo), Kadering shing (Sha), Hare/Chiuri/Balu Kath
(Nep). **Habit:** Evergreen tree, 8-12 m, **Status:** LC, **Habitat:**
Warm broad-leaved forest & **Flowering:** May.



LAURACEAE

(Laurel family)

Evergreen or deciduous trees or shrubs, often aromatic; tigs with or without conspicuous terminal vegetative buds and rings of bud scale scars. Leaves alternate, sometimes opposite or clustered at branch ends, simple, sometimes shallowly lobed near apex, pinnately veined or strongly 3-veined, ex-stipulate. Flowers in panicles, racemes or umbels, umbels often enclosed by subpersistent scales and arranged in fascicles or racemes; unisexual or bisexual, actinomorphic. Perianth segments of 3, innermost filaments usually bearing glands, often with an inner whorl of 3 staminodes, female flowers with 9 or 12 staminodes; anthers dehiscent by 2 or 4 valves. Ovary usually superior, ovule 1, apical, style short, rarely filiform. Fruit a drupe, usually borne on enlarged cup-shaped remains of perianth completely absent or totally enclosing drupe.



1. *Cinnamomum* Schaeffer

Cinnamomum bejolghota (Hamilton) Sweet. Synm: *C. obtusifolium* Nees.

ལྷོ་ལྷོ་/Drongdo (Dzo), Phramda/Tesparshing chhilu (Sha), Zapale seng (Kheng), Bhale Sinkoli/ Patrange/ Sin kaule (Nep).

Habit: Evergreen tree (to 20 m), shoots with terminal vegetative buds, **Status:** LC, **Habitat:** Sub-tropical, Warm and Cool broad-leaved forest & **Flowering:** March - May.



Cinnamomum sp.

Habit: Evergreen tree, **Status:** Unknown, **Habitat:** Cool broad-leaved forest (below Bribdungla) & **Flowering:** March - May.



2. *Persea* Miller

Persea bootanica (Meisner) Kostermans. Synm: *Machilus bootanica* Meisner. Avacado (Eng).

གོ་ལི་གོ་སྤེ་ཤིང་/Golee/ Goosey shing (Dzo), Golee shing (Sha), Guli (Ura) **Habit:** Large evergreen tree, shoots with rings of bud scale scars, **Status:** DD (Endemic), **Habitat:** Warm and Cool broad-leaved forest & **Flowering:** May.



3. *Lindera* Thunberg

Lindera sp.

Nenshing/Ru neng (Sha), Siltimur (Nep).

Habit: Deciduous shrub or small tree to 5-6m, Bark and fruits aromatic. **Status:** LC, **Habitat:** Amongst shrubs in Blue Pine and Spruce forests & **Flowering:** April - May.



Lindera neesiana (Wallich ex. Nees) Blume

Habit: Evergreen tree, **Status:** Unknown, **Habitat:** Warm broad-leaved forests & **Flowering:** May.



Alseodaphne sp.

Chogsengma (Kheng) eaten by Hornbills.

Habit: Large evergreen tree, **Status:** Unknown, **Habitat:** Sub-tropical and Warm broad-leaved forest & **Fruiting:** August – September.



4. *Parassasafras* Long

Parassasafras confertiflora (Meisner) Long, Synm: *Actinodaphne confertiflora* Meisner, *Neocinnamomum confertiflorum* (Meisner) Kostermans, *Litsea confertiflora* (Meisner) Kostermans.

Singsee shing (Sha), Kalo bori (Nep). **Habit:** Small tree to 4-6m, **Status:** LC, **Habitat:** Warm broad-leaved forests & **Flowering:** November - January.



RANUNCULACEAE

(Buttercup family)

Annual or perennial herbs, erect or stoloniferous, rarely shrubs or woody climbers. Leaves basal and on stems, alternate, rarely opposite, entire or palmately, ternately, or pinnately dissected, ex-stipulated or petioles sometimes broadened into stipule-like auricles at base. Hairs when present simple. Inflorescence 1-flowered, cymose, racemose or paniculate. Flowers actinomorphic or zygomorphic, bisexual or rarely unisexual (plants dioecious). Sepals 3-8, mostly 5, free, often showy and petaloid. Petals sometimes absent, 1- many, free, often nectariferous, sometimes inconspicuous. Stamens many, rarely 8-20. Carpels 1- many, superior, free or shortly connate at base (in *Dichocarpum*), ovules 1, basal or few-many, marginal. Fruit a cluster of 1-seeded indehiscent achene or few- to many-seeded follicles dehiscing along dorsal suture, rarely a berry.



1. *Clematis* L.

Clematis Montana DC.

Habit: Woody climber, **Status:** LC, **Habitat:** On shrubs in dry valleys, in Blue pine and Spruce forests and Juniper & Rhododendron scrub & **Flowering:** April - July.



Clematis connata DC. Synm: *C.trullifera* (Franchet) Finet & Gagnepain

Habit: Slender woody climber, **Status:** LC, **Habitat:** On shrubs in Cool broad-leaved forests & **Flowering:** September – January.



2. *Anemone* L.

Anemone rivularis DC.

Habit: Perennial herbs, **Status:** LC, **Habitat:** Clearings, open grazing grounds in Blue pine, Spruce and Hemlock forests & **Flowering:** April – August.



Anemone sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Moist areas in the Fir forest & **Flowering:** May – June.



3. *Thalictrum* L.

Thalictrum saniculiforme DC.

Habit: Erect perennial herbs, **Status:** , **Habitat:** On mossy rocks in Cool broad-leaved forests & **Flowering:** August.



Thalictrum chelidonii DC agg. *T. reniforme* Wall.

Habit: Erect perennial herbs, **Status:** LC, **Habitat:** Fir, Spruce and Mixed coniferous forests & Juniper/ Rhododendron scrub & **Flowering:** June – September.



Thalictrum virgatum Hook. f. & Thomson.

Habit: Erect perennial herbs and sometimes pendulous, **Status:** LC, **Habitat:** Steep stream bank sides and rock ledges in Hemlock and Larch forest & **Flowering:** May –July



4. *Ranunculus L.*

Ranunculus chinensis Bunge.

Habit: Erect annual or biennial herbs, **Status:** Not evaluated, **Habitat:** Roadsides, Paddy field and cultivated fields as weed & **Flowering:** April – May.



5. *Delphinium L.*

Delphinium cooperi Munz.

Jakang (Med). **Habit:** Erect perennial herbs, **Status:** LC, **Habitat:** Stream sides in Spruce forest & **Flowering:** August – October.



6. *Aconitum* L.

Aconitum laciniatum (Bruehl) Stapf.

Tsandhug (Ura), Bonga Nagpo (Med). **Habit:** Erect perennial herbs, **Status:** LC, **Habitat:** Fir forest and cultivated in gardens in Sub-alpine forest & **Flowering:** July - August.



Aconitum violaceum Jacquem. Ex Stapf.

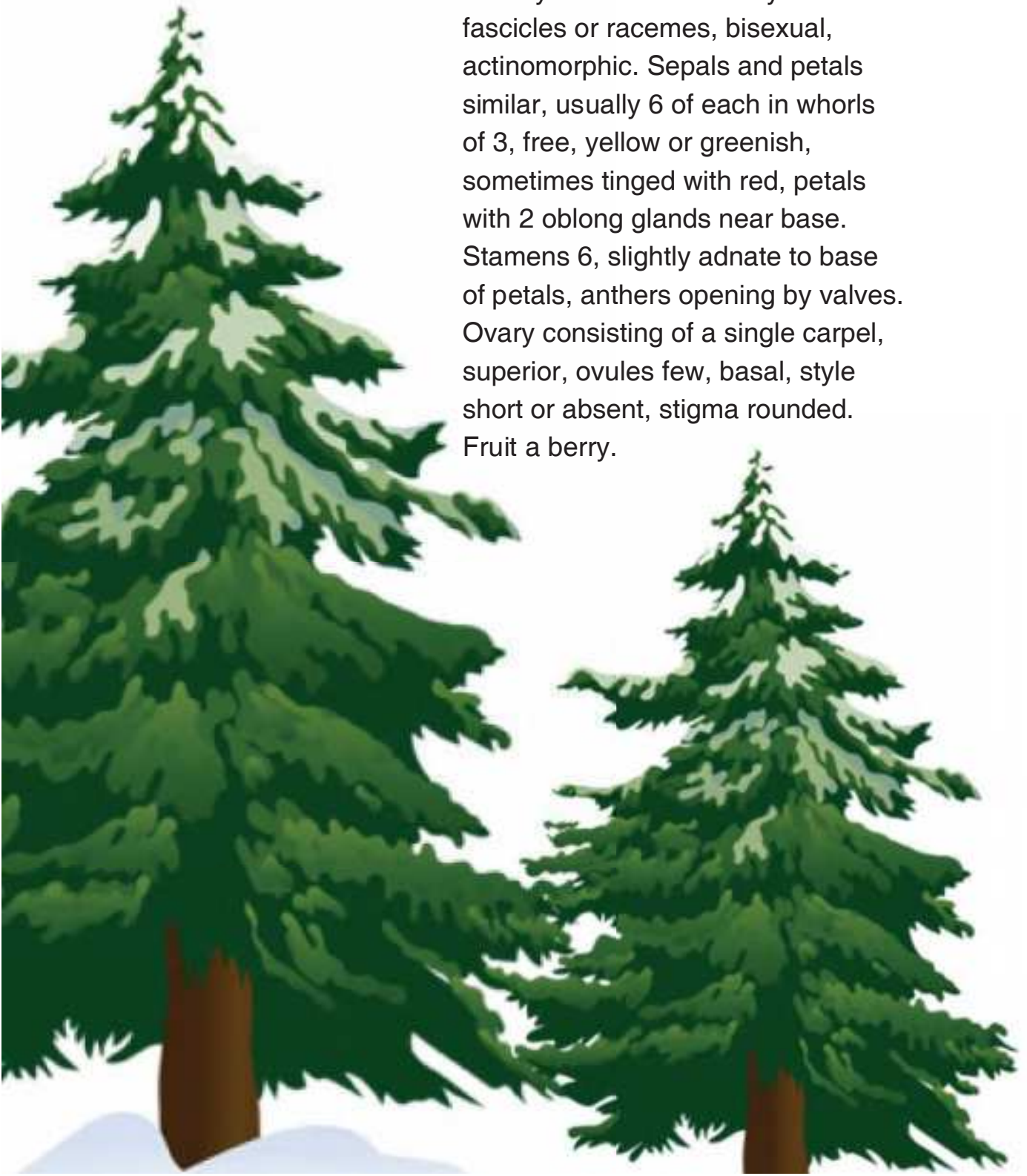
Badhog (Ura). **Habit:** Erect perennial herbs, **Status:** LC, **Habitat:** Along with shrubs on open slopes in the Sub-alpine region & **Flowering:** July – September.



BERBERIDACEAE

(Barberry family)

Shrubs, often spiny. Leaves alternate, simple or 1-pinnate, herbaceous or coriaceous, exstipulate. Flowers solitary or several to many in fascicles or racemes, bisexual, actinomorphic. Sepals and petals similar, usually 6 of each in whorls of 3, free, yellow or greenish, sometimes tinged with red, petals with 2 oblong glands near base. Stamens 6, slightly adnate to base of petals, anthers opening by valves. Ovary consisting of a single carpel, superior, ovules few, basal, style short or absent, stigma rounded. Fruit a berry.



1. *Berberis* L.

Berberis angulosa Hook.f. & Thomson. Synm: *B.parisepala* Ahrendt.

སྐྱེད་པའི་རྩེ་ཤིང་/Kerpai tsang shing (Dzo), Kerpa zoo (Sha), Kewtser (Ura), Chutro (Nep). **Habit:** Deciduous shrub, 1-1.5 m, **Status:** LC, **Habitat:** Open areas in Spruces forest and cultivation field edges in Sub-alpine region & **Flowering:** May – June.



Berberis hookeri Lemaire. *B.wallichiana* auct. Non DC.

Habit: Ever green, 3-5 ft high, **Status:** LC, **Habitat:** Hemlock and Rhododendron forest & **Flowering:** May - June.



Berberis insignis Hook. f. & Thomson. Synm: *B.incrassata* Ahrendt.

སྐྱེར་པའི་རྩེ་ཤིང་/Kerpai tsang shing (Dzo), Kerpa zoo (Sha) Kewtser (Ura), Chutro (Nep). **Habit:** Evergreen shrub, 1.5-2 m, **Status:** LC, **Habitat:** Along with other shrubs in Mixed coniferous and Blue Pine forest & **Flowering:** May.



Berberis sp.

Habit: Deciduous shrub, 1-1.5 m, **Status:** Unknown, **Habitat:** Open area along roadsides in Mixed coniferous forest. (Geyzamchu area)



Berberis sp.

Habit: Deciduous shrub, 1-1.5 m, **Status:** Unknown, **Habitat:** Growing with dwarf bamboo and Rosa shrubs in Spruce forest. (Shingkar area)



2. Mahonia Nuttall

Mahonia napaulensis DC. Synm: *M.acanthifolia* G. Don, *M.griffithii* Takeda, *M.sikkimensis* Takeda, *M.hicksii* Ahrendt, *Berberis napaulensis* (DC) Sprengel.

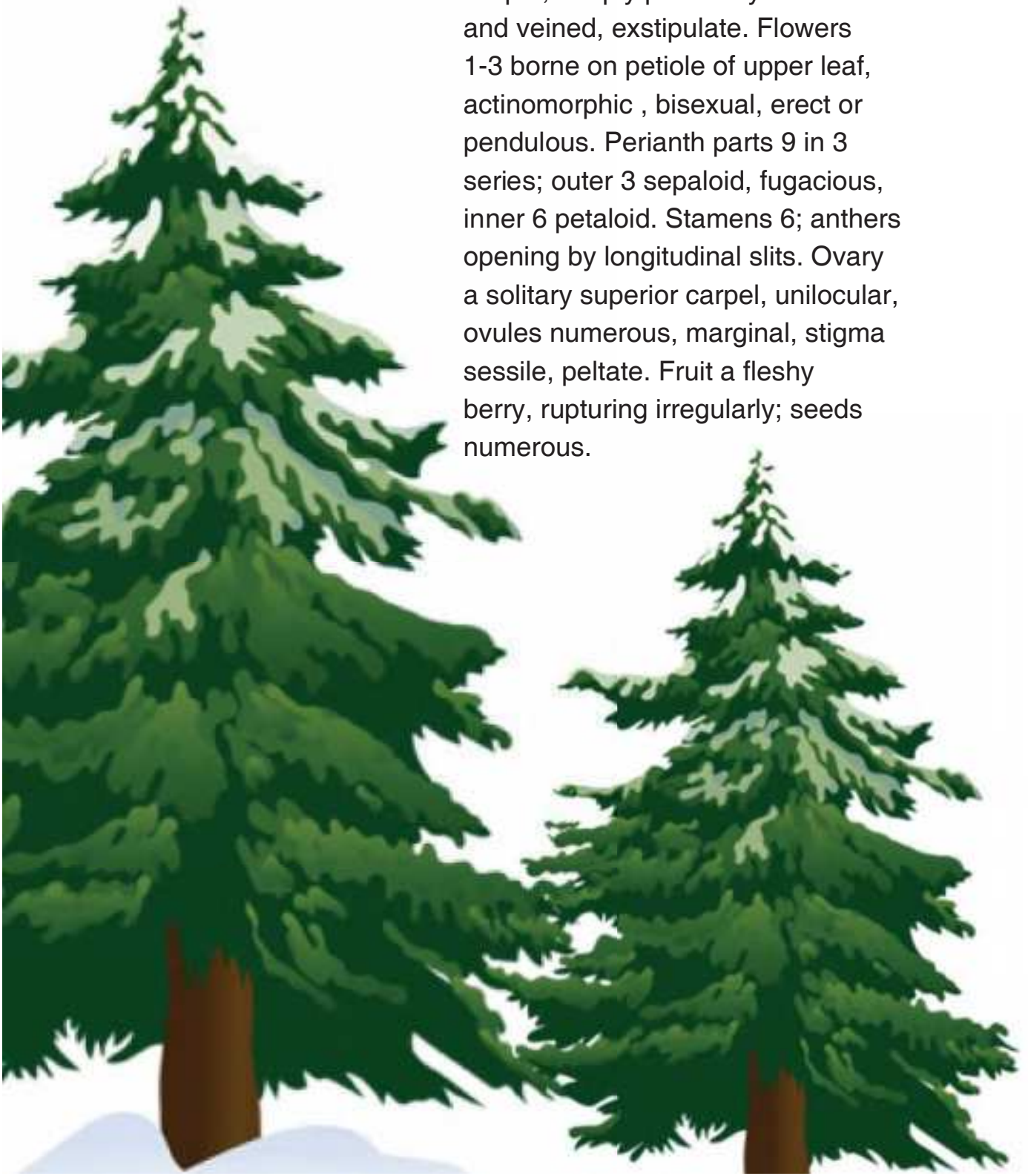
Chutro/Kesari (Nep). **Habit:** Shrub, **Status:** LC, **Habitat:** Growing with dwarf bamboo and Rosa shrubs in Spruce forest & **Flowering:** January - April.



PODOPHYLLACEAE

(May Apple family)

Perennial, shortly rhizomatous herbs. Stem erect, unbranched. Leaves 2 (rarely 3), alternate, borne at apex of stem, simple, deeply palmately lobed and veined, exstipulate. Flowers 1-3 borne on petiole of upper leaf, actinomorphic, bisexual, erect or pendulous. Perianth parts 9 in 3 series; outer 3 sepaloid, fugacious, inner 6 petaloid. Stamens 6; anthers opening by longitudinal slits. Ovary a solitary superior carpel, unilocular, ovules numerous, marginal, stigma sessile, peltate. Fruit a fleshy berry, rupturing irregularly; seeds numerous.



1. *Podophyllum* L.

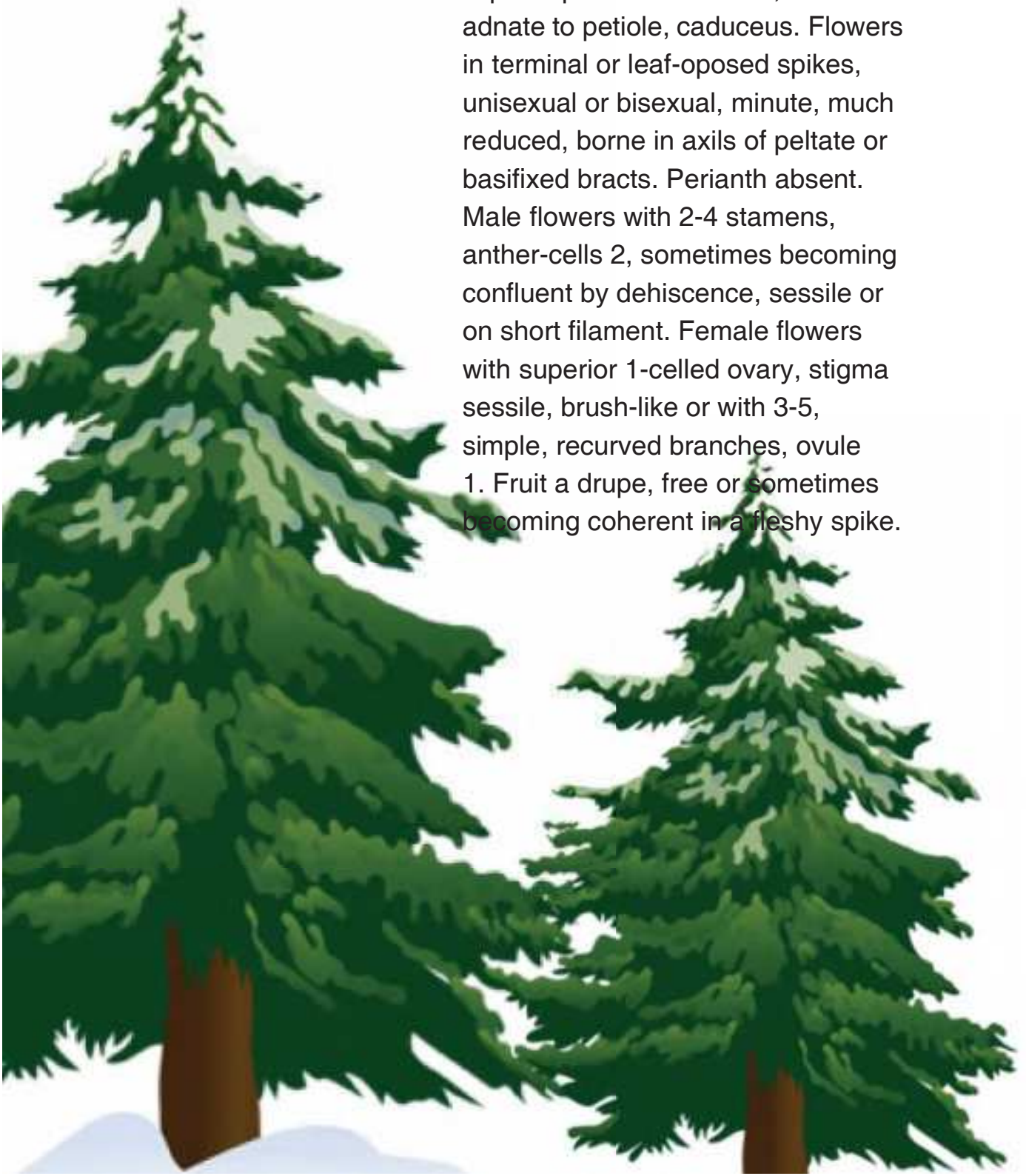
Podophyllum hexandrum Royle Synm: *P.emodi* Honiberger, *P.emodi* var.axillare Chatterjee & Mukerjee, *P.emodi* var.P.bootanense Chatterjee & Mukerjee, *Sinopodophyllum emodi* (Honiberger) Ying. Himalayan May Apple (Eng). Tongtongma (Shingkar), Yoelmosey (Med).

Habit: Perennial, shortly rhizomatous herb, **Status:** LC, **Habitat:** Shady coniferous forest with dwarf bamboo and also cultivated in the gardens (Shingkar) & **Flowering:** May - June.



PIPERACEAE

Small herbs or shrubs, often climbing, nodes often swollen. Leaves simple, alternate, opposite or whorled, entire, usually palmately veined at base, rarely pinnately veined; stipules present or absent, often adnate to petiole, caduceous. Flowers in terminal or leaf-oposed spikes, unisexual or bisexual, minute, much reduced, borne in axils of peltate or basifixed bracts. Perianth absent. Male flowers with 2-4 stamens, anther-cells 2, sometimes becoming confluent by dehiscence, sessile or on short filament. Female flowers with superior 1-celled ovary, stigma sessile, brush-like or with 3-5, simple, recurved branches, ovule 1. Fruit a drupe, free or sometimes becoming coherent in a fleshy spike.



1. *Peperomia* Ruiz & Pavon

Paperomia tetraphylla (Forster) Hooker. & Arnott. Synm: *P.reflexa* (L.f.) Dietrich non Kunth.

Habit: Bushy succulent herb, **Status:** LC, **Habitat:** Mossy tree trunks and rocky surfaces in Warm broad-leaved forests & **Flowering:** February – July.



2. *Piper* L.

Piper nigrum

Habit: vine, **Status:** Unknown, **Habitat:** In the dense warm broad-leaved fores

Piper sp.



Piper sp.

Habit: Vine, **Status:** Unknown, **Habitat:** Warm broad-leaved forest

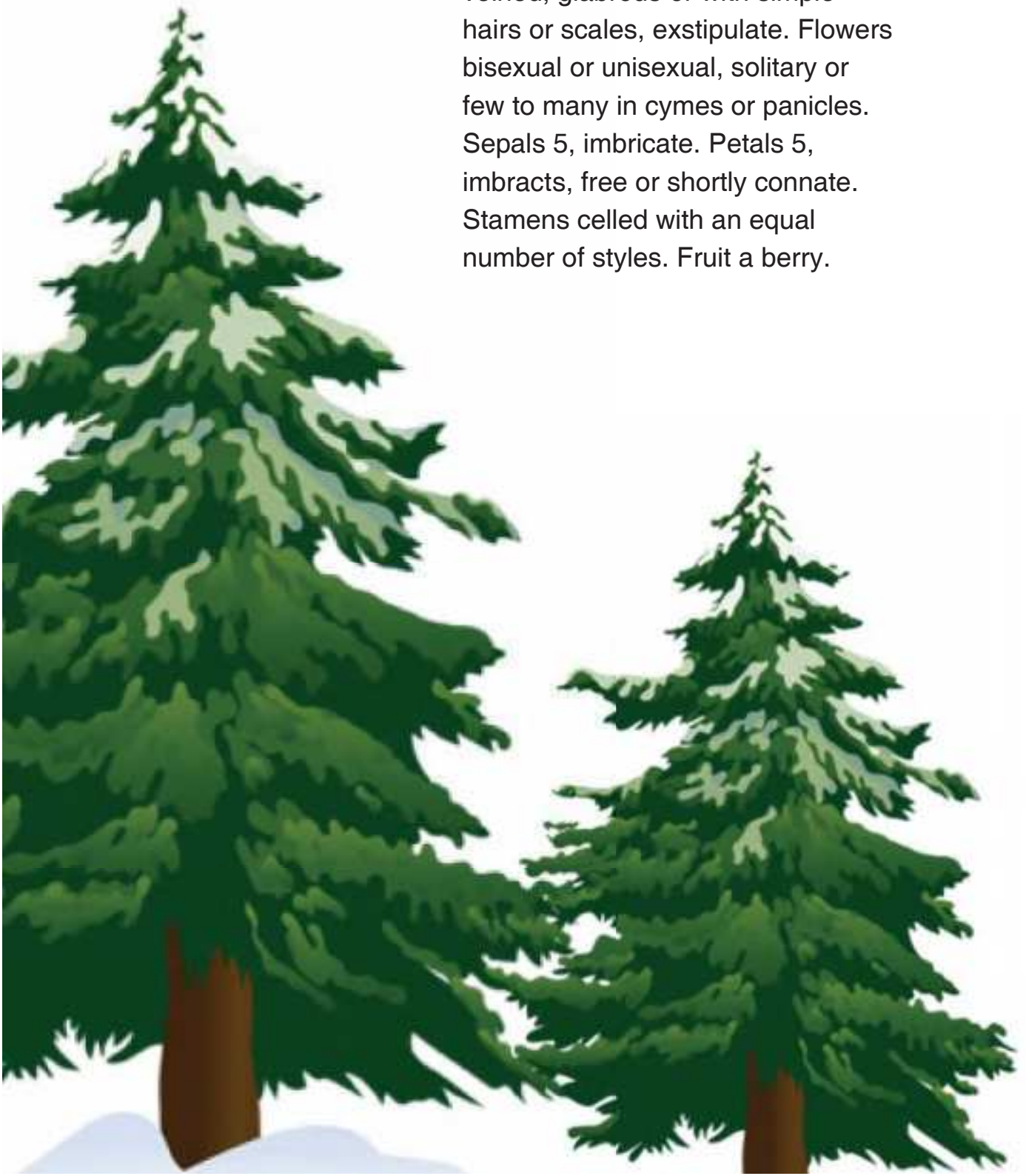


ACTINIDIACEAE

(Chinese Gooseberry family)

Trees or shrubs, sometimes climbing. Pith of branches solid, hollow or chambered.

Leaves alternate, simple, pinnately veined, glabrous or with simple hairs or scales, exstipulate. Flowers bisexual or unisexual, solitary or few to many in cymes or panicles. Sepals 5, imbricate. Petals 5, imbracts, free or shortly connate. Stamens celled with an equal number of styles. Fruit a berry.



1. *Actinidia* Lindley

Actinidia strigosa Lindley.

Yogmereb (Ura), Yogdrumbo (Med), Tekiphal (Nep)

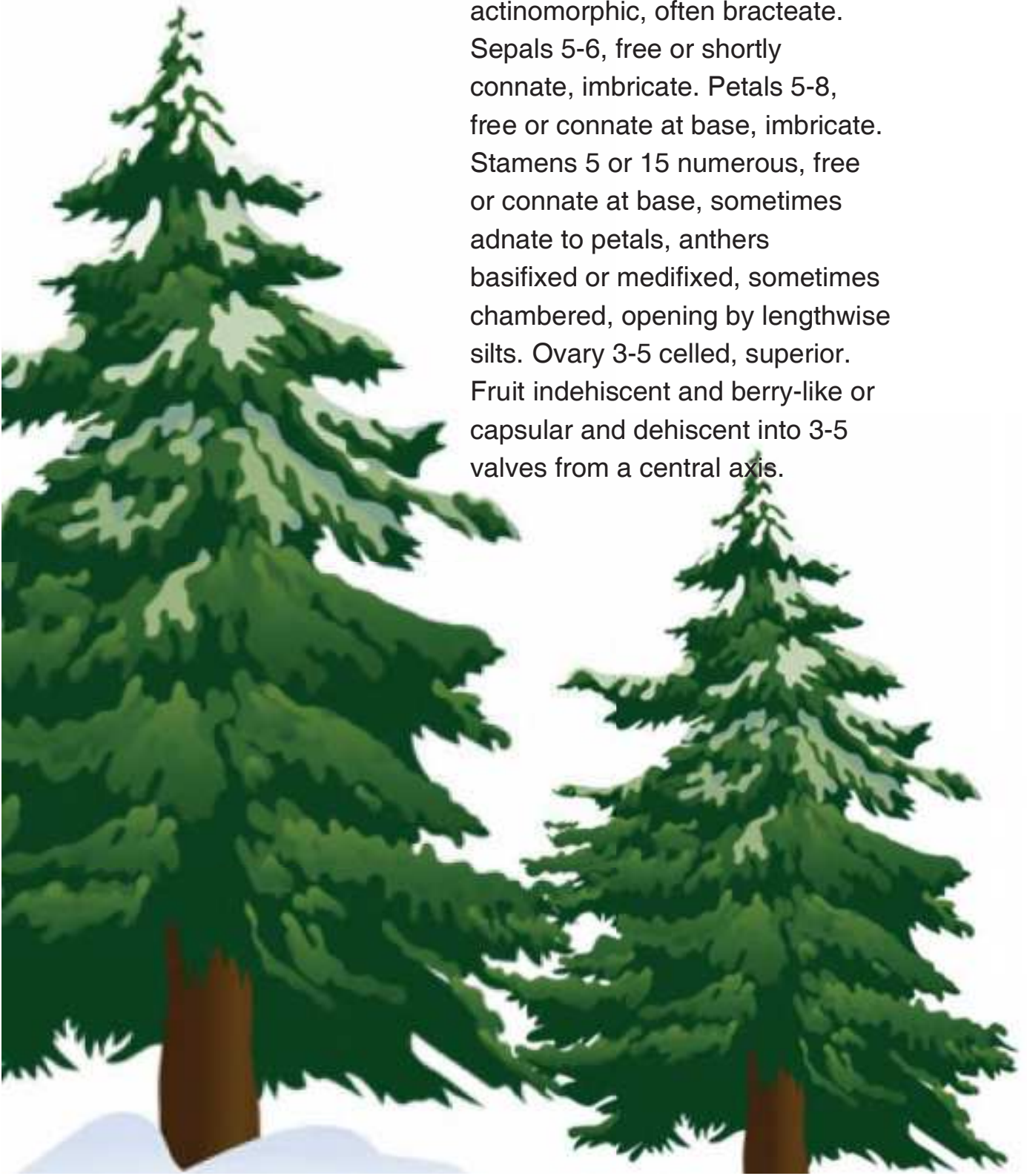
Habit: Scrambling shrub up to 7 m, **Status:** LC, **Habitat:** Margins of Cool broad-leaved forests & **Flowering:** May – July



THEACEAE

(Tea or Camellia family)

Trees or shrubs. Leaves alternate, simple, pinnately veined, mostly evergreen, ex-stipulated. Flowers solitary or clustered, unisexual or bisexual, actinomorphic, often bracteate. Sepals 5-6, free or shortly connate, imbricate. Petals 5-8, free or connate at base, imbricate. Stamens 5 or 15 numerous, free or connate at base, sometimes adnate to petals, anthers basifixed or medifixed, sometimes chambered, opening by lengthwise silts. Ovary 3-5 celled, superior. Fruit indehiscent and berry-like or capsular and dehiscent into 3-5 valves from a central axis.



1. *Schima* Blume

Schima wallichii (DC) Korthals

ཕུ་ཡམ་ཤིང་/Puyamshing (Dzo), Zalashing (Sha), Chilaune/
Gogra/ Aule Chilaune (Nep). **Habit:** Evergreen tree up to 30 m,
Status: LC, **Habitat:** Warm and Cool broad-leaved forests &
Flowering: May – July.



Schima khasiana Dyer.

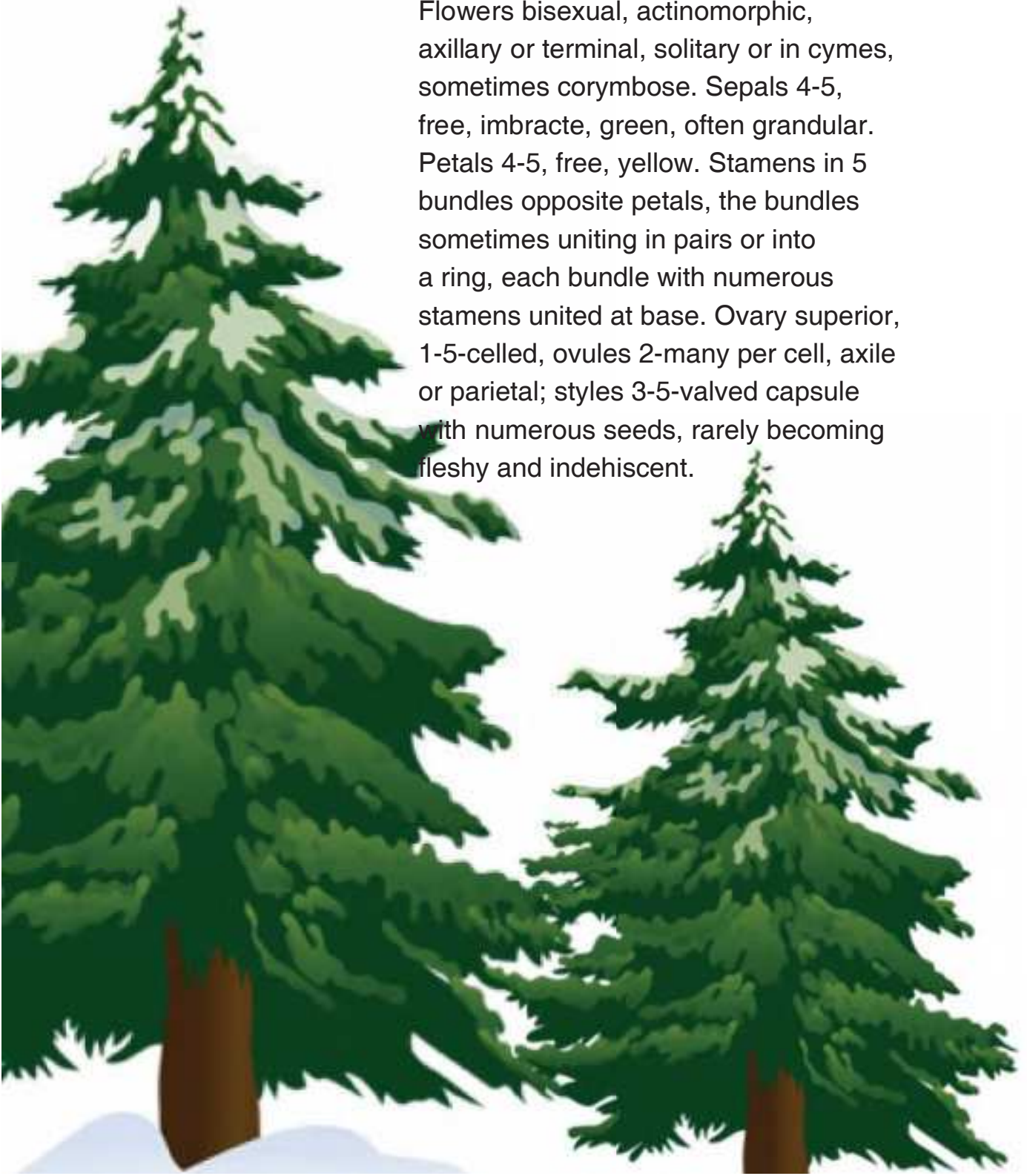
Habit: Simillar to *S. wallichii* but leaf margins serrated, **Status:**
LC, **Habitat:** Warm broad-leaved forests & **Flowering:** July.



HYPERICACEAE

(St. John's Wort family)

Perennial herbs or low shrubs, glabrous. Leaves opposite, simple, pinnately veined, entire, often pellucid-dotted or –streaked and with blackish gland dots, exstipulate. Flowers bisexual, actinomorphic, axillary or terminal, solitary or in cymes, sometimes corymbose. Sepals 4-5, free, imbracte, green, often glandular. Petals 4-5, free, yellow. Stamens in 5 bundles opposite petals, the bundles sometimes uniting in pairs or into a ring, each bundle with numerous stamens united at base. Ovary superior, 1-5-celled, ovules 2-many per cell, axile or parietal; styles 3-5-valved capsule with numerous seeds, rarely becoming fleshy and indehiscent.



1. *Hypericum* L.

Hypericum choisianum Robson. Synm: *H.hookerianum* Wight & Arnott var. *leschenaultia*.

Habit: Bushy shrub 1-2 m, **Status:** LC, **Habitat:** Cool broad-leaved and Hemlock forests & **Flowering:** June – July.



Hypericum uralum D.Don. Synm: *H.patulum*

Urilo (Nep). **Habit:** Bushy shrub with numerous spreading branchlets, **Status:** LC, **Habitat:** Open Hillsides and roadsides in Blue pine and Hemlock forests & Cool broad-leaved forests & **Flowering:** July – August.



Hypericum elodeoides

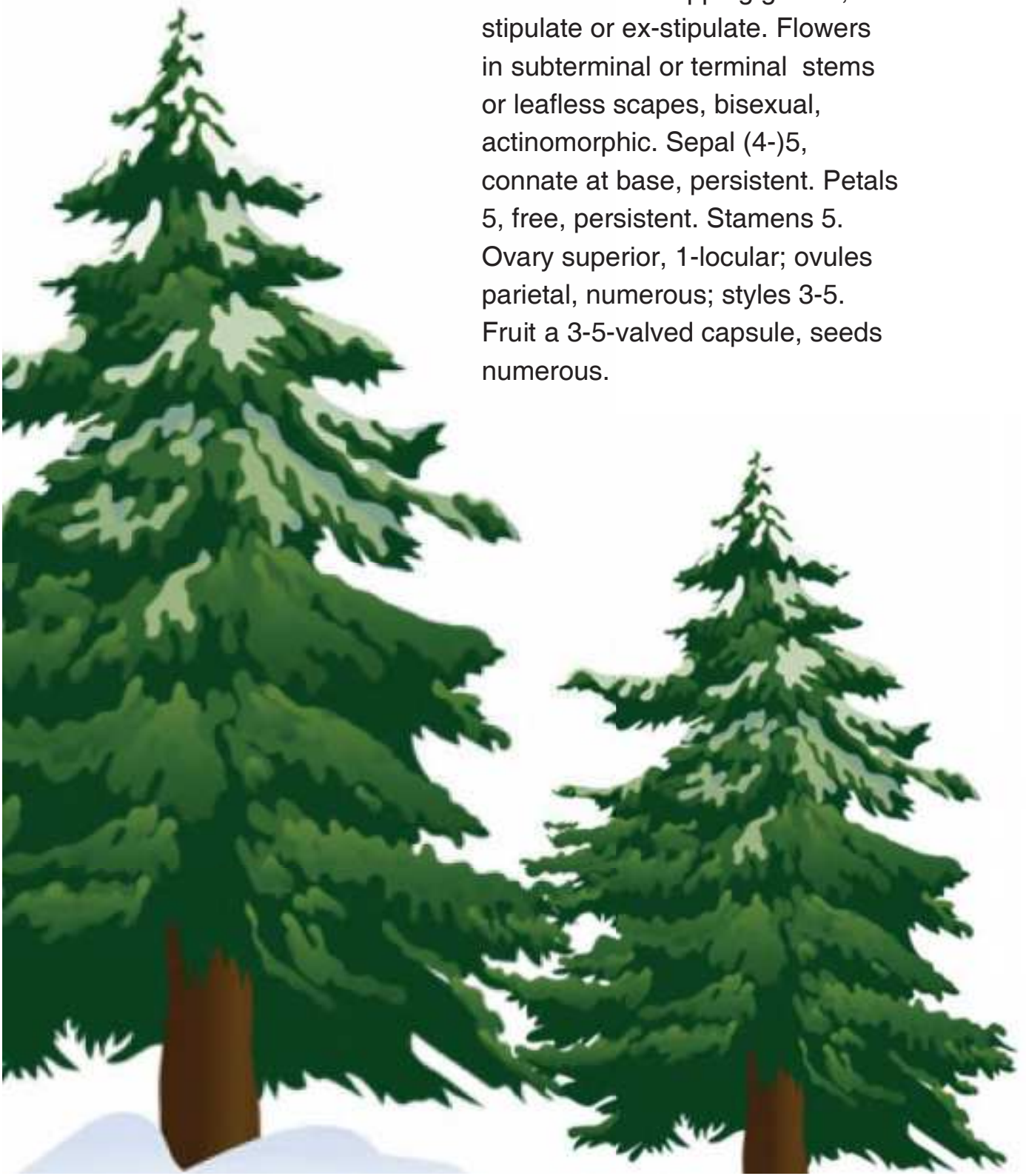
Habit: Perennial herb, **Status:** Unknown, **Habitat:** Open marshy areas in mixed coniferous forests (PNP office compound) & **Flowering:** July.



DROSERACEAE

(Sundew family)

Perennial insectivorous herbs. Leaves alternate on stems or in basal rosettes, densely covered with stalked insect-trapping glands, stipulate or ex-stipulate. Flowers in subterminal or terminal stems or leafless scapes, bisexual, actinomorphic. Sepal (4-)5, connate at base, persistent. Petals 5, free, persistent. Stamens 5. Ovary superior, 1-locular; ovules parietal, numerous; styles 3-5. Fruit a 3-5-valved capsule, seeds numerous.



1. *Drosera* L.

Drosera peltata Thunberg subsp. *peltata* (var. *lunata* (DC.) Clarke) Yoedhen (Med)

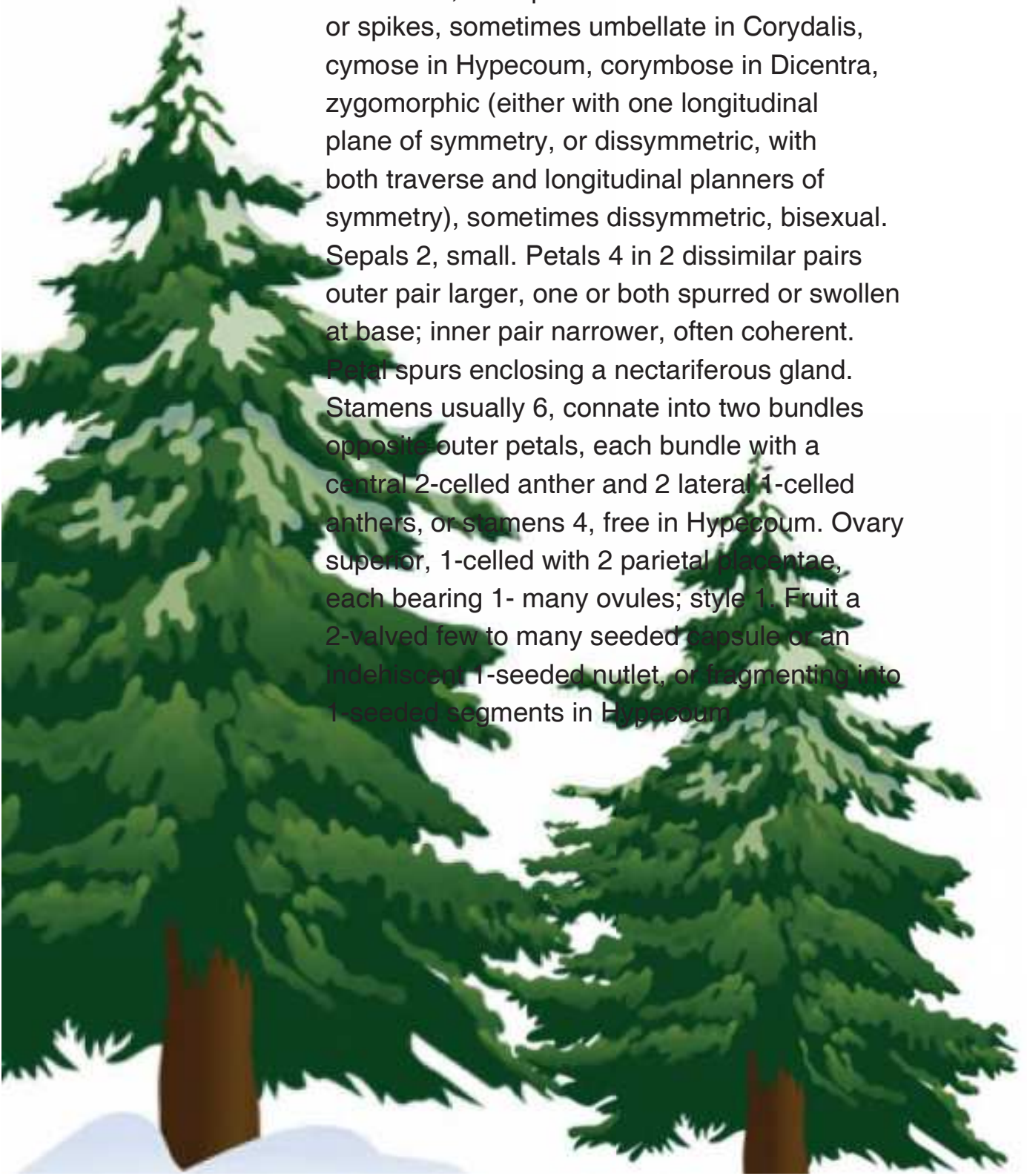
Habit: Perennial insectivorous herb, **Status:** LC, **Habitat:** Marshy areas and open meadows & **Flowering:** June – September.



FUMARIACEAE

(Fumitory family)

Annual or perennial usually glabrous herbs, sometimes climbing, root often tuberous. Leaves alternate, sometimes the upper opposite, mostly 1-4 pinnatisect or ternatisect, ex-stipulate. Flowers in racemes or spikes, sometimes umbellate in *Corydalis*, cymose in *Hypecoum*, corymbose in *Dicentra*, zygomorphic (either with one longitudinal plane of symmetry, or dissymmetric, with both transverse and longitudinal planes of symmetry), sometimes dissymmetric, bisexual. Sepals 2, small. Petals 4 in 2 dissimilar pairs outer pair larger, one or both spurred or swollen at base; inner pair narrower, often coherent. Petal spurs enclosing a nectariferous gland. Stamens usually 6, connate into two bundles opposite outer petals, each bundle with a central 2-celled anther and 2 lateral 1-celled anthers, or stamens 4, free in *Hypecoum*. Ovary superior, 1-celled with 2 parietal placentae, each bearing 1- many ovules; style 1. Fruit a 2-valved few to many seeded capsule or an indehiscent 1-seeded nutlet, or fragmenting into 1-seeded segments in *Hypecoum*.



1. *Dicentra* Bernhardtii

Dicentra scandens (D.Don) Walpers Synm: *D.thalictrifolia* (Wall) Hook & Thomson *Dactylicapnos scandens* (D.Don) Hutchinson

Habit: Climber to 3 m, **Status:** LC, **Habitat:** Climbing on shrubs in cool-broad-leaved forest & **Flowering:** June – September



2. *Corydalis* Ventenat

Corydalis polygalina Hook. f. & Thomson Synm: *C.graminea* Prain

Habit: Slender simple-stemmed herb 8-30 cm, **Status:** LC, **Habitat:** Excavated open roadsides in mixed coniferous forest and Fir forests & **Flowering:** June – September



Corydalis sp.

Habit: Slender simple-stemmed herb 8-30 cm, **Status:** Unknown, **Habitat:** Growing with net of herbs on roadsides in Fir forests (Behind Phrumsengla while traveling towards Sengor) & **Flowering:** September



PAPAVERACEAE

(Poppy family)

Annual, biennial or perennial herbs with milky juice (latex); indumentums of simple, barbellate or sellate hairs. Leaves mostly basal in a rosette, simple, pinnatifid or pinnatisect, rarely palmately lobed, extipulate, stem leaves usually few, alternate. Flowers on leafless scapes or in leafy racemes or panicles, actinomorphic, hermaphrodite, nodding in bud, showy. Sepals 2-3, caduceous. Petals 4-8, free, biseriate, imbracte, often crumpled at first. Stamens numerous, free. Ovary superior, 1-celled or apparently 2-10-celled by intrusive placentae; ovules numerous, placentation parietal; stigmas usually connate, capitate on distinct style, rarely free or sessile on ovary or lobed disc. Fruit a capsule dehiscent by 2-10 pores or valves; seeds numerous.



1. *Meconopsis* Viguier

Meconopsis horridula Hook. f. & Thomson Synm: *M. racemosa*
Maximowicz

ཚེར་སྒོན་མེ་ཉལ། Tser ngoen metog (Dzo), Tser ngoen (Med)

Habit: Monocarpic herb, **Status:** NTh, **Habitat:** Alpine cliffs and screes with Juniper and Cotoneaster, & **Flowering:** June – August.



Meconopsis paniculata Prain

Tarnam (Ura)

Habit: Annual herb, **Status:** LC, **Habitat:** Open slopes and grazing grounds & **Flowering:** June – August.



Meconopsis sinuata, Synm: *Meconopsis latifolia* Prain

Himalayan blue poppy, Satin poppy (Eng).

Habit: Biennial or perennial, monocarpic or polycarpic herbs.

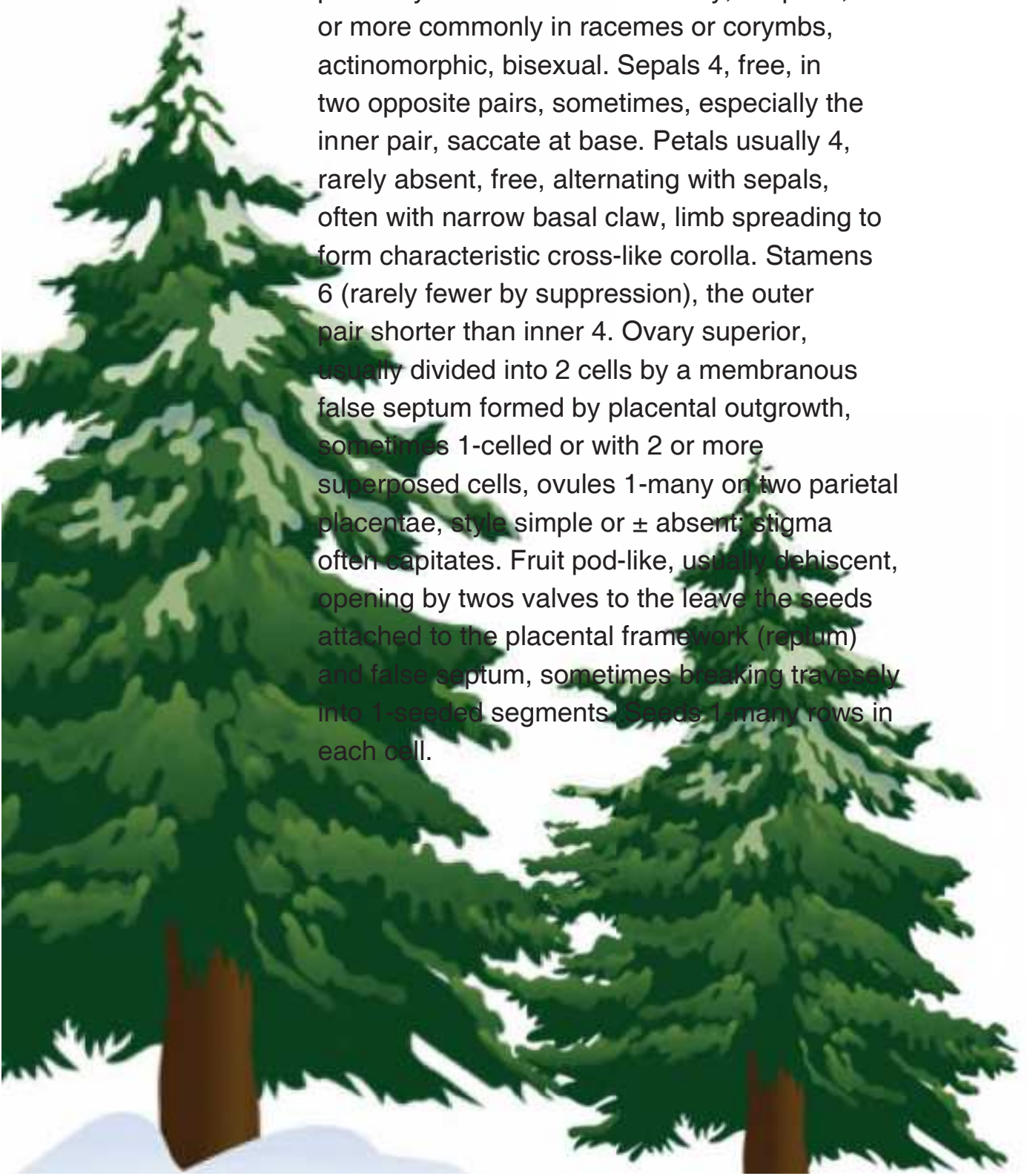
Status: Not Evaluated. **Habitat:** Rocky alpine hillsides, amongst dwarf Rhododendron forest and in Fir Forest. **Flowering:** June-August



CRUCIFERAE

(Mustard family)

Annual, biennial or perennial herbs, rarely woody, glabrous or bearing simple, branched or stellate hairs. Leaves alternate, exstipulate, simple, sometimes pinnately divided. Flowers solitary, scapose, or more commonly in racemes or corymbs, actinomorphic, bisexual. Sepals 4, free, in two opposite pairs, sometimes, especially the inner pair, saccate at base. Petals usually 4, rarely absent, free, alternating with sepals, often with narrow basal claw, limb spreading to form characteristic cross-like corolla. Stamens 6 (rarely fewer by suppression), the outer pair shorter than inner 4. Ovary superior, usually divided into 2 cells by a membranous false septum formed by placental outgrowth, sometimes 1-celled or with 2 or more superposed cells, ovules 1-many on two parietal placentae, style simple or \pm absent; stigma often capitate. Fruit pod-like, usually dehiscent, opening by two valves to the leave the seeds attached to the placental framework (replum) and false septum, sometimes breaking transversely into 1-seeded segments. Seeds 1-many rows in each cell.



1. *Thlaspi* L.

Thlaspi arvense L.

Goi-memba (Sha), Tirma (Ura), Drega (Med).

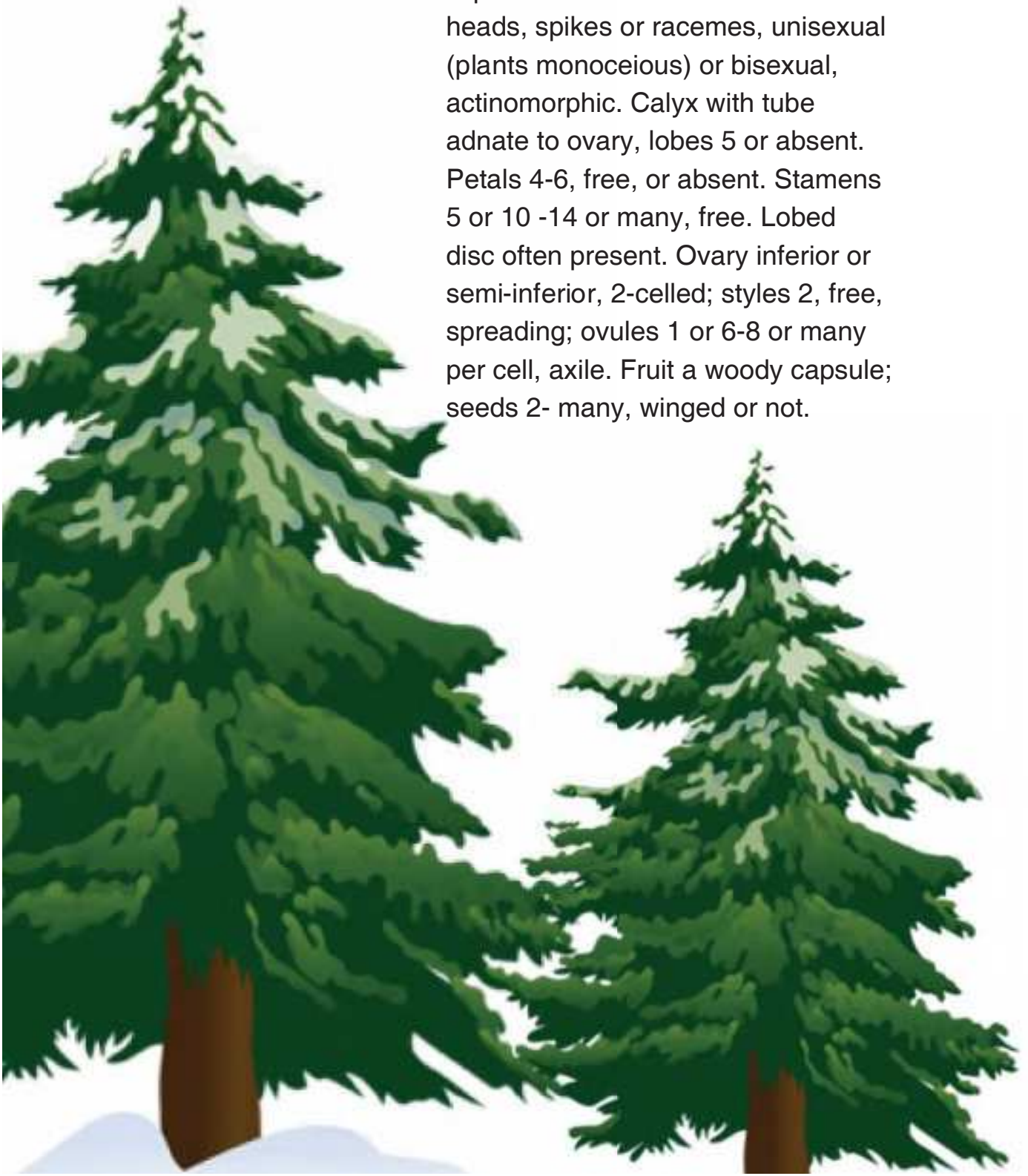
Habit: Glabrous annual, **Status:** Not evaluated, **Habitat:** Weed of roadsides and cultivation fields, & **Flowering:** April



HAMAMELIDACEAE

(Witch Hazel family)

Evergreen or deciduous trees or shrubs, with simple or stellate hairs. Leaves alternate, simple, pinnately or palmately veined, stipulate. Flowers free or connate in heads, spikes or racemes, unisexual (plants monoecious) or bisexual, actinomorphic. Calyx with tube adnate to ovary, lobes 5 or absent. Petals 4-6, free, or absent. Stamens 5 or 10 -14 or many, free. Lobed disc often present. Ovary inferior or semi-inferior, 2-celled; styles 2, free, spreading; ovules 1 or 6-8 or many per cell, axile. Fruit a woody capsule; seeds 2- many, winged or not.



1. *Exbucklandia* R. W. Brown

Exbucklandia populnea (Griff.) R. W. Brown Synm: *Bucklandia populnea* Griffith, *Symingtonia populnea* (Griff.) van Steenis

ཅན་ལྷུ་ཤིང་/ Chenju shing (Dzo), Lem shing (Sha), Pipli (Nep).

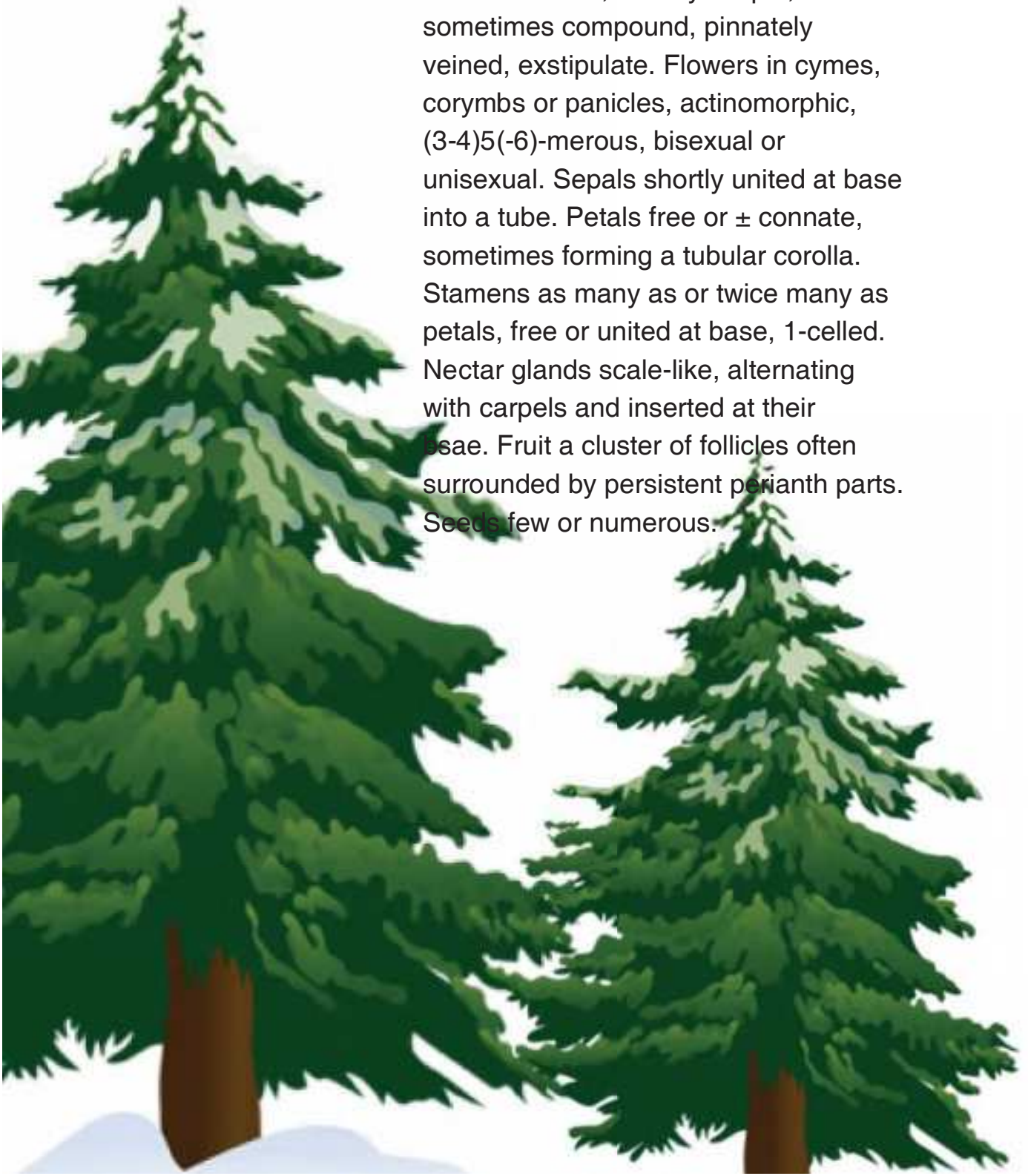
Habit: Large evergreen tree 15-33 m, **Status:** LC, **Habitat:** Warm and cool broad-leaved forests, & **Flowering:** November – March.



CRASSULACEAE

(Stonecrop family)

Succulent herbs, sometimes woody at base. Leaves alternate, opposite or subverticillate, sometimes forming a basal rosette, usually simple, sometimes compound, pinnately veined, exstipulate. Flowers in cymes, corymbs or panicles, actinomorphic, (3-4)5(-6)-merous, bisexual or unisexual. Sepals shortly united at base into a tube. Petals free or \pm connate, sometimes forming a tubular corolla. Stamens as many as or twice many as petals, free or united at base, 1-celled. Nectar glands scale-like, alternating with carpels and inserted at their bases. Fruit a cluster of follicles often surrounded by persistent perianth parts. Seeds few or numerous.



1. *Kalanchoe* Adanson

Kalanchoe diagremontiana Raym.-Hamet & H. Perrier, Synm: *Bryophyllum diagremontianum* (Raym.-Hamet & H. Perrier) A. Berger; Mother of Millions/ Aligator Plant (Eng).

Habit: Erect or ascending perennial, **Status:** Not evaluated (introduced), **Habitat:** Cultivated and becoming naturalized growing in dry Chirpine forests, & **Flowering:** March – May.



2. *Sedum* L.

Sedum triactina Berger Synm: *S.verticillatum* (Hook. f. & Thomson) Hamet non L., *Triactina verticillata* Hook. f. & Thomson.

Tsenmar (Med)

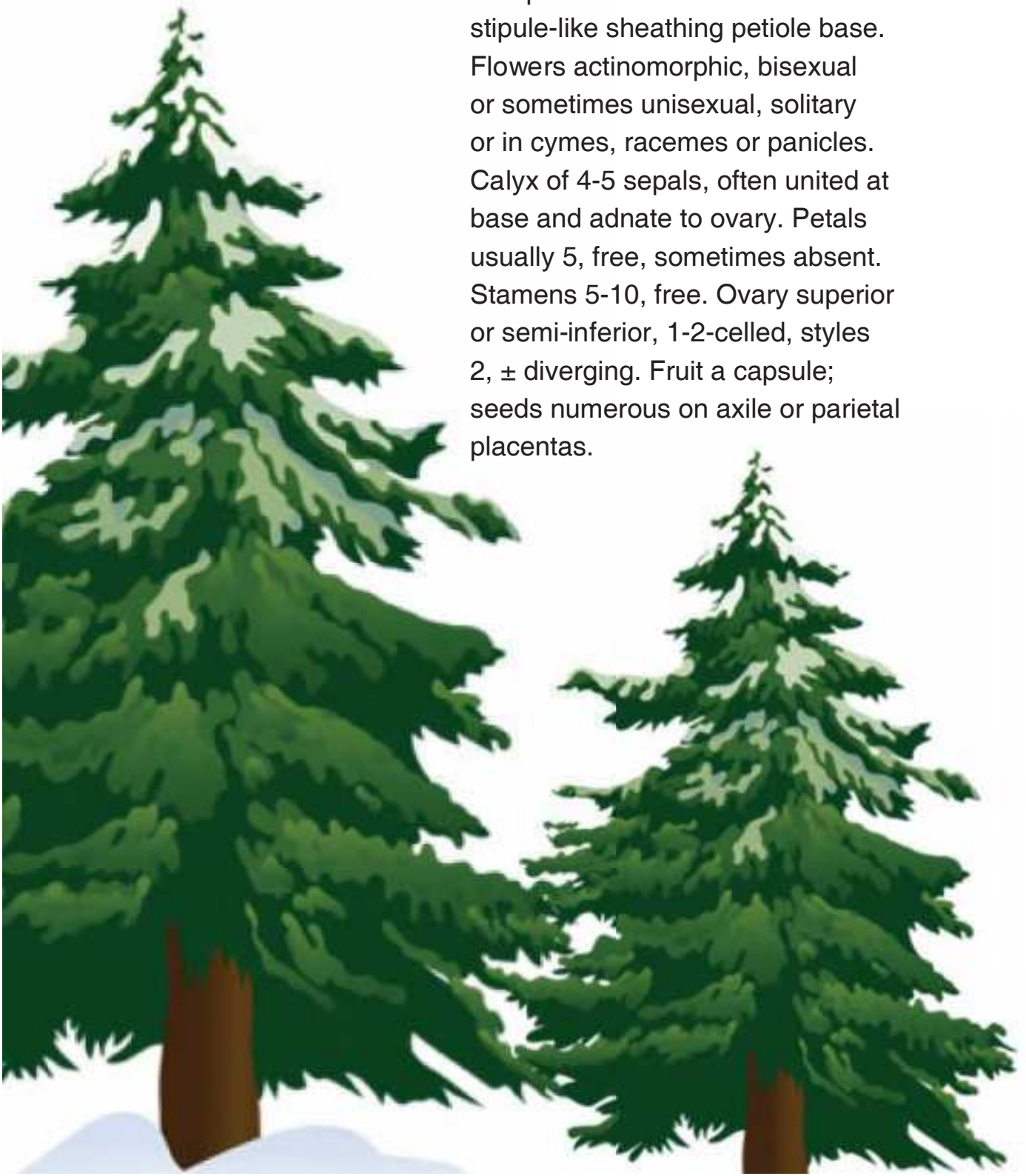
Habit: Perennial, **Status:** LC, **Habitat:** On mossy rocks in forests, & **Flowering:** June – August



SAXIFRAGACEAE

(Saxifrage family)

Herbs. Basal leaves sometimes rosette, stem leaves alternate, rarely opposite, simple, pinnate or ternate, exstipulate but sometimes with stipule-like sheathing petiole base. Flowers actinomorphic, bisexual or sometimes unisexual, solitary or in cymes, racemes or panicles. Calyx of 4-5 sepals, often united at base and adnate to ovary. Petals usually 5, free, sometimes absent. Stamens 5-10, free. Ovary superior or semi-inferior, 1-2-celled, styles 2, \pm diverging. Fruit a capsule; seeds numerous on axile or parietal placentas.



1. *Astilbe* D. Don

Astilbe rivularis D. Don.

Tonsar Gugay (Sha),

Habit: Erect rhizomatous perennial herb, **Status:** LC, **Habitat:** Hillsides and valley bottom in cool broad-leaved forests, & **Flowering:** July – October.



2. *Saxifraga* L.

Saxifraga stenophylla Royle.

Ja soenam choejay (Ura),

Habit: Perennial herb, **Status:** LC, **Habitat:** Open hillsides & **Flowering:** July – September.



Saxifraga sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** On mossy rocks and marshy area, & **Flowering:** April.



Saxifraga sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Mossy rocks along roadsides in Sub-alpine region (near Phrumsengla top) & **Flowering:** November.



3. *Chrysosplenium* (Golden Saxifrage)

Chrysosplenium tenellum

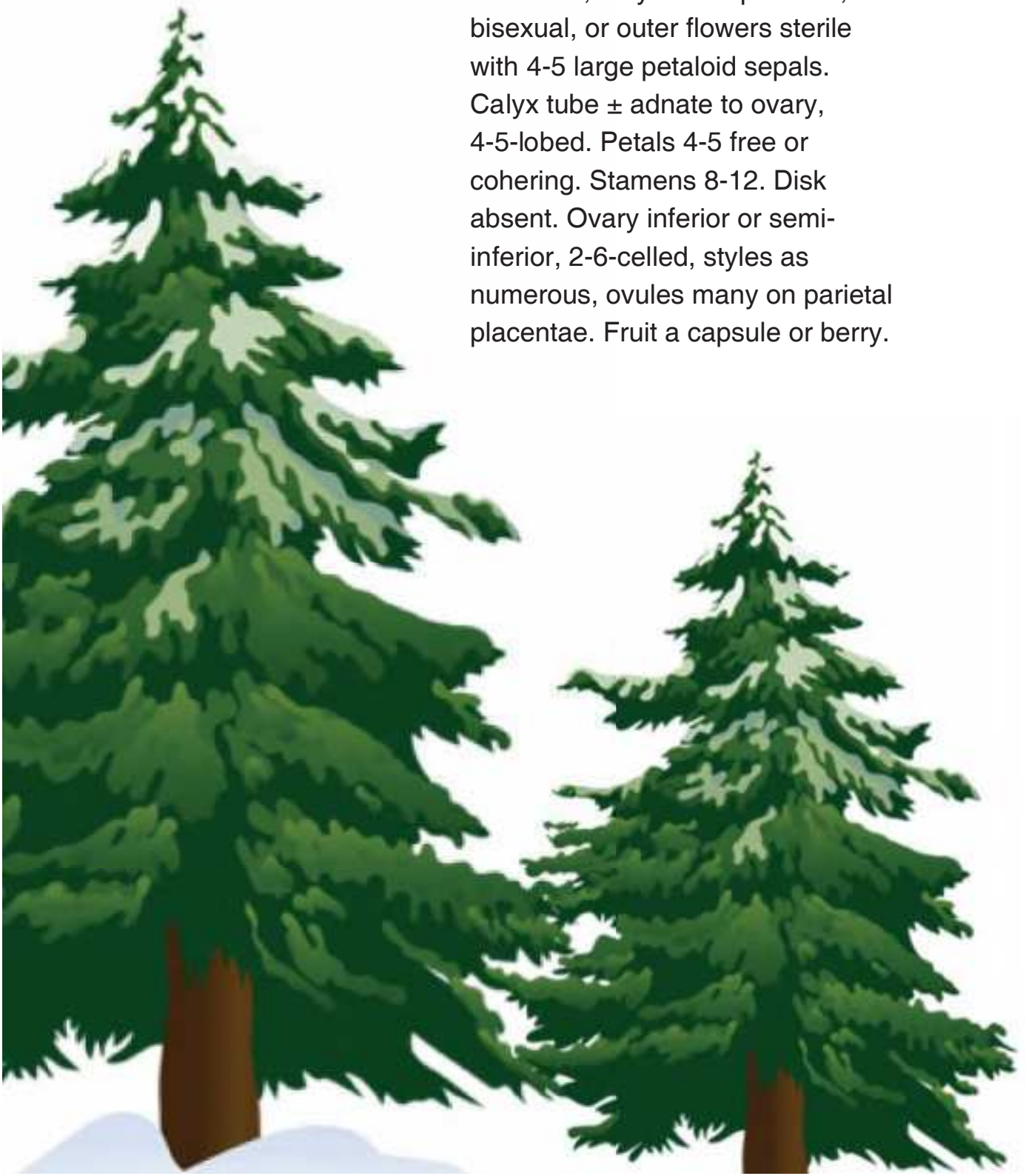
Habit: Perennial herb, **Status:** Unknown, **Habitat:** Stream banks and marshy area, & **Flowering:**



HYDRANGEACEAE

(Hydrangea family)

Trees or shrubs sometimes climbing. Leaves opposite, simple, exstipulate, pinnately veined. Flowers terminal cymosely branched, corymbs or panicles, bisexual, or outer flowers sterile with 4-5 large petaloid sepals. Calyx tube \pm adnate to ovary, 4-5-lobed. Petals 4-5 free or cohering. Stamens 8-12. Disk absent. Ovary inferior or semi-inferior, 2-6-celled, styles as numerous, ovules many on parietal placentae. Fruit a capsule or berry.



1. *Hydrangea* L.

Hydrangea aspera D. Don, Synm: *H.robusta* Hook. f. & Thomson Sungmulagu shing (Sha), Bhogote (Nep).

Habit: Erect climbing shrub 3-5 m, **Status:** LC, **Habitat:** Warm and cool broad-leaved forests, & **Flowering:** August



Hydrangea heteromala D. Don. Synm: *H.vestita* Wall

Halonre (Nep). **Habit:** Similar to *H.aspera* but its bush or a tree 2-10 m, **Status:** LC, **Habitat:** Cloud forest especially Spruce and Helock forest, & **Flowering:** June – August



Hydrangea stylosa

Habit: Climbing low shrub, **Status:** Unknown, **Habitat:** Marshy area in cool broad-leaved forest, & **Flowering:** June.



2. Dichroa Loureiro

Dichroa febrifuga Loureiro.

ཉོན་ཏོ་སྐྱམ་/Hoendo Nam/ Hogena (Dzo), Khagyang shing (Sha), Basak (Nep).

Habit: Shrub 1-3 m, **Status:** LC, **Habitat:** Margins of warm broad-leaved and evergreen Oak forest, & **Flowering:** May – November.



GROSSULARIACEAE

(Gooseberry family)

Shrubs, sometimes spiny, often glandular. Leaves alternate, simple, often palmately lobed, ex-stipulate. Flowers mostly in axillary racemes on short lateral shoots, rarely solitary or few, axillary, bisexual or unisexual (the plants then dioecious). Calyx shallowly cup-shaped or tubular, 5-lobed, often petaloid. Petals 5, adnate to calyx and smaller than calyx lobes. Stamens 5, opposite calyx lobes, usually present but functionless in female flowers. Ovary inferior, 1-celled, style single, bifid above, stigmata usually capitate, ovules numerous on two parietal placentae, styles but not ovaries usually present in male flowers. Fruit a berry, bearing persistent flower remains above.



1. *Ribes* L.

Ribes laciniatum Hook. f. & Thomson. Synm: *R.tenue*
Janczewski

Gokham (Ura). **Habit:** Slender, dioecious shrub 1-4 m, **Status:** LC, **Habitat:** In Fir/ Rhododendron forest, & **Flowering:** April – June.



Ribes glaciale Wall.

Gokham (Ura), Kimbu (Nep).

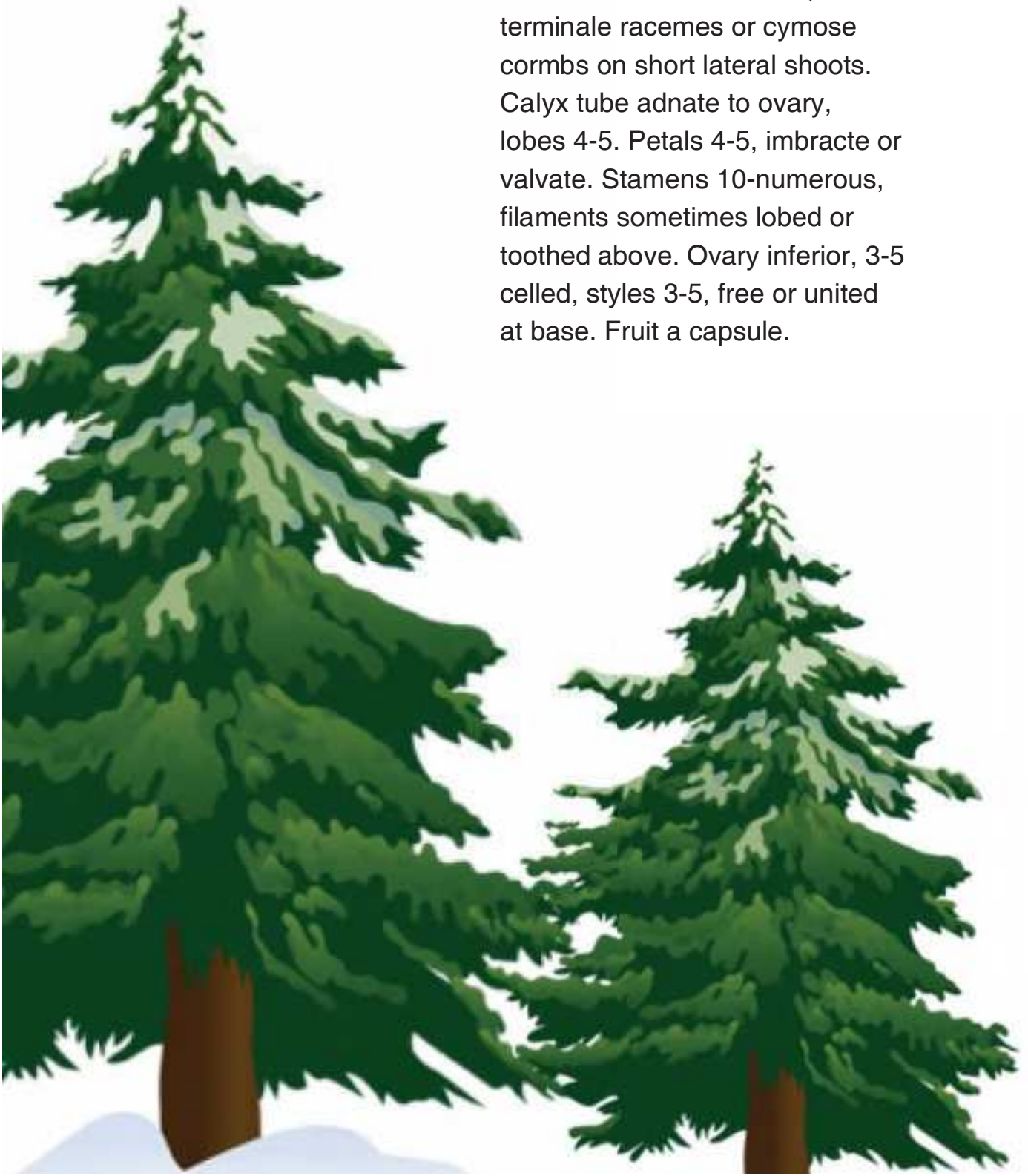
Habit: Dioecious shrub 1-5 m, **Status:** LC, **Habitat:** Forest margins and hillsides among Rhododendrons, & **Flowering:** April – May.



PHILADELPHACEAE

(Mock Orange family)

Erect shrubs sometimes with serrate indumenta. Leaves opposite, simple, exstipulate, pinnately 3-5 veined at base. Flowers bisexual, in terminale racemes or cymose cormbs on short lateral shoots. Calyx tube adnate to ovary, lobes 4-5. Petals 4-5, imbracte or valvate. Stamens 10-numerous, filaments sometimes lobed or toothed above. Ovary inferior, 3-5 celled, styles 3-5, free or united at base. Fruit a capsule.



1. *Deutzia* Thunberg

Deutzia corymbosa G. Don. Synm: *D.hookeriana* (Schneider) Airy Shaw, *D.compacta* auct. Non Craib.

Habit: Shrub 1-3 m, **Status:** LC, **Habitat:** Forest margins in Cool broad-leaved forest, Bluepine, Hemlock and Fir forest, & **Flowering:** June – July.



2. *Philadelphus* L.

Philadelphus tomentosus G. Don. Synm: *P.cornarius* L. var. *tomentosus* (G. Don) Clarke.

Habit: Shrub 2-6 m, **Status:** LC, **Habitat:** Margins in Blue Pine and Evergreen Oak forest and in dry scrub, & **Flowering:** May – July.



ROSACEAE

(Rose family)

Trees, shrubs or herbs; sometimes armed, indumentums of simple hairs (sometimes stellate in *Rubus*).

Leaves alternate, simple or pinnately, palmately or pedately compound (triterminate in *Aruncus*), pinnately veined; stipules usually present. Flowers solitary or often in fascicles, racemes, cymes, corymbs or panicles, actinomorphic, bisexual, rarely unisexual. Calyx lobes; petals and stamens inserted at margin of calyx cup or tube (hypanthium). Calyx lobes 4-6, sometimes with as many outer epicalyx segments. Petals 4-6 or more, free. Stamens 4-many. Ovary of 1- many, free, superior carpels of 4-6-celled, inferior or semi-inferior and united to calyx-tube; styles simple, free. Stamens united; ovules 1 or more per cell. Fruit an achene (often aggregated), follicle, drupe or pome.



1. *Spiraea* L. (by A.J.C. Grierson)

Spiraea bella Sims.

Lahare Phul (Nep). **Habit:** Rhizomatous shrub, stem 1-2.5m, **Status:** LC, **Habitat:** Amongst shrubs and streamsides, & **Flowering:** May – August.



Spiraea canescense D. Don.

Gu shing (Ura). **Habit:** Shrub 2-5 m, **Status:** LC, **Habitat:** Open Spruce and Blue Pine forest and along cultivation field edges, & **Flowering:** May – June.



Spiraea arcuata Hook.f.

Habit: Shrub 1-4 m, **Status:** LC, **Habitat:** Margins in Blue Pine, Hemlock and Fir forest, & **Flowering:** May – June



2. *Prunus* L. (by A.J.C. Grierson)

Prunus rufa Hook. f.

Click tserma (Ura), Lekh Paiyun (Nep). **Habit:** Shrub or tree, 2-10 m, **Status:** LC, **Habitat:** Clearings in Fir forest and mixed coniferous forest, & **Flowering:** April – May.



3. *Rubus* L. (by D.G. Long)

Rubus calycinus D.Don. Synm: *R.subherbaceus* Kuntze

Bin Aselu (Nep). **Habit:** Herb, **Status:** LC, **Habitat:** Mossy slopes in cool broad-leaved forest, & **Flowering:** April – May.



Rubus nepalensis (Hook. f.) Kuntze. Synm: *R.nutans* G. Don, var. *nepalensis* Hook. f., *R.nutaniflorus* Hara var. *nepalensis* (Hook. f.) Balakrishnan.

Samarib (Ura). **Habit:** Creeping herb, **Status:** LC, **Habitat:** Ground plant growing in Fir, Spruce and mixed coniferous forest, & **Flowering:** June – July.



Rubus sengorensis Grierson & Long

Habit: Creeping herb, stems elongate, woody, bearing hairs and slender straight prickles with prostrate or suberect woody leafy branches 15-30 cm, **Status:** LC/End, **Habitat:** Creeping on mossy banks and stream sides in Hemlock and Fir forest, & **Flowering:** June – July.



Rubus ellipticus Smith Synm: *R.ellipticus* var.denudatus Hook. f. *R.flavus* D. Don.

ཚེལ་མ་ཚེལ་ལྷ། Tshelma Tshelu (Dzo), Gongsey/ Sergong (Sha), Tsermerib (Ura), Aselu/ Ainselu (Nep). **Habit:** Robust scrambling shrub 2-3 m, **Status:** LC, **Habitat:** Roadsides, scrubs, abandoned cultivation in warm and cool broad-leaved forest, & **Flowering:** February – April.



***Rubus biflorus* Smith**

Taktse metog (Sha), Kentakare (Med), Thulu Gongsey (Nep).

Habit: Shrub 1-2 m (3-5 leaflets, rarely 7), **Status:** LC, **Habitat:** In clearings and scrub in coniferous especially Blue Pine and Spruce forests & **Flowering:** May – July.



***Rubus foliolosus* D.Don.**

Habit: Slender scrambling shrub, **Status:** Unknown **Habitat:** Amongst shrubs along roadsides in cool broad-leaved forests (Namling) & **Flowering:** June – August.



Rubus sp.

Habit: Robust scrambling shrub 2-3 m, **Status:** Unknown, **Habitat:** Roadsides, stream sides in abandoned cultivation in Sub-alpine region (Phrumsengla area & Shingkhar), & **Flowering/Fruiting:** September.



Rubus lineatus Reinw. Ex Blume; Silk-leaved Berry (Eng), **Habit:** Deciduous scrambling shrub, **Status:** LC, **Habitat:** On rocks with scrubs in cool broad-leaved forest (Namling).



Rubus niveus Thunb. Ee D.Don. Hill Raspberry (Eng).

Habit: Slender scrambling shrub, **Status:** Unknown, **Habitat:** Along with shrubs in warm broad-leaved forest, & **Flowering:** June.



Rubus sp.

Habit: Scrambling shrub on trees, **Status:** Unknown, **Habitat:** Along with shrubs in cool broad-leaved forest (Latongla).



4. *Potentilla* L. (A.J.C. Grierson & D.G. Long)

Potentilla cuneata Lehmann. *P.ambigua* Cambessedes.

Habit: Rosette or mat-forming perennial herb, **Status:** LC, **Habitat:** On rocky stream sides, cliffs and boulders, & **Flowering:** May – July.



Potentilla griffithii Hook. f. *P.sikkimensis* Wolf non Prain.

Habit: Perennial herb with rootstock and prostrate or decumbent shoots, **Status:** LC, **Habitat:** Roadsides, margins of cultivation and disturbed ground in Blue Pine and Spruce forests, & **Flowering:** June – September.



Potentilla peduncularis D. Don.

Habit: Perennial rosetted herb with thick woody rootstock covered with leaf remains, **Status:** LC, **Habitat:** Open hillsides and in Fir forests, & **Flowering:** June – July.



Potentilla lineata Treviranus.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Along streamsides in Rhododendron forests (Khandupang).



Potentilla cuneata Lehmann.

Habit: Perennial herb (Silver colour leaves), **Status:** Unknown
Habitat: Disturbed ground in Blue Pine and Spruce forests (PNP compound).



Potentilla saundersiana Royle.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Open hillsides and in Fir forests (Khandupang).



Potentilla sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Open stony and disturbed ground (PNP comound).



Potentilla sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Rhododendron forest (Between Khandupang and Geyzamchu).

Fragaria L. (by D.G. Long)



5. *Fragaria* L. (by D.G. Long)

Fragaria nubicola (Hook. f.) Lacaita. Synm: *F. vesca* L. var. *nubicola* Hook. f.

Habit: Perennial herb with stout rootstock, **Status:** LC, **Habitat:** Open grassy banks at margins of cool broad-leaved, Spruce, Blue Pine and Hemlock forest, & **Flowering:** April – June.



6. *Rosa* L. (A.J.C. Grierson)

Rosa sericea Lindley var. *sericea*.

སེལུ་ཤིང་/Sew shing (Dzo), Thranglewa (Ura), Sewai Metog (Med), Sisi Chungchun (Nep). **Habit:** Erect shrub 1-4m, **Status:** LC, **Habitat:** Open dry hill slopes, & **Flowering:** April – June.



Rosa macrophylla Lindley.

ཏག་ཚེར་དམར་མོ་/Tagtser marp (Dzo), Tagtsermarpo (Sha), Batsema (Ura), Seygoedth (Med). **Habit:** Erect shrub 1-5m, **Status:** LC, **Habitat:** Hillsides and forest margins, & **Flowering:** June - July.



7. *Cotoneaster* L. (by A.J.C. Grierson)

Cotoneaster microphyllus Lindley. Synm: *C.thymifolius* Baker, *C.integrifolius* (Roxb.) Klotz.

Katappa roo (Sha), Kaw Tser (Ura), Japo Tsi tsi (Med), Brush Jhar (Nep). **Habit:** Low growing much branched shrub c 15cm, **Status:** LC, **Habitat:** Rock faces and gravel banks, & **Flowering:** April – July.



Cotoneaster bacillaris Lindley. Synm: *C.obtusus* Lindley, *C.gamblei* Klotz, *C.griffithii* Klotz and *C.cooperi* Marquand.

Weng Tsar seng (Ura). **Habit:** Small tree 3-7 m, **Status:** LC, **Habitat:** Shrubs in Blue Pine forests and streamsides, & **Flowering:** May – June.



Cotoneaster sp.

Habit: Low shrub, **Status:** Unknown, **Habitat:** Hemlock forest (Ura), & **Flowering/ Fruiting:** August.



Cotoneaster sp.

Habit: Shrub, **Status:** Unknown, **Habitat:** Along with other shrubs in Blue Pine and Spruce forests (PNP compound, Ura), & **Flowering/Fruiting:** October.



8. Sorbus L. (by G.G. Long)

Sorbus thibetica (Cardot) Handel-Mazzetti.

ཅ་སོ་ཀེ/ Chasokey (Dzo), Hali (Ura/Sengor). **Habit:** Tree up to 4-10 m, **Status:** LC, **Habitat:** Spruce, Hemlock and Fir forest, also planted for fruit & **Flowering:** May - June.



Sorbus microphylla (Wenzig) Hook. f.

ཚལ་མ་ཤིང་/ Tselma shing (Dzo), Tsar (Ura), Sanu Pasi (Nep).

Habit: Shrub 2-3m or small tree up to 10 m, **Status:** LC, **Habitat:** Common in Fir, Hemlock and Spruce forest, & **Flowering:** June - July.



Sorbus insignis (Hook. f.) Hedlund *Pyrus insignis* Hook. f.

Habit: Tree up to 10m, **Status:** Unknown, **Habitat:** Rhododendron and Mixed coniferous forest, & **Flowering:** April – May.



Sorbus arachnoidea Koehne. Synm: *S.foliolosa*

Pasi (Nep).

Habit: Tree 5-10 m, **Status:** LC, **Habitat:** Fir and Hemlock forest, & **Flowering:** May - July.



Sorbus sp.

Habit: Tree 8 m, **Status:** Unknown, **Habitat:** Fir and Hemlock forest (Shakshapong, Shingnyer), & **Flowering/Fruiting:** September.



Sorbus sp.

Duushing (Sengor). **Habit:** Scrambling shrubs, **Status:**, **Habitat:** Cool broad-leaved forest and Hemlock (Sengor), & **Flowering:** May.



9. *Docynia* Decaisne (by A.J.C. Grierson)

Docynia indica (Wall.) Decaisne. Synm: *D.griffithiana* Decaisne, *Eriolobus indicus* (Wall.) Schneider.

ཏོང་ཤིང་/ Tong shing (Dzo), Thungkagpa (Sha), Tong (Ura), Mehel (Nep)

Habit: Tree 4 -10 m, **Status:** LC, **Habitat:** Warm and Cool broad-leaved forest, & **Flowering:** March - May.



10. *Malus* L. (by A.J.C. Grierson)

Malus pumila Miller *Pyrus malus* L.

Red Highland Apple (Eng), Khambu (Ura). **Habit:** Shrub or small tree 3-6 m, **Status:** Not evaluated, **Habitat:** Planted.



Malus pumila Miller *Pyrus malus* L.

White Highland Apple (Eng), Khambu (Ura). **Habit:** Shrub or small tree 3-6 m, **Status:** Not evaluated, **Habitat:** Planted.



Malus sikkimensis (Wenzig) Koehne

Mindu shing (Sha) **Habit:** Deciduous shrub or small tree, **Status:** Unknown, **Habitat:** Damp and marshy areas.



Malus baccata (L.) Borkhausen. Dushing (Ura)

Habit: Small tree 2 - 6 m, **Status:** Unknown, **Habitat:** Stream sides or marshy areas in Sub-alpine region (Ura), & **Flowering:** April - May.



11. *Pyrus* L. (by A.J.C. Grierson)

Pyrus pashia D. Don.

Leetong (Ura/Kurtoed). **Habit:** Tree 8 m, **Status:** LC, **Habitat:** Planted (Shingkar), & **Flowering:** April – May, **Fruiting:** December/ January.



LEGUMINOSAE

(Pea family)

Trees, shrubs or herbs, sometimes twining or climbing. Leaves alternate, sometimes simple but usually with few to many leaflets arranged trifoliately, pinnately, bipinnately or digitally; stipules usually present. Flowers zygomorphic and bisexual, or actinomorphic and sometimes polygamous; inflorescence often terminal, axillary or supra-axillary. Calyx campanulate or tubular, 5-toothed, the posterior pair of teeth often \pm connate. Petals mostly 5 or sometimes fewer, free or some or all connate, equal or unequal. Stamens commonly rarely only 3 or 7 fertile and fully developed, sometimes numerous; filaments variously united, rarely free. Ovary monocarpellate, superior, unilocular or sometimes falsely plurilocular, ovules 1 or more borne on posterior suture; style simple, filiform or capitate. Fruit a pod (legume), valves usually dry rarely fleshy, usually dehiscent along both sutures or breaking transversely into 1-seeded segments or indehiscent. Seeds often pea- or bean-like, rarely conspicuously arillate.



1. *Delonix* Rafinesque

Delonix regia (Hooker) Rafinesque *Poinciana regia* Hooker.
Flameboyant/ Flame Tree/ Gold Mohur (Eng). **Habit:** Tree 10-15 m, **Status:** Not evaluated (introduced), **Habitat:** Sub-tropical forest and mostly planted, & **Flowering:** May - June.



2. *Bauhinia* L.

Bauhinia purpurea L.
Pegpeyposhing (Sha), Tanki (Nep). **Habit:** Erect shrub or tree 2-12 m, **Status:** LC, **Habitat:** Sub-tropical forest, & **Flowering:** October - November.



3. *Albizia Durazzini*

Albizia chinensis (Osbeck) Merrill.

Chinese Albizia/ Silk Tree (Eng). **Habit:** Tree 5-10 m, **Habitat:** Streamside in Warm broad-leaved forest, & **Flowering:** April.



4. *Indigofera L.*

Indigofera dosua D. Don
var. *dosua*.

Kumchingma shing (Sha),
Chiringi Jhar (Nep). **Habit:**
Shrub 1-4 m, **Status:** LC,
Habitat: Open hillsides
and roadside banks, &
Flowering: April - August.



5. *Desmodium Desveaux*

Desmodium elagans DC.

Habit: Shrub 1-3 m, **Status:** Least Concern, **Habitat:** Dry
hillside in Chirpine forest, & **Flowering:** August.



6. *Erythrina* L.

Erythrina arborescens Roxb.

Chassee (Dzo), Phaledo/ Roringa (Nep). **Habit:** Tree 5-15 m, **Status:** LC, **Habitat:** Warm broad-leaved forest, & **Flowering:** July - August.



7. *Mucuna* Adanson

Mucuna imbricata DC. Ex Baker. Synm: *M.interrupta* Gagnepain.

Habit: Large woody twiner, **Status:** LC, **Habitat:** River banks in Sub-tropical forest.



8. *Astragalus* L.

Astragalus concretus Bentham.

Habit: Sprawling herb, **Status:** Unknown, **Habitat:** Roadside with dwarf bamboo in Spruce and Blue Pine forest, & **Flowering:** June.



Astragalus sp.

Habit: Erect herb, **Status:** Unknown, **Habitat:** Growing with dwarf bamboo in Spruce and Blue Pine forest, & **Flowering:** February.



9. *Gueldenstaedtia* Fisher

Gueldenstaedtia himalaica Baker.

Habit: Low growing perennial herb, **Status:** LC, **Habitat:** Open hillsides with dwarf bamboo, & **Flowering:** May - July.



Gueldenstaedtia donianus

Habit: Low growing perennial herb, **Habitat:** Open hillsides with dwarf bamboo, & **Flowering:** May - July.



10. *Pisum L.*

Pisum sativum L. var. arvense (L.) Poiret.

Field Pea/ Garden Pea (Eng), Nami (Ura), Mortar (Nep). **Habit:** Annual climbing herbs, **Status:** Not evaluated (cultivated), **Habitat:** Cultivated, & **Flowering:** March - August.



11. *Trifolium L.*

Trifolium repens L.

White Clover (Eng), Clover (Ura)

Habit: Creeping perennial, **Status:** Not evaluated (introduced), **Habitat:** Open grassy slopes and roadside banks, & **Flowering:** April - June.



Red Clover *Trifolium pratense L.*

Habit: Creeping perennial, **Status:** Not evaluated (introduced), **Habitat:** Roadside banks, & **Flowering:** June.

12. *Piptanthus* Sweet

Piptanthus nepalensis (Hook.) Sweet. Synm: *P.laurifolius* (D. Don) Stapf, *P.bombycinus* Marquand.

Dhungmai (Ura), Jangchu (Sengor), Gahate-phul (Nep). **Habit:** Shrub, 1-2.5 m, **Status:** LC, **Habitat:** Open hillsides and with scrubs, & **Flowering:** April - May.



13. *Parochetus* Buch.-Ham. Ex D.Don

Parochetus communis Buch.- Ham. Ex D.Don.

Shamrock Pea/ Blue Oxalis (Eng). **Habit:** Prostrate herb, **Status:** LC (IUCN), **Habitat:** Alongside of Foot trails and grazed areas in Broad-leaved forest, & **Flowering:** August.



OXALIDACEAE

(Wood-Sorrel family)

Annual or perennial herbs, with rhizomes, bulb or bulbils, or small trees. Leaves alternate or rosette; compound, trifoliolate or 1-pinnate, stipulate or exstipulate. Flowers in basal or axillary peduncled umbels or panicles, bisexual, actinomorphic. Sepals 5, free or weakly coherent at base. Petals 5, free or weakly coherent at base. Stamens 10 in 2 whorls, filaments free or united at base, outer whorl sometimes without anthers. Ovary superior, 5-celled; style 5, free with small capitate stigmas, ovules 1-10 per cell, axile. Fruit a capsule or berry; seeds usually with aril.

Many oxalidaceae display 'trimorphic heterostyly' where the flowers of a single species may be of three types—with long styles, medium and short stamens, medium styles with long and short stamens, and short styles with long and medium stamens.



1. *Oxalis* L.

Oxalis corniculata L.

Amrul (Hindi). **Habit:** Perennial creeping herb, **Status:** Not evaluated (Weed), **Habitat:** On disturbed soil on roadsides and in cultivation & **Flowering:** February – August.



GERANIACEAE

(Geranium family)

Herbs. Leaves opposite or alternate, lobed or palmately dissected, palmately veined, stipulate. Flowers solitary, or in few flowered cymes, or umbellate, bisexual, actinomorphic (zygomorphic in *Pelargonium*). Sepals 5, free (united at base in *Pelargonium*). Petals 5, free, sometimes alternating with 5 nectaries. Stamens 10, usually all fertile, rarely 5 without anthers, filaments free or united at base. Ovary superior, 5-celled, ovules 1-2 per cell, styles 5 fused into a basal elongating beak. Capsule 5-lobed, mericarpic, 5-celled, each cell 1-seeded, mericarps dehiscent with part of beak breaking and coiling upwards elastically from the central column.



1. *Geranium* L.

Geranium procurens Yeo. Synm: *G.grevilleanum* Wall.
G.lambertii Sweet var. *backhousianum* (Regel) Hara.

Toka-Khohan-Ngon (Sha). **Habit:** Fairly stout but decumbent herb, **Status:** LC, **Habitat:** Hemlock and Fir forest, & **Flowering:** July - September.



Geranium polyanthes Edgeworth & Hook.f.

Habit: Erect stout herb 15-70cm, **Status:** LC, **Habitat:** Mountain meadows & **Flowering:** June - August.



Geranium donianum Sweet. Synm: *G.collinum* Willdenow,
G.stenorhizum Stapf.

Habit: Similar to *G.refractrum* but much branched herb, **Status:** LC, **Habitat:** Fir and Juniper forest & **Flowering:** June - October.



Geranium nepalensis Sweet.

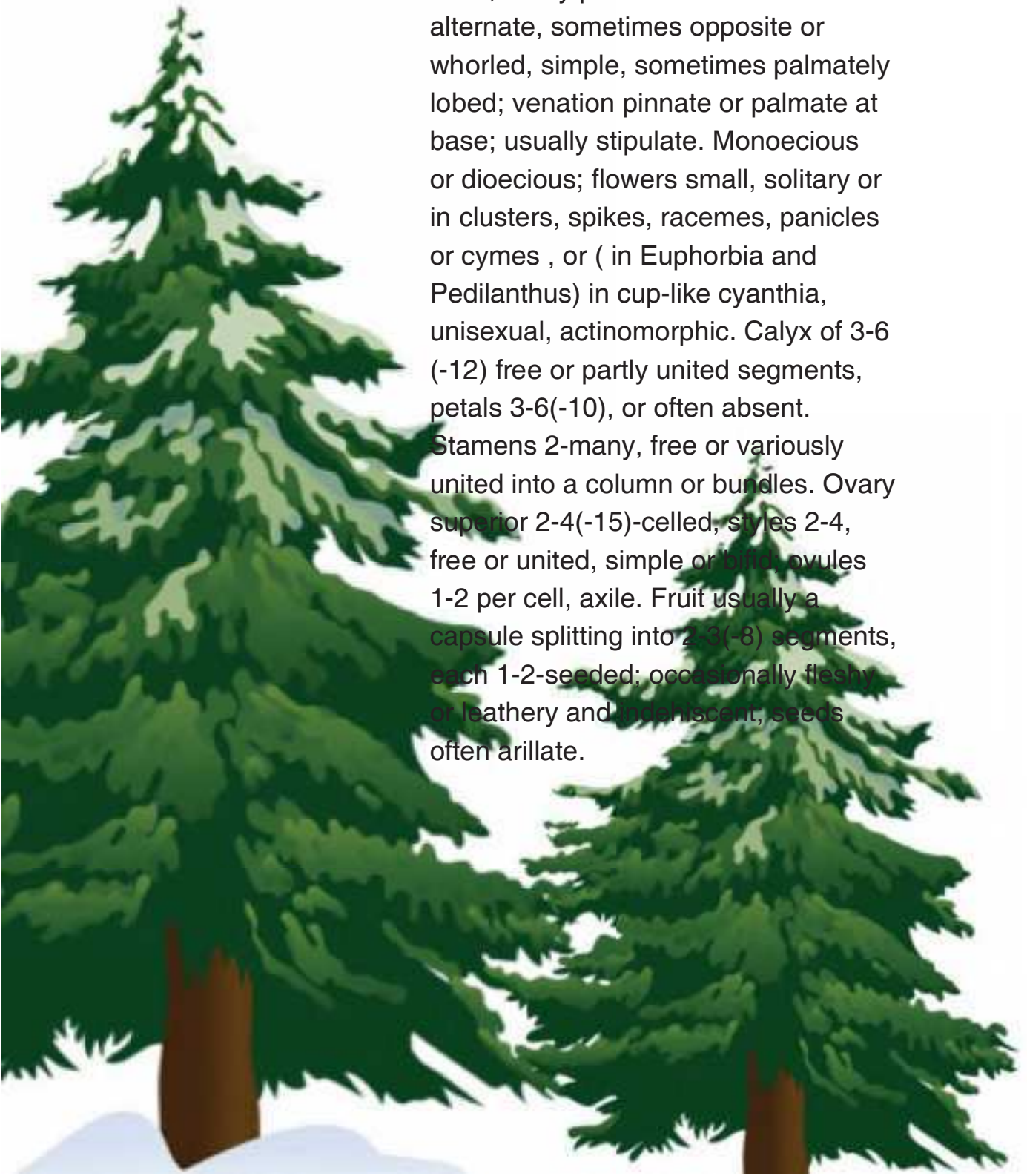
Habit: Scrambling herb, **Status:** LC, **Habitat:** Disturbed areas and amongst shrubs in forest & **Flowering:** July - September.



EUPHORBIACEAE

(Spurge family)

Trees, shrubs (sometimes succulent, rarely climbing) or herbs, often with milky sap, indumentums of simple or stellate hairs, rarely peltate scales. Leaves alternate, sometimes opposite or whorled, simple, sometimes palmately lobed; venation pinnate or palmate at base; usually stipulate. Monoecious or dioecious; flowers small, solitary or in clusters, spikes, racemes, panicles or cymes, or (in *Euphorbia* and *Pedilanthus*) in cup-like cyathia, unisexual, actinomorphic. Calyx of 3-6 (-12) free or partly united segments, petals 3-6 (-10), or often absent. Stamens 2-many, free or variously united into a column or bundles. Ovary superior 2-4 (-15)-celled, styles 2-4, free or united, simple or bifid; ovules 1-2 per cell, axile. Fruit usually a capsule splitting into 2-3 (-8) segments, each 1-2-seeded; occasionally fleshy or leathery and indehiscent; seeds often arillate.



1. *Euphorbia* L.

Euphorbia pulcherrima Klotzsch. Synm: *Poinsettia pulcherrima* (Klotzsch) Graham. *Poinsettia* (Eng).

Habit: Shrub 2-3m, **Status:** Not evaluated (introduced), **Habitat:** Roadsides in Warm broadleaved and sub-tropical forest regions & **Flowering:** April - May.



Euphorbia griffithii Hook. f. Synm: *Tithymalus griffithii* (Hook. f.) Hara, *E. sikkimensis* Boissier subsp. *bhutanica* Fischer.

Chungkaiju (Ura), Durjit (Med). **Habit:** Perennial herb with creeping rhizomes and erect annual stems 40-80cm, **Status:** LC, **Habitat:** In clearings and amongst amongst scrub in Blue Pine, Oak and Conifer/ Rhododendron forests & **Flowering:** May - August.



2. *Ostodes* Blume

Ostodes paniculata Blume.

Bepari (Nep). **Habit:** Shrub to 3m or tree to 15m, **Status:** LC, **Habitat:** Su-tropical and Warm broad-leaved forest & **Flowering:** March - June.



3. *Claoxylon* Jussieu

Claoxylon longipetiolatum Kurz

Habit: Medium sized shrub, **Status:** Unknown, **Habitat:** Warm broad-leaved forest & **Flowering:** June.



4. *Macaranga* Petit-Thouars

Macaranga denticulata (Blume) Mueller. Synm: *M.gummiflua* (Miquel) Mueller.

བོམ་ཅུ་ཤིང་/Bomchu shing (Dzo), Malata (Nep). **Habit:** Evergreen tree 3-10m, **Status:** LC, **Habitat:** Foothills and duars. In secondary sub-tropical forest & **Flowering:** March - May.



Mallotus nepalensis Muller.

Habit: Large shrub or small tree to 12m, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** June - July.



5. *Ricinus* L.

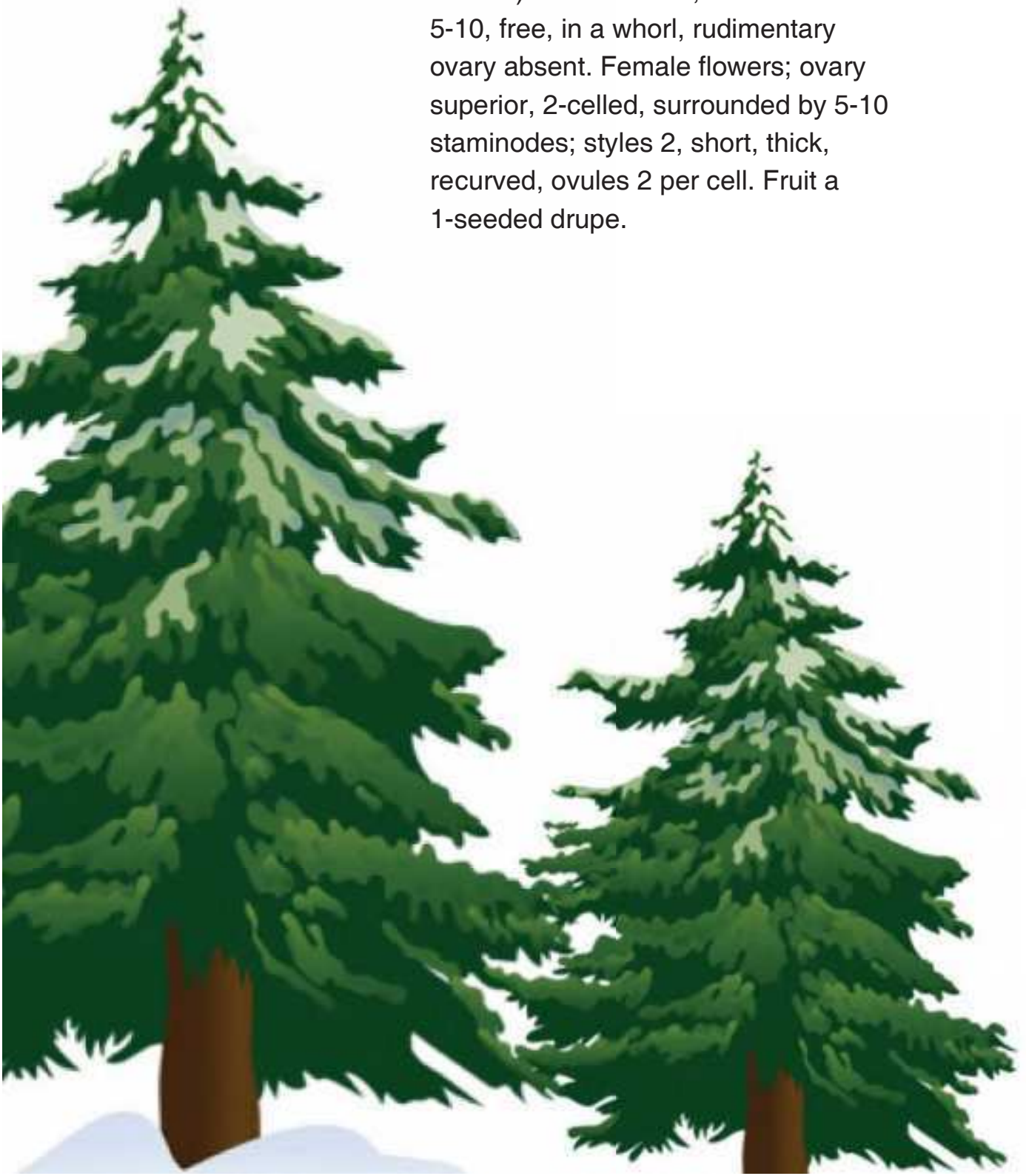
Ricinus communis L.

Castor-oil Plant (Eng). Chamling shing (Sha), Reri (Nep), Denrog (Med). **Habit:** Shrub 2m or small tree to 5m, **Status:** Not evaluated (introduced), **Habitat:** Waste grounds in the warm broad-leaved and sub-tropical forest areas & **Flowering:** January - March.



DAPHNIPHYLLACEAE

Dioecious evergreen trees or shrubs. Leaves alternate but crowded at branch-ends, simple, entire, pinnately veined, exstipulate. Flowers in axillary racemes, unisexual, actinomorphic. Perianth absent (in Bhutan). Male flowers; stamens 5-10, free, in a whorl, rudimentary ovary absent. Female flowers; ovary superior, 2-celled, surrounded by 5-10 staminodes; styles 2, short, thick, recurved, ovules 2 per cell. Fruit a 1-seeded drupe.



1. *Daphniphyllum* Blume

Daphniphyllum himalense (Bentham) Mueller.

ལྷུ་ལྷུ་ཤིང་/Juroo shing (Dzo), Lal Chandan (Nep).

Habit: Evergreen tree 5-12m, **Status:** LC, **Habitat:** Warm broad-leaved and Evergreen Oak forest & **Flowering:** April - June.

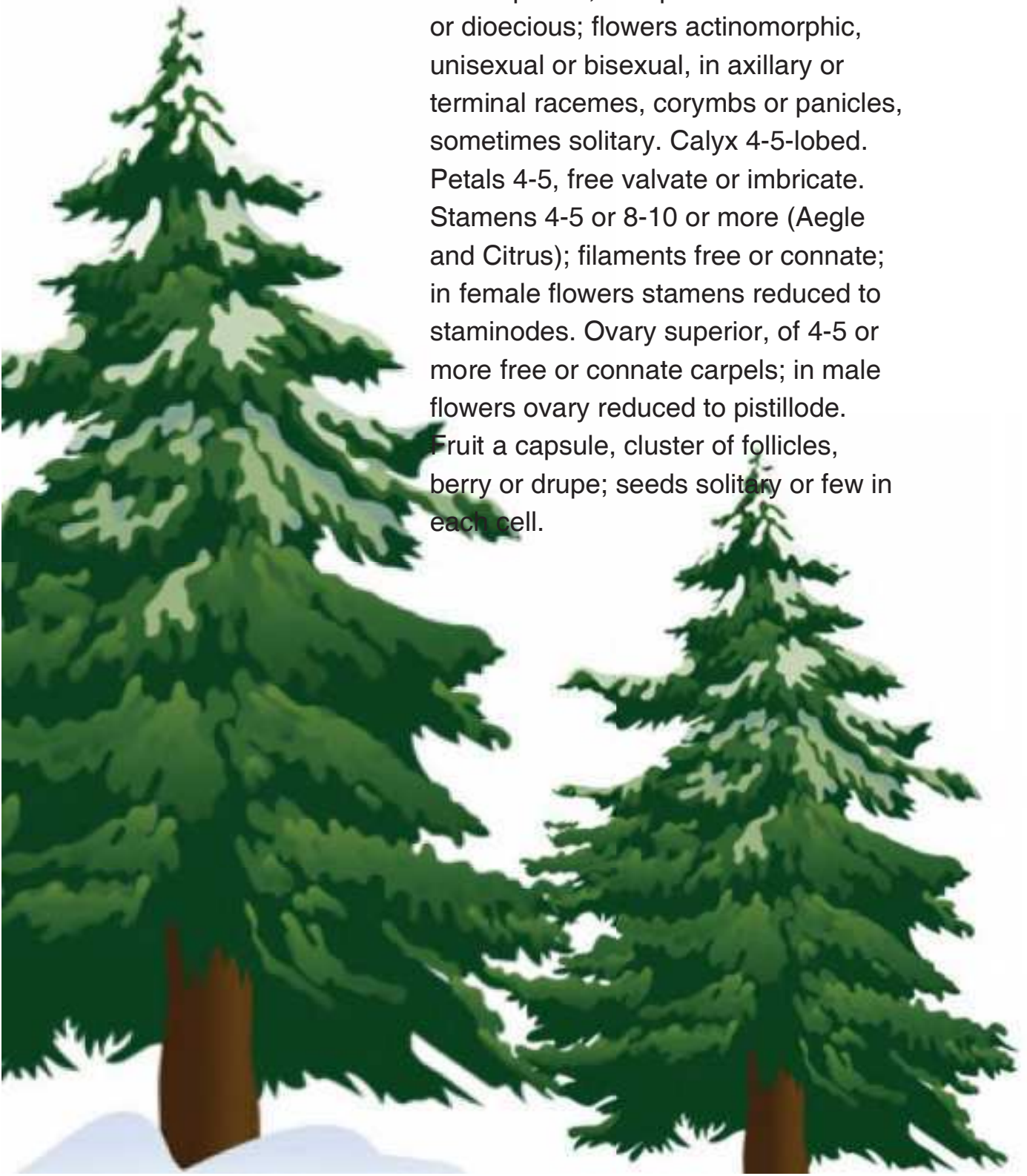


RUTACEAE

(Citrus family)

Trees, shrubs, rarely herbs;
leaves, flowers and fruits usually
bearing numerous oil glands.

Leaves opposite or alternate, simple or compound, exstipulate. Monoecious or dioecious; flowers actinomorphic, unisexual or bisexual, in axillary or terminal racemes, corymbs or panicles, sometimes solitary. Calyx 4-5-lobed. Petals 4-5, free valvate or imbricate. Stamens 4-5 or 8-10 or more (Aegle and Citrus); filaments free or connate; in female flowers stamens reduced to staminodes. Ovary superior, of 4-5 or more free or connate carpels; in male flowers ovary reduced to pistillode. Fruit a capsule, cluster of follicles, berry or drupe; seeds solitary or few in each cell.



1. *Tetradium* Loureiro

Tetradium ruticarpum (Jussieu) Hartley. Synm: *Evodia ruticarpa* (Jussieu) Bentham.

Habit: Shrub to or small tree to 10m, **Status:** LC, **Habitat:** On open hillsides & **Flowering:** June.



2. *Skimmia* Thunberg

Skimmia laureola (DC.) Walpers. sub.sp. *laureola*, Synm: *S.melanocarpa* Rehder & Wilson, *S.wallichii* Hook. f. & Thomson

Jainberiphul (Nep). **Habit:** Semi-prostrate shrub, seldom exceeding 1m, **Status:** LC, **Habitat:** Banks in Fir/Rhododendron forest & **Flowering:** April - May.



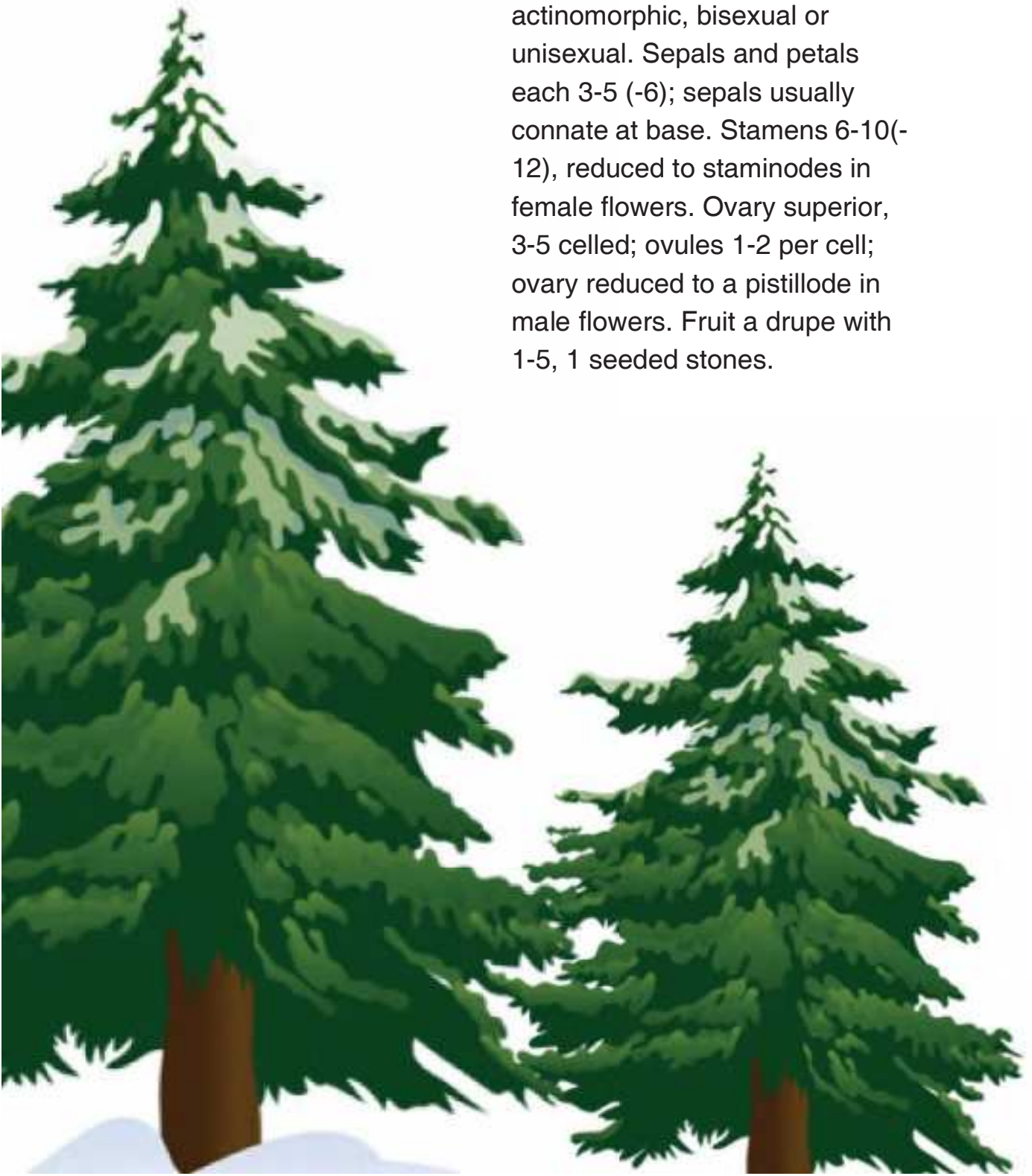
Citrus maxima (Burman) Merrill. Synm: *C.grandis* (L.) Osbeck, *C.decumana* L.

Pummelo/ Shaddock (Eng), འྲི་རྩུམ་པ་/ Drehumpa (Dzo), Noom-pang/ Solonji (Sha), Poksey/ Sangkatra (Nep). **Habit:** Tree up to 10m, **Status:** Not evaluated, **Habitat:** Cultivated & **Flowering:** March.



BURSERACEAE

Resinous trees or shrubs. Leaves alternate, odd-pinnate, exstipulate or with deciduous stipules. Monoecious or dioecious; flowers in panicles or racemes, actinomorphic, bisexual or unisexual. Sepals and petals each 3-5 (-6); sepals usually connate at base. Stamens 6-10(-12), reduced to staminodes in female flowers. Ovary superior, 3-5 celled; ovules 1-2 per cell; ovary reduced to a pistillode in male flowers. Fruit a drupe with 1-5, 1 seeded stones.



1. *Canarium* Stickman

Canarium strictum Roxb. Synm: *C.sikkimense* King.

Poikarshing (Sha), Poekarseng (Ura), Dhuna/ Gokuldhup (Nep),
Poikar (Med). **Habit:** Evergreen tree up to 50m, **Status:** LC,

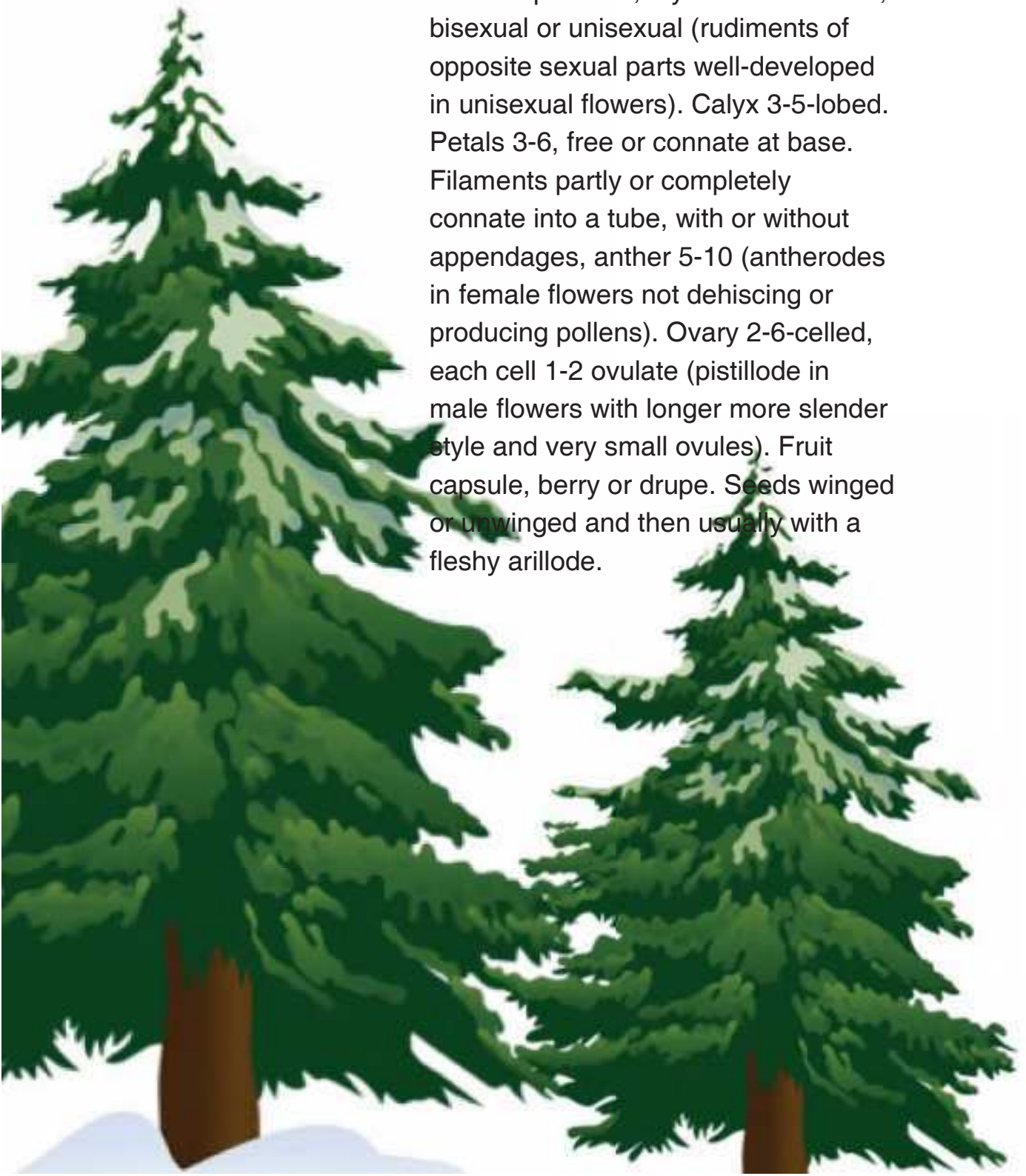
Habitat: Sub-tropical and Warm broad-leaved forest.



MELIACEAE

(Mahogany family)

Trees or shrubs. Leaves alternate, trifoliate or pinnate, rarely 2-3-pinnate. Monoecious or dioecious; flowers in axillary or terminal panicles, thyrses or racemes, bisexual or unisexual (rudiments of opposite sexual parts well-developed in unisexual flowers). Calyx 3-5-lobed. Petals 3-6, free or connate at base. Filaments partly or completely connate into a tube, with or without appendages, anther 5-10 (antherodes in female flowers not dehiscing or producing pollens). Ovary 2-6-celled, each cell 1-2 ovulate (pistillode in male flowers with longer more slender style and very small ovules). Fruit capsule, berry or drupe. Seeds winged or unwinged and then usually with a fleshy arillode.



1. *Melia* L.

Melia azedarach L. Synm: *M.composita* Willdenow, *M.bukayun* Royle.

Perisan Lilac (Eng), Ja shing (Dzo), Bakaina (Nep). **Habit:** Tree 6-15m, **Status:** LC, **Habitat:** Planted as avenue plants & **Flowering:** March.



2. *Aglaia*

Aglaia cucculata (Roxb.) Pellegr.

Pacific Apple (Eng), Khewelaiseng (Kheng). **Habit:** Tree 6-20m, **Status:** DD (IUCN), **Habitat:** Warm broad-leaved forest (Fruit eaten by Hornbill) & **Flowering:** March.



3. *Toona* (Endlicher) Roemer

Toona ciliata Roemer. Synm: *Cedrela toona*

Rottler & Wildenow, *C.kingii* C.DC.

Indian Mahogany (Eng), ལྷན་ལྷོང་/ Chhuen shing (Dzo), Rawa shing (Sha), Yaiseng (Ura), Charshing (Med), Toon/ Tuni (Nep)

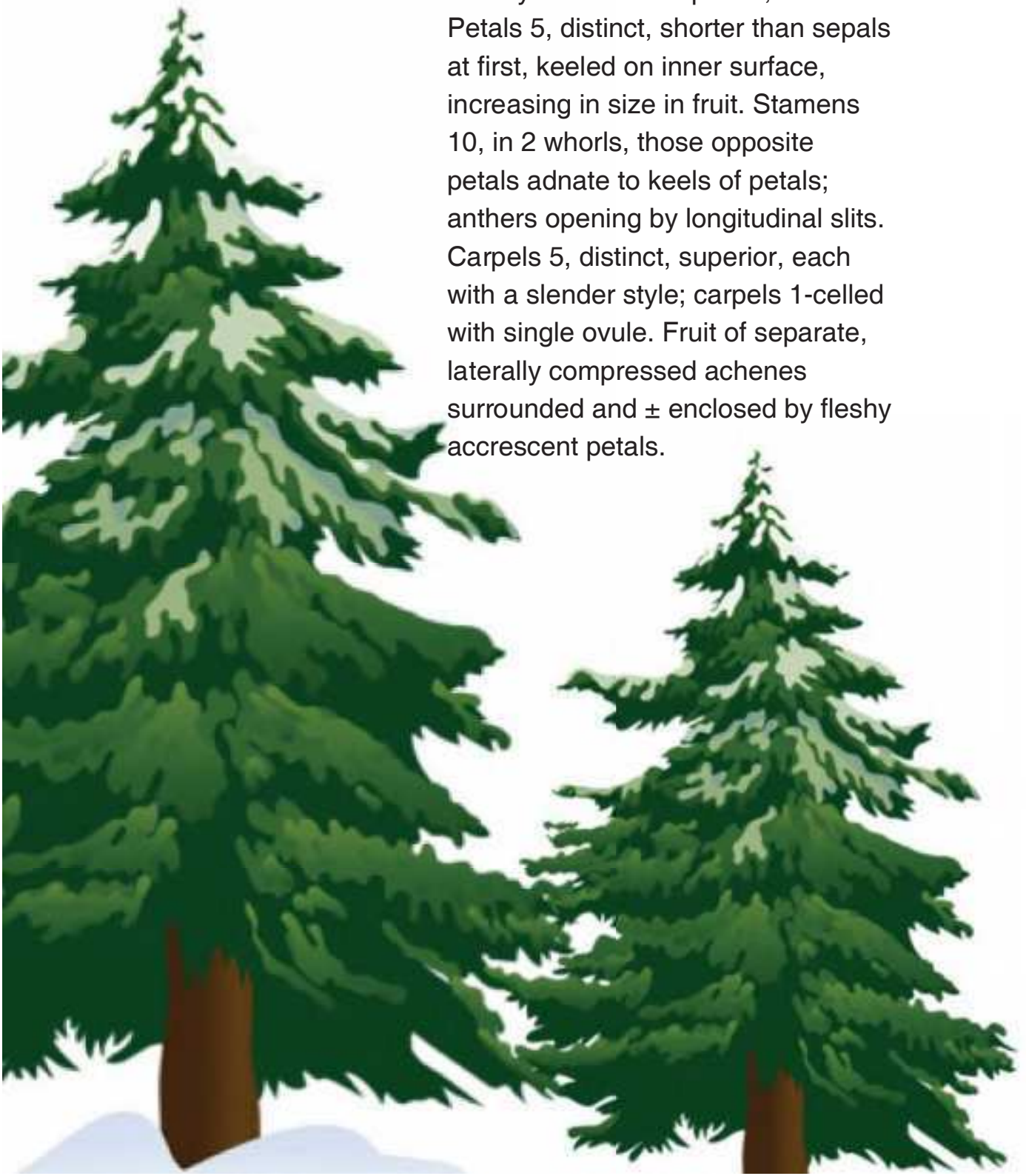
Habit: Large tree 20-27m, **Status:** LC, **Habitat:** Sub-tropical and Warm broad-leaved forest & **Flowering:** November - March.



CORIARIACEAE

(Coriaria family)

Shrubs. Leaves opposite, simple, entire, palmately veined, exstipulate. Flowers actinomorphic, bisexual, in terminal or axillary racemes. Sepals 5, imbricate. Petals 5, distinct, shorter than sepals at first, keeled on inner surface, increasing in size in fruit. Stamens 10, in 2 whorls, those opposite petals adnate to keels of petals; anthers opening by longitudinal slits. Carpels 5, distinct, superior, each with a slender style; carpels 1-celled with single ovule. Fruit of separate, laterally compressed achenes surrounded and \pm enclosed by fleshy accrescent petals.



1. *Coriaria* L.

Coriaria napalensis Wall.

Limphu shi (Dzo), Bamlegpa (Ura)

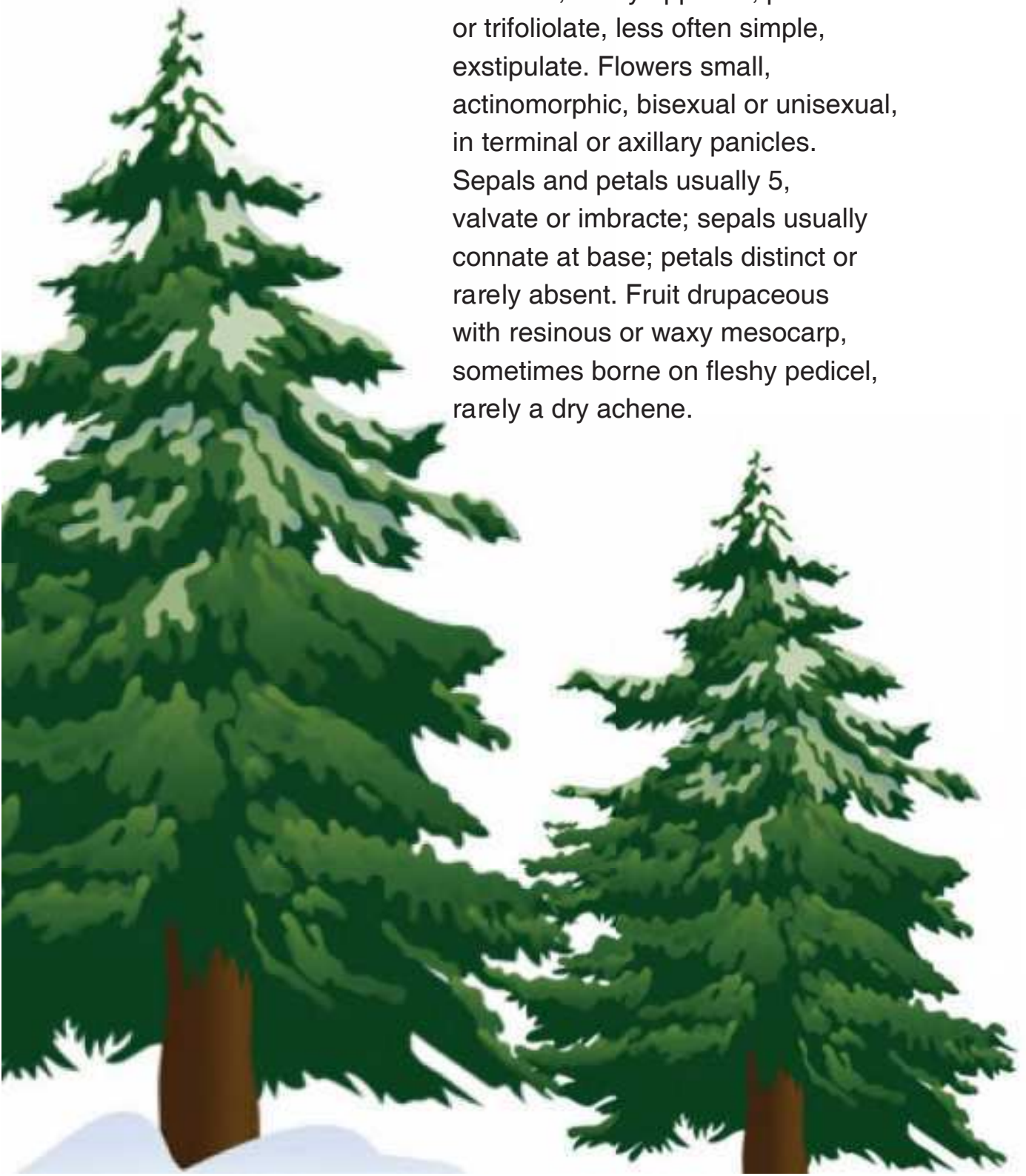
Habit: Shrub, 1-2.5m, **Status:** LC, **Habitat:** Steep dry shrub-covered hillsides & **Flowering:** April - May.



ANARCARDIACEAE

(Mango or Cashew family)

Trees, shrubs, sometimes scandent, usually with corrosive sap turning black when exposed to air. Leaves alternate, rarely opposite, pinnate or trifoliolate, less often simple, exstipulate. Flowers small, actinomorphic, bisexual or unisexual, in terminal or axillary panicles. Sepals and petals usually 5, valvate or imbracte; sepals usually connate at base; petals distinct or rarely absent. Fruit drupaceous with resinous or waxy mesocarp, sometimes borne on fleshy pedicel, rarely a dry achene.



1. *Mangifera* L.

Mangifera indica L.

Mango (Eng), ཨམ་ཅུ་གུ་ལི། Am Chukuli (Dzo), Aam (Sha), Aa-drey (Med), Amp (Nep).

Habit: Tree 10-30m, **Status:** Not evaluated (cultivated), **Habitat:** Cultivated in low areas & **Flowering:** March – April.



Mangifera sylvatica

Wild Mango (Eng). **Habit:** Similar to *M.indica* but young leaves drooping & blackish purple, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** April - May.

2. *Choerospondias* Burt & Hill

Choerospondias axillaris (Roxb.) Burt & Hill. Synm: *Spondias axillaris* Roxb.

ཅམ་ཤིང། Chhara shing (Dzo), Thrung-chung seyshing (Sha), Lingling shoksho (Ura), Nying zho sha (Med), Lapsi (Nep).



Habit: Tree to 10m or more, **Status:** LC, **Habitat:** Sub-tropical forests & **Flowering:** April (Drupes edible).



3. *Drimycarpus* Hook.f.

Drimycarpus racemosus (Roxb.) Hook.f.

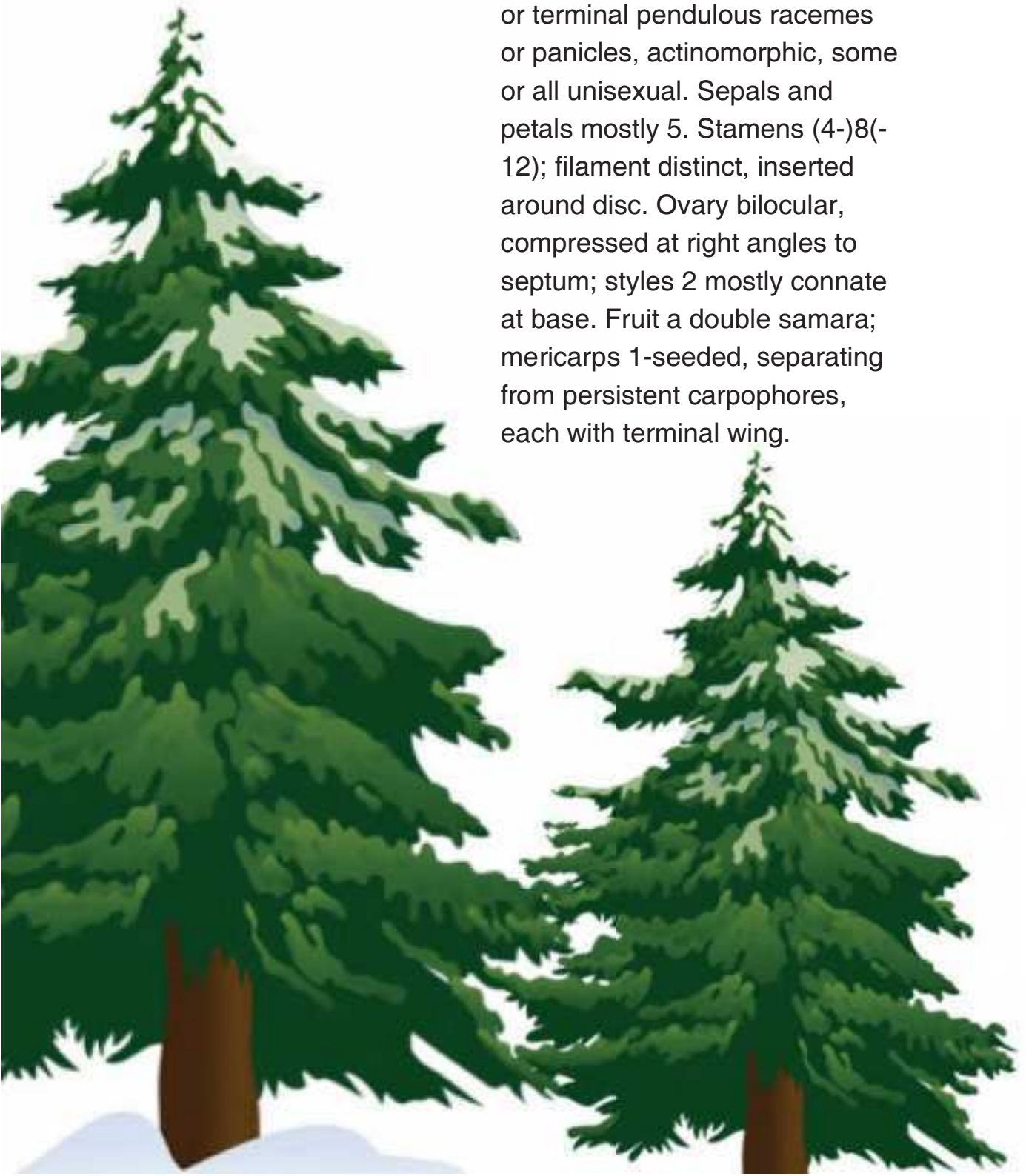
Pungent Fruit (Eng), Kadarmey (Kheng), Chemeyla (Saling), Khak Balaiyo (Nep). **Habit:** Tree to 30m, **Status:** Not assessed yet (IUCN), **Habitat:** Sub-tropical, warm and cool broad-leaved forests & **Flowering:** July – September.



ACERACEAE

(Maple family)

Deciduous trees. Leaves opposite, simple, often palmately lobed; stipules absent. Dioecious or Monoecious; flowers in axillary or terminal pendulous racemes or panicles, actinomorphic, some or all unisexual. Sepals and petals mostly 5. Stamens (4-)8(-12); filament distinct, inserted around disc. Ovary bilocular, compressed at right angles to septum; styles 2 mostly connate at base. Fruit a double samara; mericarps 1-seeded, separating from persistent carpophores, each with terminal wing.



1. *Acer* L.

Acer oblongum DC.

ཚིབ་ལ་ཤིང་/ Chhibla shi (Dzo), Phirphiri (Nep). **Habit:** Shrub, 1-2.5m, **Status:** LC, **Habitat:** Steep dry shrub-covered hillsides & **Flowering:** April - May.



Acer campbellii Hiern.

Wamola (Ura), Kapasi (Nep). **Habit:** Tree to 10m, **Status:** LC, **Habitat:** Fir and Mixed conifer forest & **Flowering:** May – June.



Acer pectinatum Nicholson. Synm: *A. caudatum* Wall.

འོང་ཀ།/ Wongka (Dzo), Wamola (Ura), Lekh Kapasi (Nep) **Habit:** Tree to 10-15m, **Status:** LC, **Habitat:** Cool broad-leaved, Hemlock and Fir forests & **Flowering:** April - May.



Acer sterculiaceum Wall. Synm: *A.villosum* Wall.

Habit: Tree to 7-15m, **Status:** LC, **Habitat:** Cool broad-leaved forest & **Flowering:** April - May.



Acer hokeri Miquel.

Habit: Similar to *A.oblongum* but leaves often serrulate towards apex, **Status:** LC, **Habitat:** Blue pine forest (Below Tangsibi, Ura) & **Flowering:** Feb.-March.



Acer thomsonii Miquel. Arch. Neerl.

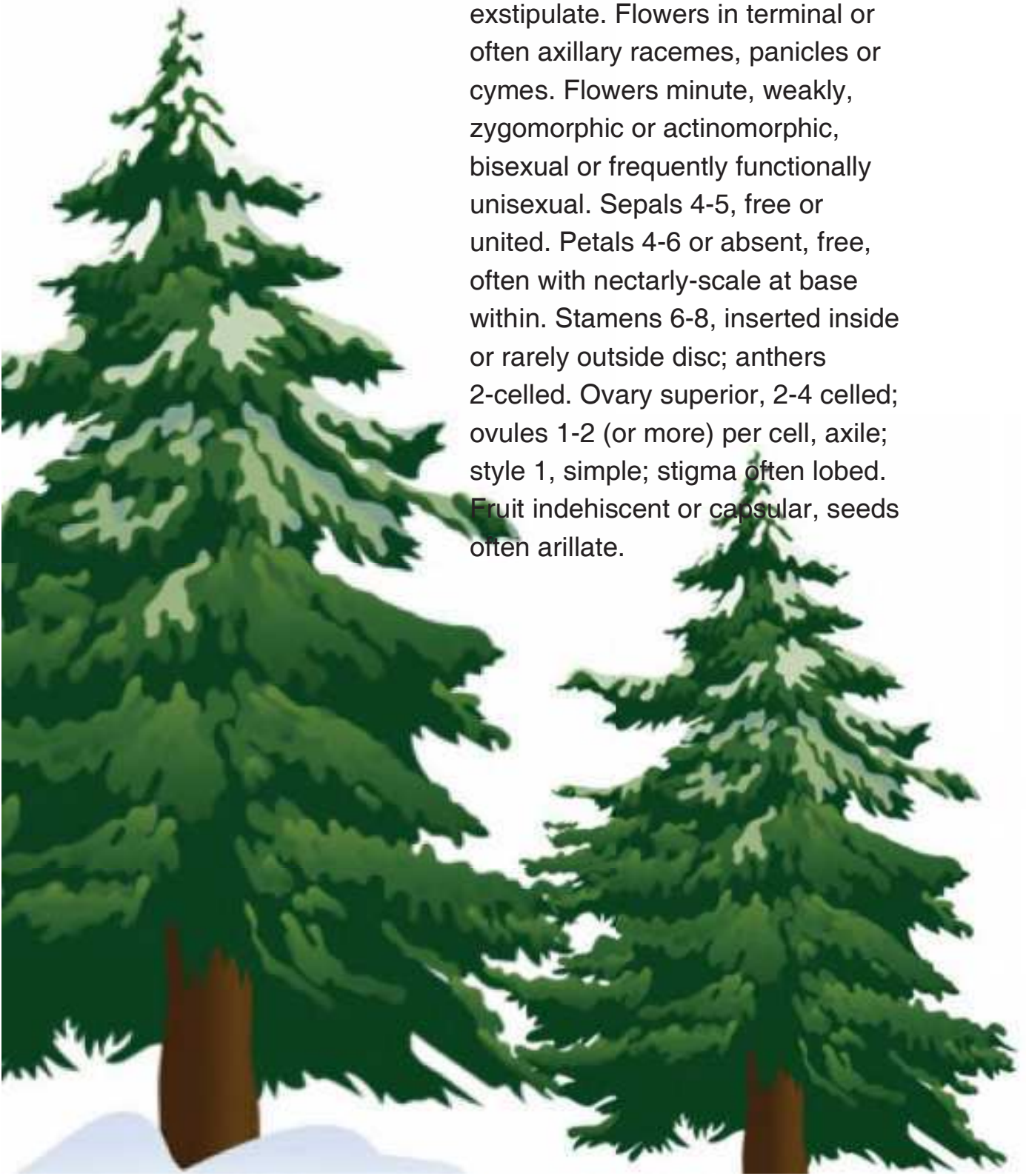
Habit: Tree, **Status:** LC, **Habitat:** Warm broad-leaved forest (Tsanzabi, Saling).



SAPINDACEAE

(Soapberry family)

Trees, shrubs or climbing herbs. Leaves alternate, simple, trifoliolate, 1-pinnate or biternate; leaflets opposite or alternate, pinnately veined, exstipulate. Flowers in terminal or often axillary racemes, panicles or cymes. Flowers minute, weakly, zygomorphic or actinomorphic, bisexual or frequently functionally unisexual. Sepals 4-5, free or united. Petals 4-6 or absent, free, often with nectary-scale at base within. Stamens 6-8, inserted inside or rarely outside disc; anthers 2-celled. Ovary superior, 2-4 celled; ovules 1-2 (or more) per cell, axile; style 1, simple; stigma often lobed. Fruit indehiscent or capsular, seeds often arillate.



1. *Sapindus L.*

Sapindus rarak Synm: *Dittelasma rarak* (DC.) Hiern.

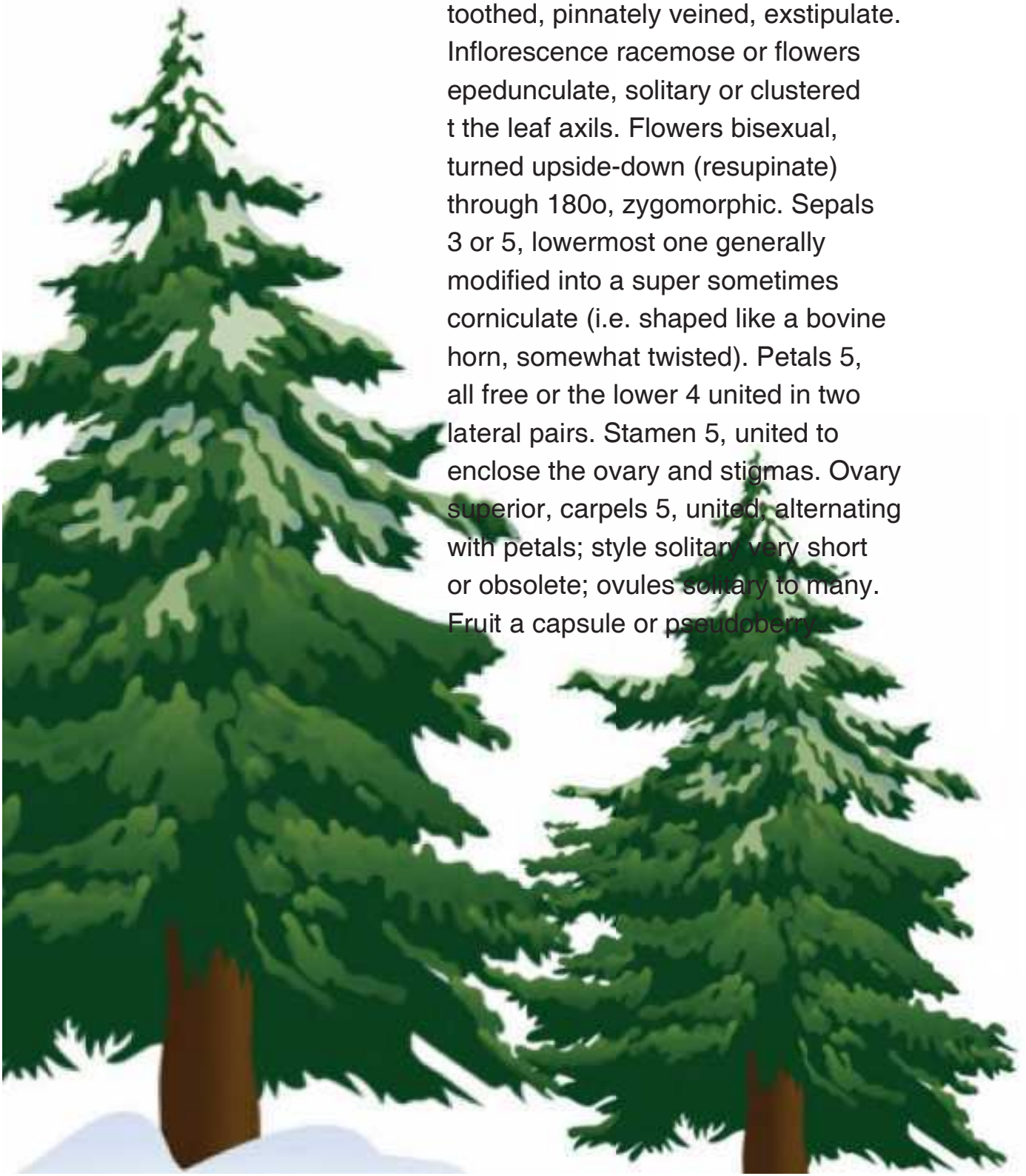
Reethra/ Chinese berry (Eng), རྟ་ཀ་པ་ལྷི/ Nakapani (Dzo, Med & Ura), Killing shing (Sha), Reethra (Nep). **Habit:** Deciduous tree 5-15m, **Status:** LC, **Habitat:** Sub-tropical forests & **Flowering:** May.



BALSAMINACEAE

(Balsam family)

Annual or perennial herbs, often rather fleshy. Stems erect to procumbent, often rooting at the lower nodes. Leaves spirally arranged, opposite or whorled, toothed, pinnately veined, exstipulate. Inflorescence racemose or flowers epedunculate, solitary or clustered at the leaf axils. Flowers bisexual, turned upside-down (resupinate) through 180°, zygomorphic. Sepals 3 or 5, lowermost one generally modified into a spur sometimes corniculate (i.e. shaped like a bovine horn, somewhat twisted). Petals 5, all free or the lower 4 united in two lateral pairs. Stamen 5, united to enclose the ovary and stigmas. Ovary superior, carpels 5, united, alternating with petals; style solitary very short or obsolete; ovules solitary to many. Fruit a capsule or pseudoberry.



1. *Impatiens* L.

Impatiens cristata Wall. Synm: *I.scabrida* Hara

Rugged Yellow Balsam (Eng). **Habit:** Annual herb to 70cm, **Status:** LC, **Habitat:** Sunny or semi-shaded moist areas, particularly in open forest, along pathways or close to habitation & **Flowering:** June - October.



Impatiens sulcata Wall. Synm: *I.gigantea* Edgeworth

Habit: Annual herb to 1.5m, **Status:** LC, **Habitat:** Stream margins and pathsides in forests & **Flowering:** June - September.



Impatiens urticifolia Wall.

Habit: Annual Herb, **Status:** LC, **Habitat:** Growing in cultivation areas (Shingkar) & **Flowering:** July.



Impatiens sp.

Habit: Annual Herb, **Status:** Unknown, **Habitat:** Fir Forest (Geyzamchu) & **Flowering:** August.



Impatiens drepanophora Hook.f.

Habit: Annual Herb, **Status:** Unknown, **Habitat:** Growing in stream sides and along road drains in Warm broad-leaved forest (Namling) & **Flowering:** September.



Impatiens sp.

Habit: Annual Herb, **Status:** Unknown, **Habitat:** Sub-tropical forest areas & **Flowering:** June.



Impatiens lutea Hook.f.

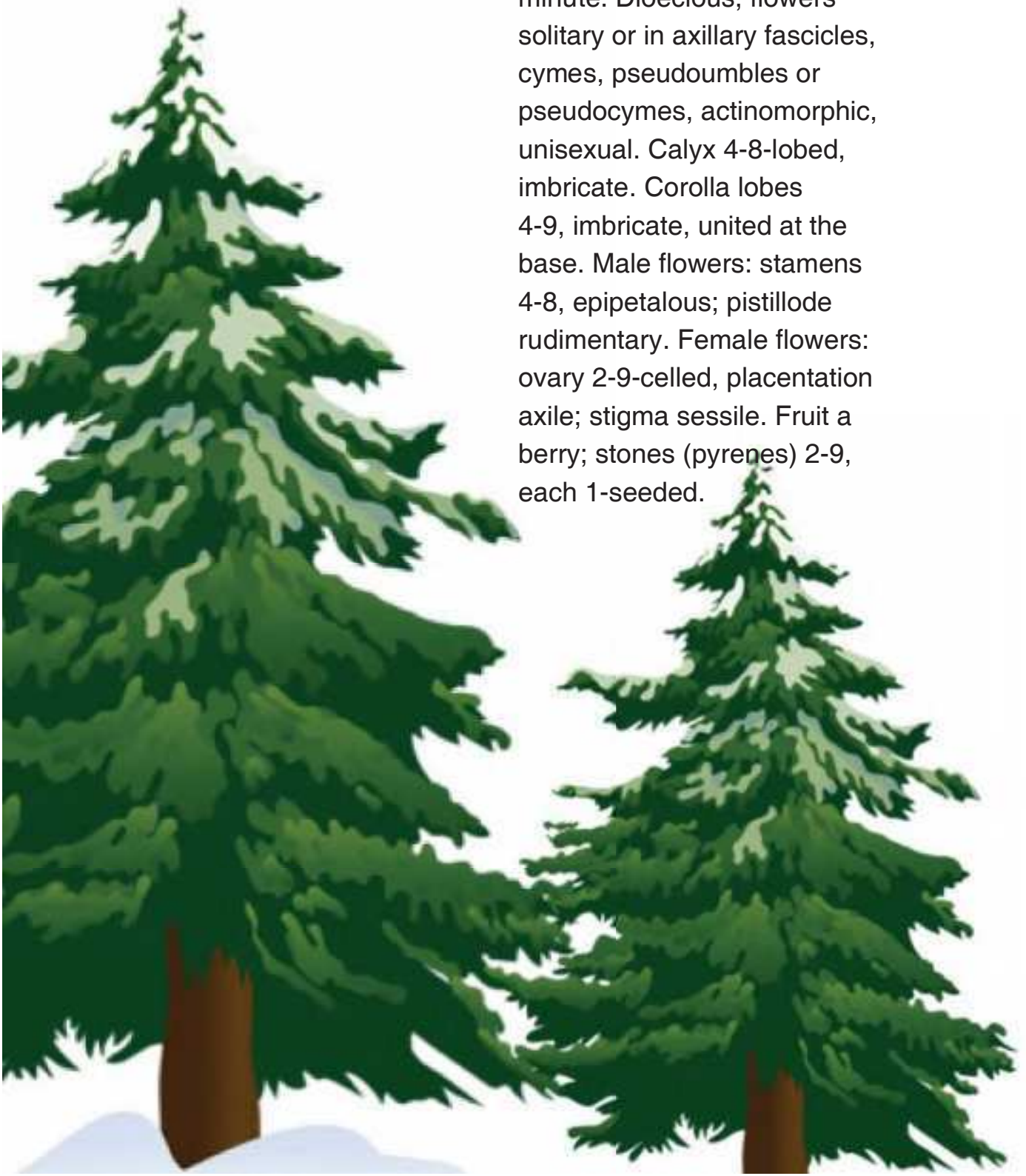
Habit: Annual Herb, **Status:** Unknown, **Habitat:** Su-tropical forest (Tsanzabi, Saling) & **Flowering:** July.



AQUIFOLIACEAE

(Holly family)

Evergreen or deciduous trees or shrubs. Leaves alternate, simple, pinnately veined; stipules minute. Dioecious; flowers solitary or in axillary fascicles, cymes, pseudoumbels or pseudocymes, actinomorphic, unisexual. Calyx 4-8-lobed, imbricate. Corolla lobes 4-9, imbricate, united at the base. Male flowers: stamens 4-8, epipetalous; pistillode rudimentary. Female flowers: ovary 2-9-celled, placentation axile; stigma sessile. Fruit a berry; stones (pyrenes) 2-9, each 1-seeded.



1. *Ilex* L.

Ilex dipyrena Wall.

Himalayan Holly (Eng), Ra-tsa shing (Sha), Lise/ Liso Caulah (Nep), Kanderu (Hindi). **Habit:** Evergreen tree to 12m, **Status:** LC, **Habitat:** Dense mixed forest in Cool-broad-leaved, Hemlock and Fir forests & **Flowering:** April - May.



CELASTRACEAE

(Spindle-Tree family)

Trees, shrubs or woody climbers. Leaves opposite or alternate, simple, pinnately veined; stipules usually minute. Flowers in axillary or terminal cymes, racemes or panicles, rarely solitary, mostly bisexual, actinomorphic. Calyx united at base, 4-5-lobed. Petals 4-5, free. Disc usually conspicuous, often lobed. Stamens 4-5, free or rarely filaments connate at base, borne on disc, antisepalous; anthers (1-)2-celled. Ovary superior, sometimes partly or totally immersed in disc, 2-5-valved capsule, rarely indehiscent; seeds 1-many, often arillate, rarely winged.



1. *Euonymus* L.

Euonymus tingens Wall.

Habit: Small evergreen tree, 3-10m, **Status:** Not evaluated (cultivated), **Habitat:** Blue Pine and Hemlock forest & **Flowering:** May - September.



Euonymus frigidus Wall.

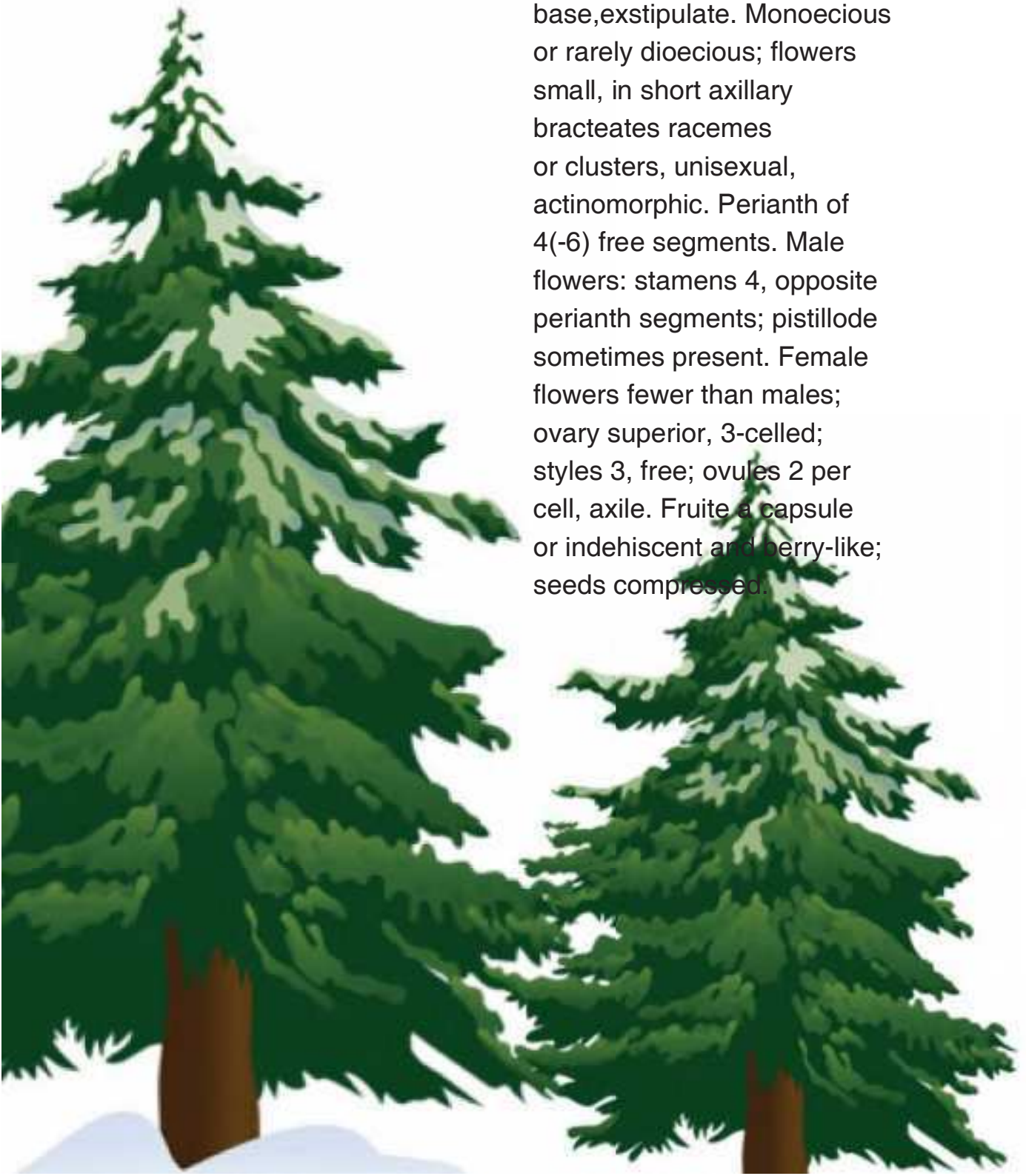
Habit: Evergreen shrub, **Status:** LC, **Habitat:** Mossy broad-leaved and Hemlock/Rhododendron forest & **Flowering:** May-June.



BUXACEAE

(Boxwood family)

Evergreen shrubs or small trees. Leaves alternate or opposite, simple entire, pinnately veined or 3-veined at base, exstipulate. Monoecious or rarely dioecious; flowers small, in short axillary bracteates racemes or clusters, unisexual, actinomorphic. Perianth of 4(-6) free segments. Male flowers: stamens 4, opposite perianth segments; pistillode sometimes present. Female flowers fewer than males; ovary superior, 3-celled; styles 3, free; ovules 2 per cell, axile. Fruit a capsule or indehiscent and berry-like; seeds compressed.



1. *Sarcococca* Lindley

Sarcococca hookeriana Baillon. Synm: *S.pruniformis* Lindley.
var. *hookeriana* (Baillon) Hook.

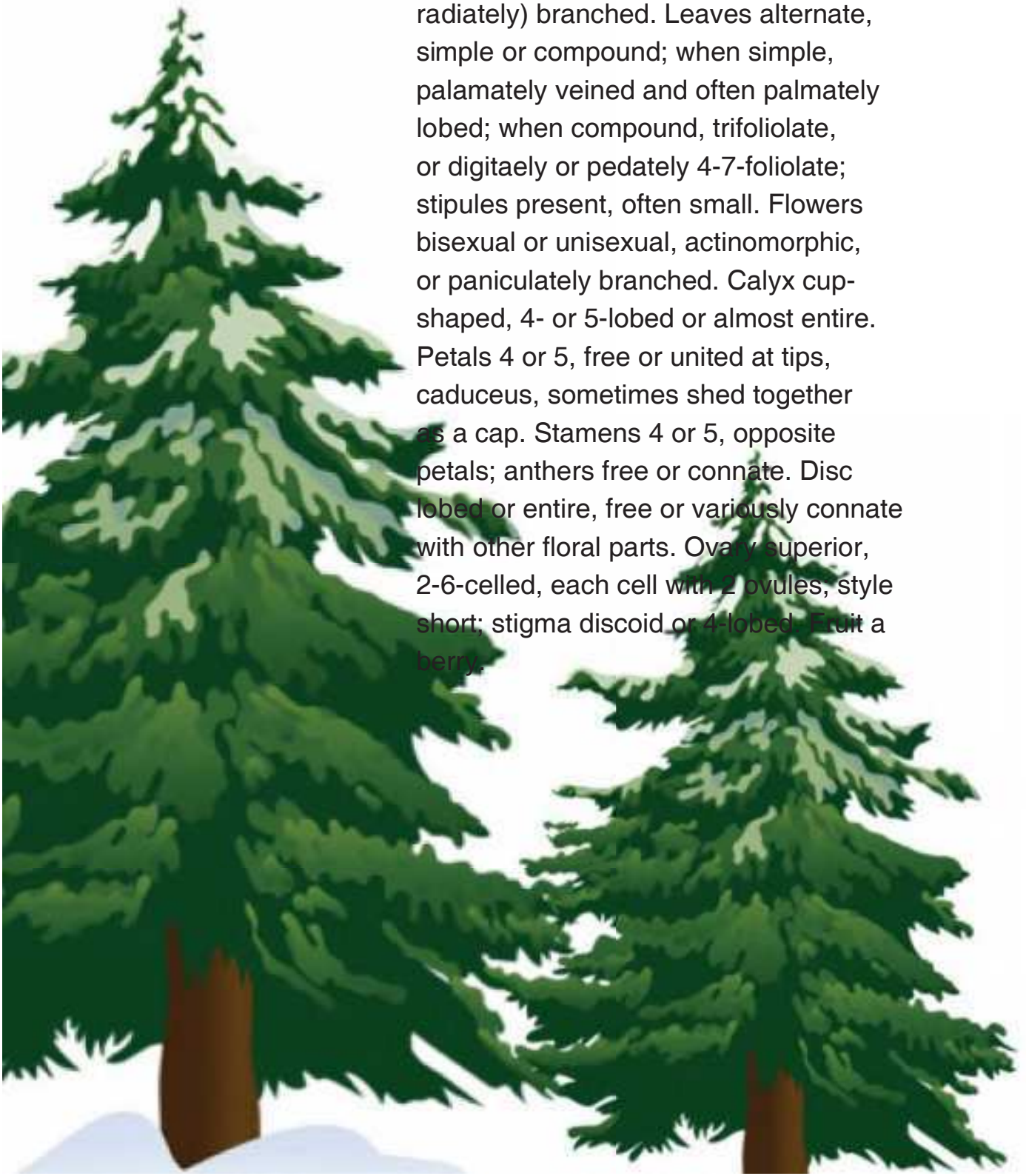
Habit: Shrub to 0.3-3m, **Status:** LC, **Habitat:** Shaded stream-sides and ravines in cool broad-leaved and Blue Pine forests & **Flowering:** March - June.



VITACEAE

(Vine family)

Climbing shrubs with tendrils, or rarely an erect herb without tendrils; tendrils leaf-opposed, sometimes also borne on peduncles, simple or dichotomously (rarely radiately) branched. Leaves alternate, simple or compound; when simple, palmately veined and often palmately lobed; when compound, trifoliolate, or digitately or pedately 4-7-foliolate; stipules present, often small. Flowers bisexual or unisexual, actinomorphic, or paniculately branched. Calyx cup-shaped, 4- or 5-lobed or almost entire. Petals 4 or 5, free or united at tips, caduceous, sometimes shed together as a cap. Stamens 4 or 5, opposite petals; anthers free or connate. Disc lobed or entire, free or variously connate with other floral parts. Ovary superior, 2-6-celled, each cell with 2 ovules; style short; stigma discoid or 4-lobed. Fruit a berry.



1. *Tetrastigma* (Miquel) Planch

Tetrastigma leucostaphylum (Dennst.) N.P.Balacr.

མུ་ལས་རུབ་སྐྱེ/ Maley roobje (Dzo), Kho-soo-ba-roo (Sha), Lasum (Trongsa), Krenpashui/ Zeyzeymai-ru (Kheng), Charchare (Nep)

Habit: Large deciduous climbing shrub, **Status:** LC, **Habitat:** Climbing on trees in warm broad-leaved forest & **Flowering:** May - July.



2. *Cyphostemma* (Planch) Alston

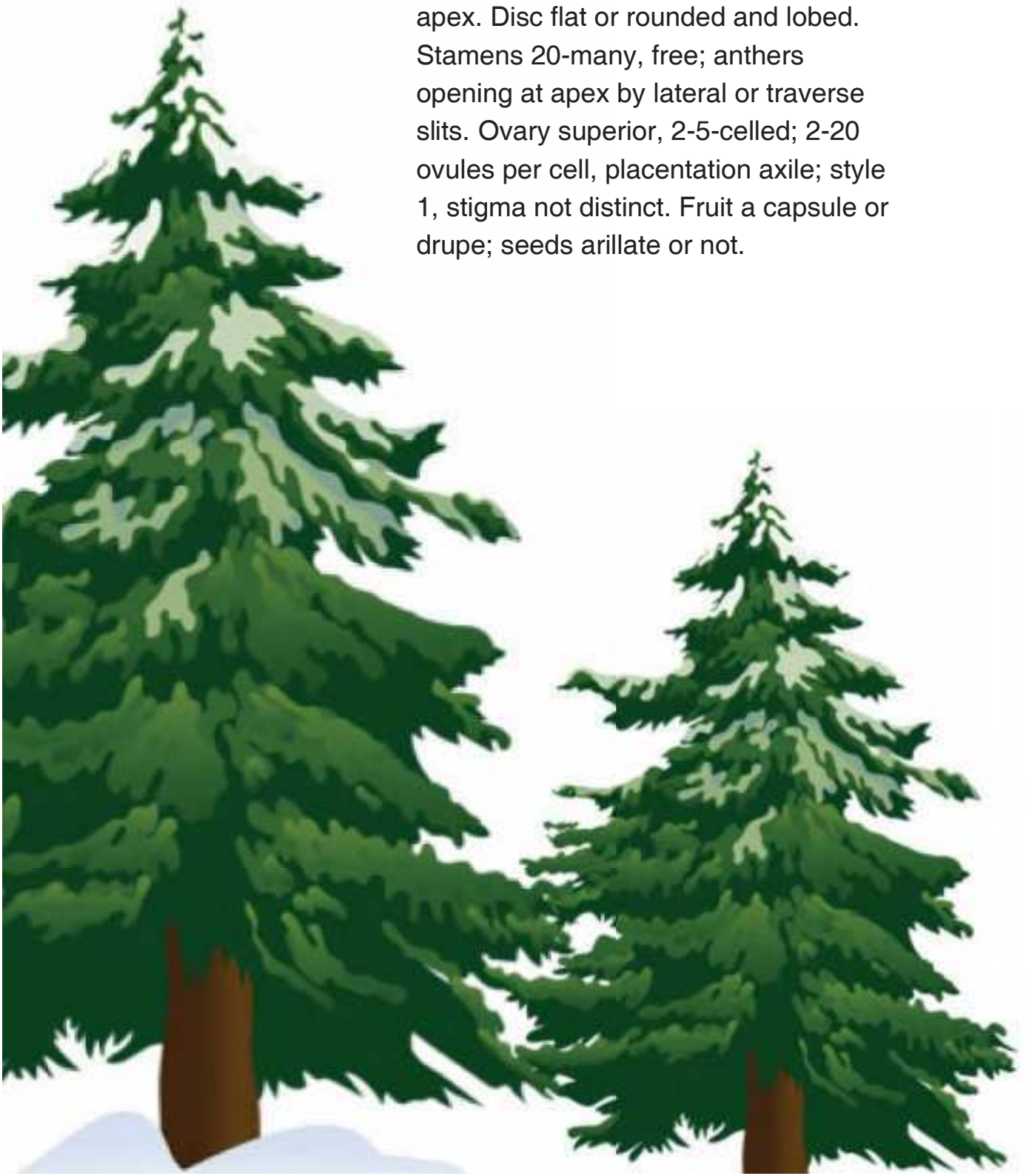
Cyphostemma auriculatum (Roxb) P. Singh & B.V.

Eared Cyphostemma (Eng). **Habit:** Large deciduous climbing shrub, **Status:** LC, **Habitat:** Climbing on trees in warm broad-leaved forest & **Flowering:** May - July.



ELAEOCARPACEAE

Trees. Leaves alternate, simple, pinnately veined, stipulate. Flowers axillary, in racemes, fascicles or solitary, bisexual, actinomorphic. Sepals 4-5, free or connate at base. Petals 4-5, rarely united at base, toothed or fimbriate at apex. Disc flat or rounded and lobed. Stamens 20-many, free; anthers opening at apex by lateral or traverse slits. Ovary superior, 2-5-celled; 2-20 ovules per cell, placentation axile; style 1, stigma not distinct. Fruit a capsule or drupe; seeds arillate or not.



1. *Sloanea* L.

Sloanea dasycarpa (Benth.) Hemsley. Synm: *Echnicarpus dasycarpus* Benth.

Gobre (Nep). **Habit:** Evergreen tree, 15-25m, **Status:** LC, **Habitat:** Warm broad-leaved and Evergreen Oak forest (Yongkola to Tsamang) & **Flowering:** September - November.



2. *Elaeocarpus*

Elaeocarpus lanceifolius Roxb.

ཀེལུ་ཀེལུ་ཤིང་/ Que-que shing (Dzo), Gasha Thung shing (Sha), Khasha kogpa (Med), Bhadrash (Nep). **Habit:** Tree 12-20m, **Status:** LC, **Habitat:** Warm broad-leaved and Evergreen Oak forest & **Flowering:** August - September.



Elaeocarpus varunua Masters.

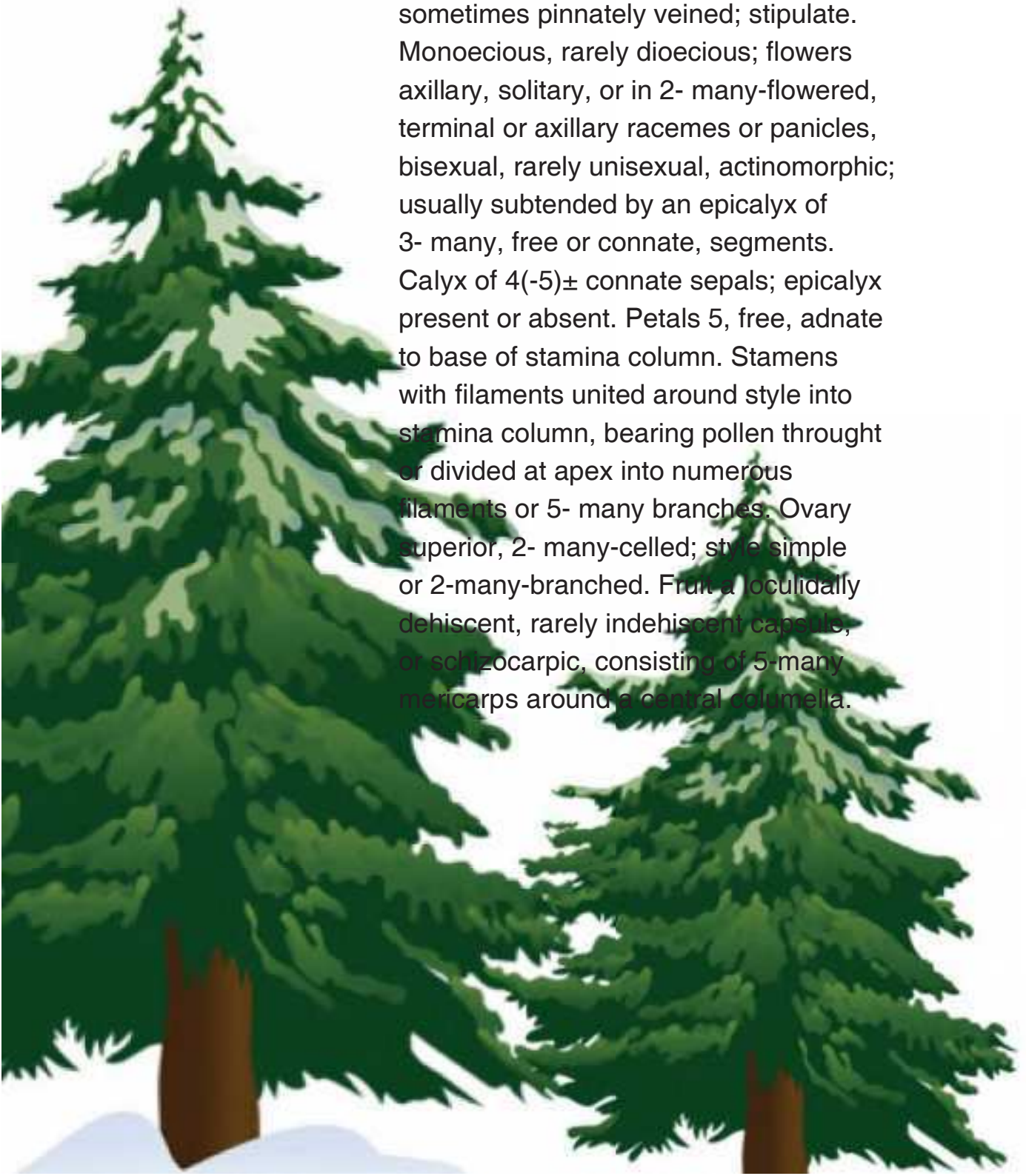
Habit: Tree 10-20m, **Status:** Unknown, **Habitat:** Cool broad-leaved and Evergreen Oak forest (Jarrey, Lhuentse) & **Flowering:** May.



MALVACEAE

(Mallow family)

Herbs, shrubs, trees, or climbers; indumentum usually stellate; stems often fibrous. Leaves alternate, simple or lobed, usually palmately 3-7-veined from base, sometimes pinnately veined; stipulate. Monoecious, rarely dioecious; flowers axillary, solitary, or in 2- many-flowered, terminal or axillary racemes or panicles, bisexual, rarely unisexual, actinomorphic; usually subtended by an epicalyx of 3- many, free or connate, segments. Calyx of 4(-5)± connate sepals; epicalyx present or absent. Petals 5, free, adnate to base of stamina column. Stamens with filaments united around style into stamina column, bearing pollen through or divided at apex into numerous filaments or 5- many branches. Ovary superior, 2- many-celled; style simple or 2-many-branched. Fruit a loculidally dehiscent, rarely indehiscent capsule, or schizocarpic, consisting of 5-many mericarps around a central columella.



1. *Abelmoschus* Medikus

Abelmoschus manihot (L.) Medikus, Synm: *Hibiscus pungens* Roxb.

Sweet Hibiscus/ Manihot-mallow (Eng). Sey-gi-metog (Dzo), Seyr-metog (Sha). **Habit:** Erect herb, 0.5-1m, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** August - December.



2. *Malva* L.

Malva verticillata L.

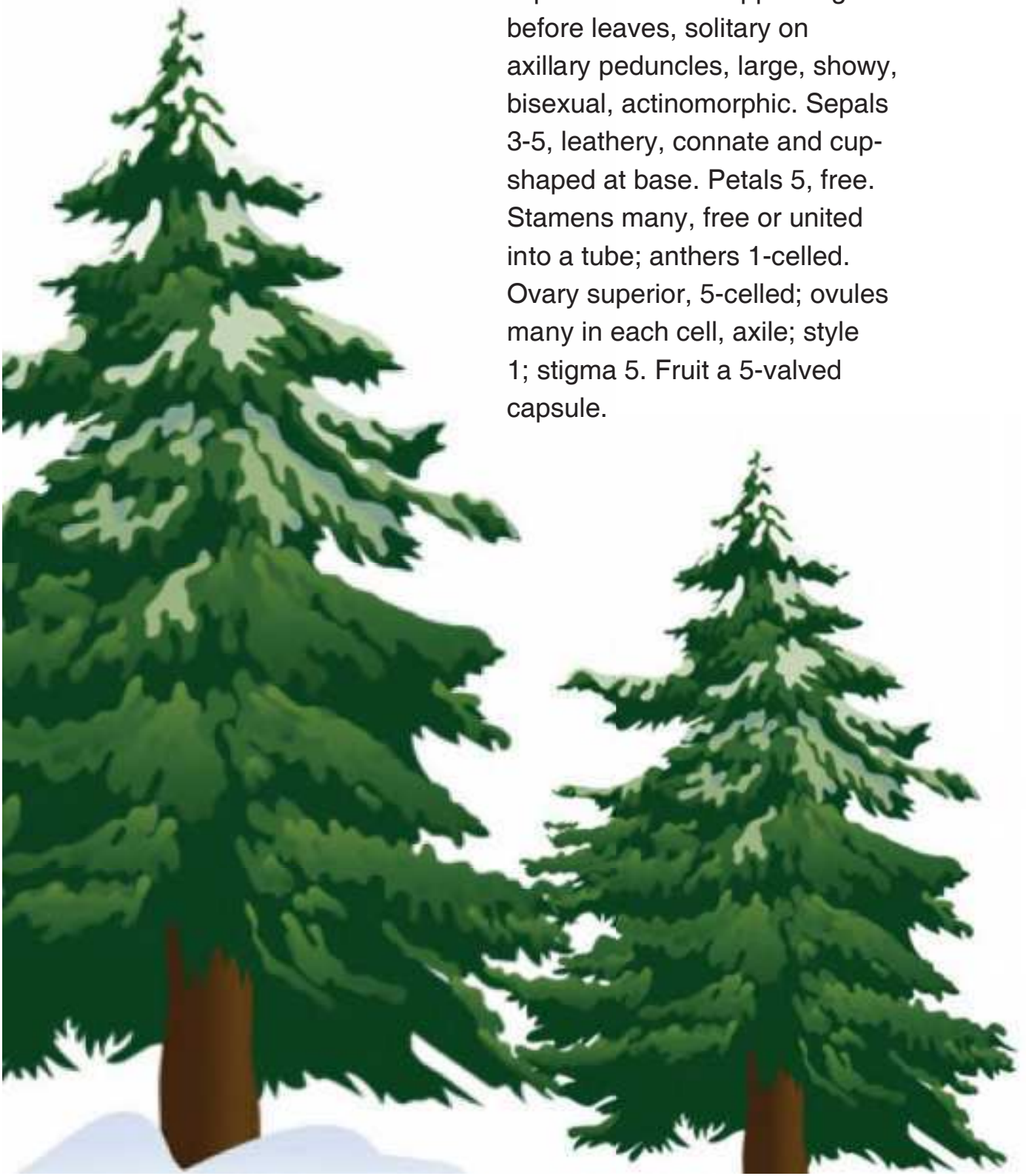
Niga (Med). **Habit:** Annual or biennial herb; stems erect to 1m, **Status:** LC, **Habitat:** Waste ground & **Flowering:** July - October.



BOMBACACEAE

(Baobab family)

Deciduous trees, often with stellate hairs or peltatescales. Leaves alternate, digitately compound, stipulate. Flowers appearing before leaves, solitary on axillary peduncles, large, showy, bisexual, actinomorphic. Sepals 3-5, leathery, connate and cup-shaped at base. Petals 5, free. Stamens many, free or united into a tube; anthers 1-celled. Ovary superior, 5-celled; ovules many in each cell, axile; style 1; stigma 5. Fruit a 5-valved capsule.



1. *Bombax* L.

Bombax ceiba L. Synm: *B.malabaricum* DC., *Salmalia malabarica* (DC.) Schott & Endlicher.

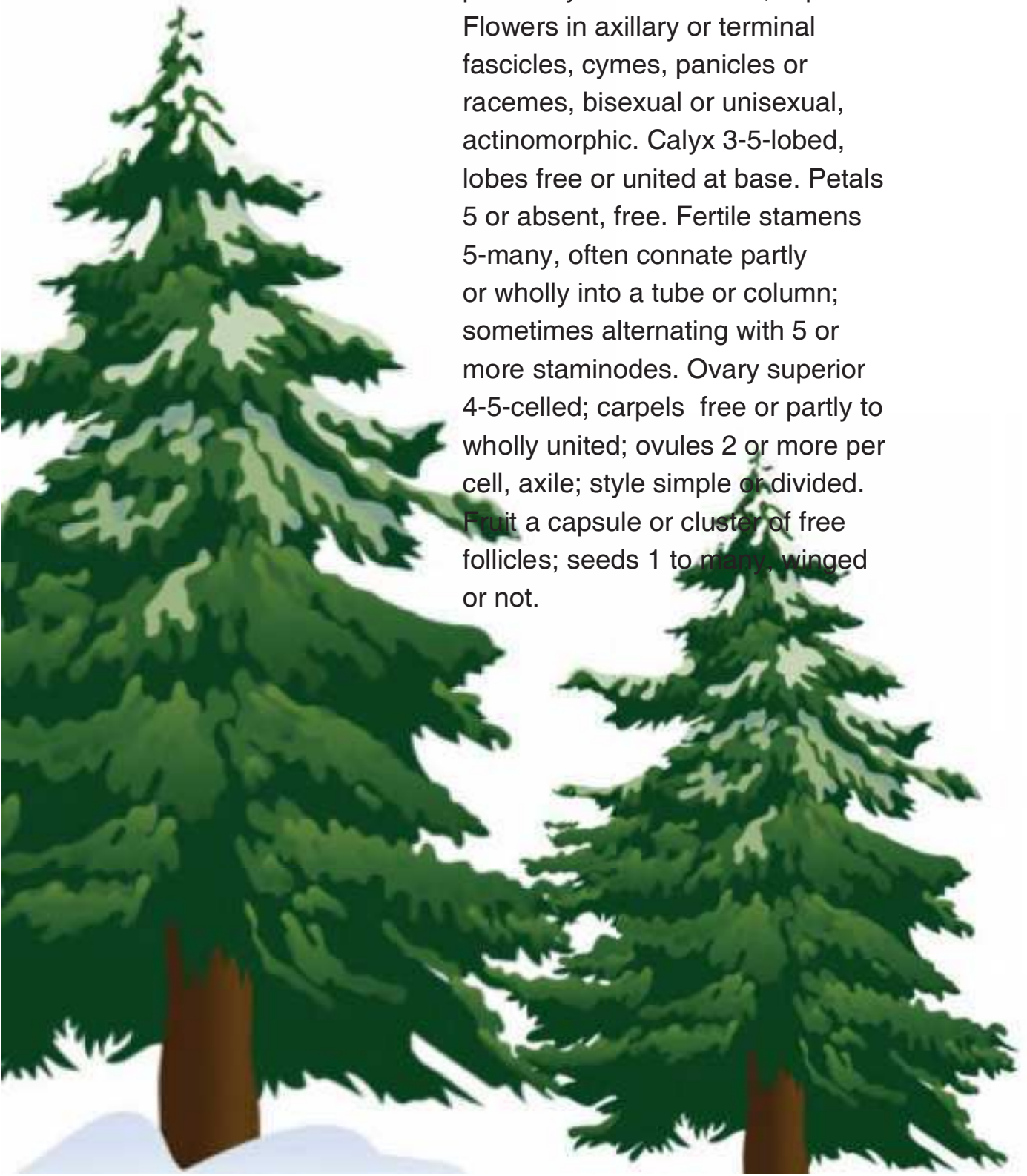
Red Cotton Tree/ Kapok Tree (Eng). ཕལྷ་དགོ་གསར་/ Pema-Geysar (Dzo/Med), Pema Gesar shing (Sha), Pem Geysar seng (Ura), Semal/ Simul (Nep), Semal (Hindi). **Habit:** Large tree to 30m, **Status:** LC, **Habitat:** Sub-tropical forest and dry hillsides in Chirpine forest & **Flowering:** January - February.



STERCULIACEAE

(Cacao family)

Trees, shrubs or woody climbers, often with stellate hairs. Leaves alternate, simple, sometimes lobed, often palmately veined at base, stipulate. Flowers in axillary or terminal fascicles, cymes, panicles or racemes, bisexual or unisexual, actinomorphic. Calyx 3-5-lobed, lobes free or united at base. Petals 5 or absent, free. Fertile stamens 5-many, often connate partly or wholly into a tube or column; sometimes alternating with 5 or more staminodes. Ovary superior 4-5-celled; carpels free or partly to wholly united; ovules 2 or more per cell, axile; style simple or divided. Fruit a capsule or cluster of free follicles; seeds 1 to many, winged or not.



1. *Sterculia* L.

Sterculia villosa Smith.

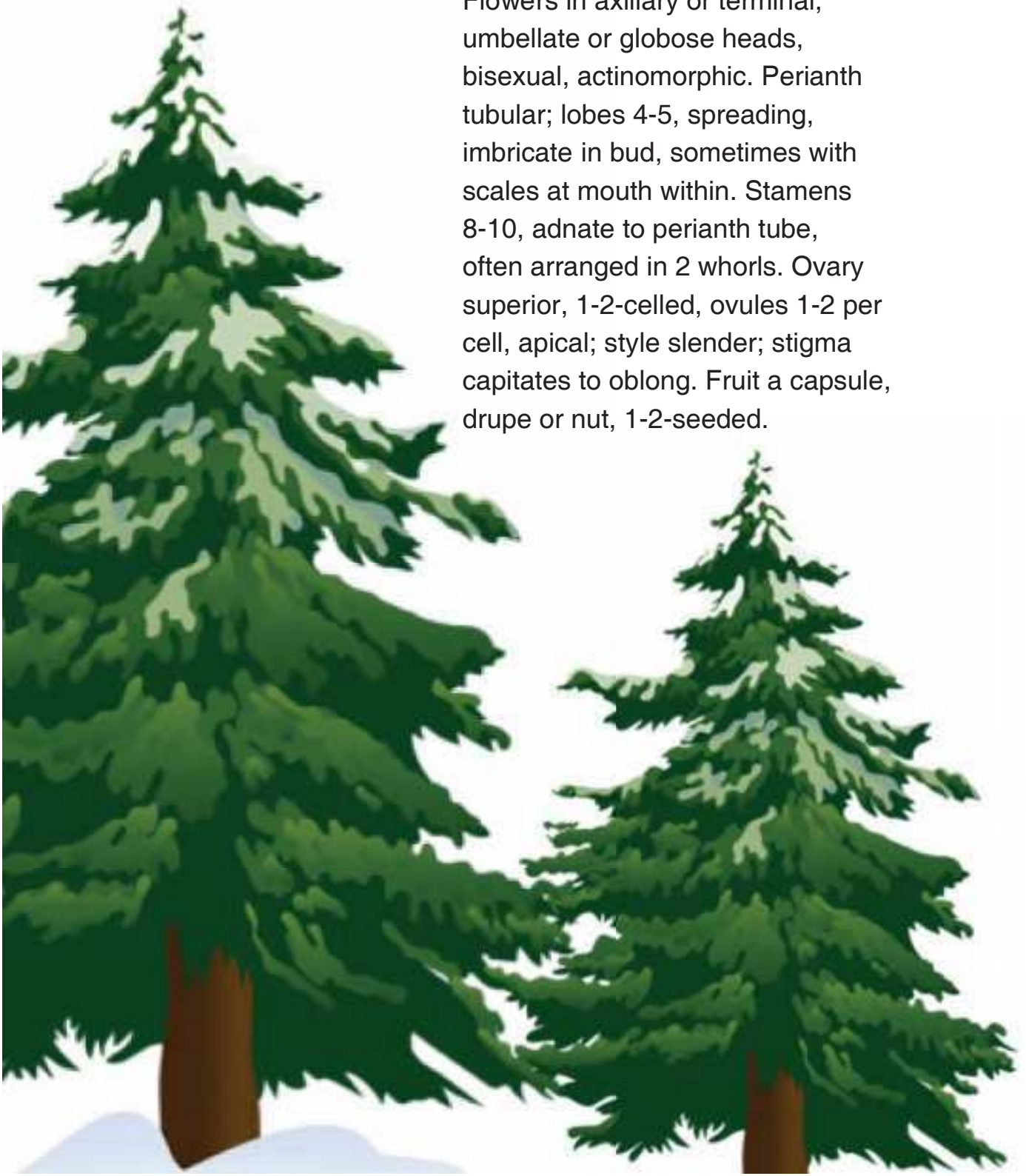
Phrang shing (Sha), Odal (Nep). **Habit:** Tree to 10-15m, **Status:** LC, **Habitat:** Sub-tropical and dry Chirpine forest & **Flowering:** January - March.



THYMELAECEAE

(Daphne family)

Shrubs or trees, rarely herbs, with tough fibrous inner bark. Leaves alternate, simple, pinnately veined, entire, exstipulate. Flowers in axillary or terminal, umbellate or globose heads, bisexual, actinomorphic. Perianth tubular; lobes 4-5, spreading, imbricate in bud, sometimes with scales at mouth within. Stamens 8-10, adnate to perianth tube, often arranged in 2 whorls. Ovary superior, 1-2-celled, ovules 1-2 per cell, apical; style slender; stigma capitate to oblong. Fruit a capsule, drupe or nut, 1-2-seeded.



1. *Daphne* L.

Daphne bholua D.Don. Synm: *D.cannabina* Lourerio var. *bholua*

ལྷས་ཤོག་ཤིང་/ལྷས་ནག་པོ།/Dhey shing/Dhey nap (Dzo), Shogo shing (Sha), Shogshing Aarnag (Med), Shrog-khegsang (Ura), Kagate (Nep)

Habit: Shrub 1-3m, **Status:** Unknown, **Habitat:** Evergreen Oak, Hemlock, Blue Pine, Spruce and Fir forests & **Flowering:** February - May.



Daphne sureil W.W.Smith & Cave.

Habit: Ground level shrub, **Status:** Not assessed, **Habitat:** Warm broad-leaved forest & **Flowering:** October - November.



Daphne ludlowii Long & Rae.

Habit: Shrub (20-30 cm), **Status:** Endemic to Bhutan (Endemic to PNP), **Habitat:** Mixed Rhododendron, Hemlock & Spruce Forest (3350-3580 M), **Flowering:** May.



ELAEGNACEAE

(Oleaster family)

Trees or shrubs, mostly silvery, yellow or brown scales, sometimes spiny.

Leaves usually coriaceous, simple, alternate, pinnately veined, petiolate; stipules absent. Monoecious or dioecious; flowers solitary or in clusters or racemes, actinomorphic, bisexual or unisexual. Sepals 2-8, united. Petal absent. Stamens 4-8, inserted on calyx, free. Ovary superior, 1-celled; style elongated. Fruit drupe-like, indehiscent, containing a single stone.



1. *Elaeagnus* L.

Elaeagnus caudata Momiyama.

Goeli/ Malindo (Nep). **Habit:** Strangling shrub, **Status:** Unknown, **Habitat:** Warm broad-leaved forest & **Flowering:** January - February.



Elaeagnus parvifolia Royle. Synm: *E.umbellata* Thunberg.

Autumn Olive (Eng). སྒྲི/ Bji (Dzo), Dhangboor-zoo/ Dhangboor-say (Sha), Dhamarib (Ura), Gweli (Nep). **Habit:** Spiny shrub, 1-5m, **Status:** Unknown, **Habitat:** Roadsides and stream banks in dry valleys, among scrub or in Blue Pine forest & **Flowering:** March - June.



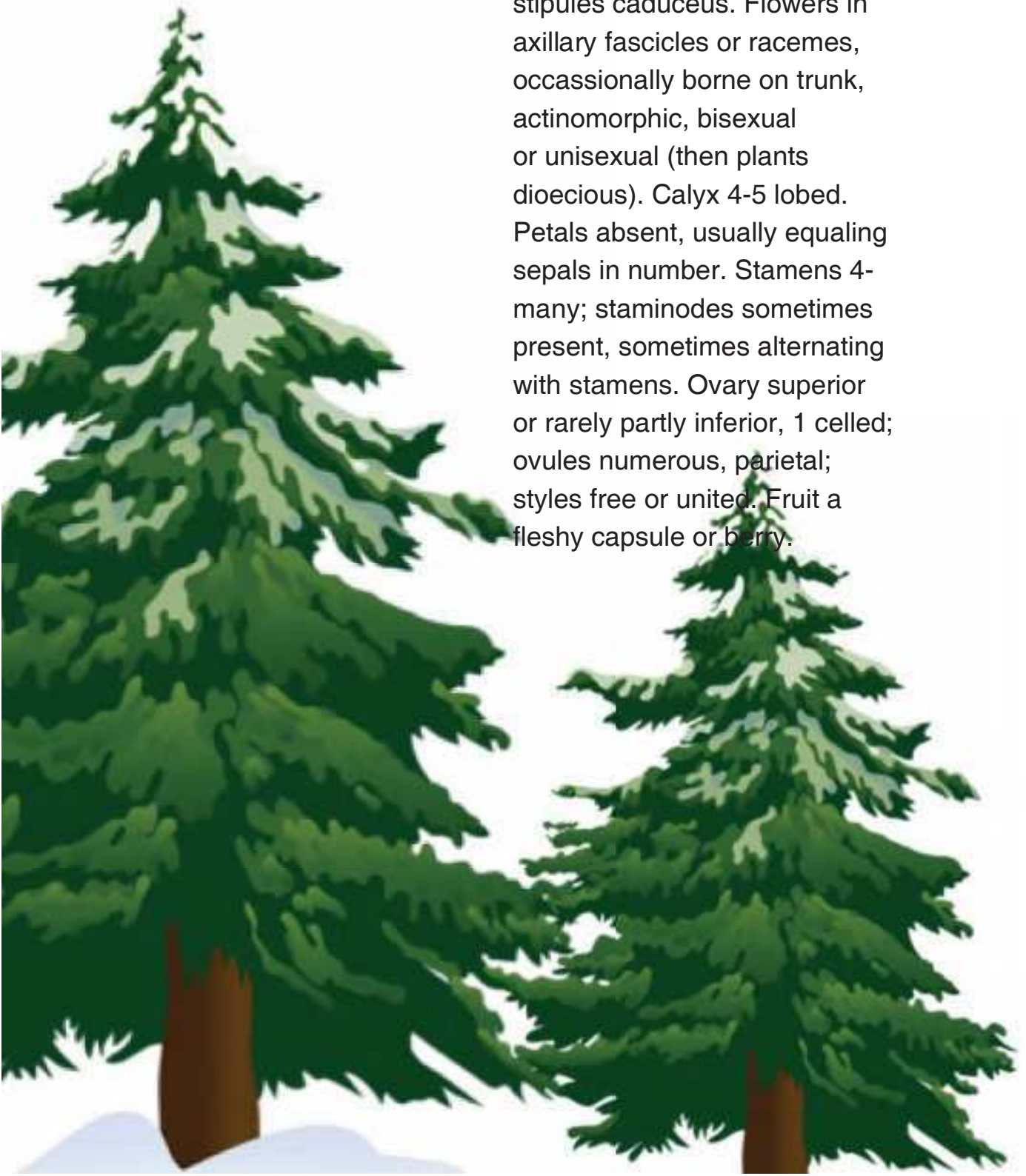
Hippophae salicifolia D.Don.

Willow-leaved Seabuckthorn (Eng). སྒྲར་རྩི/སྒྲར་རྩེ་ཀའུམ་/ Tare/ Tari Caum (Dzo), Tey seng (Bumthang), Tarbu (Med). **Habit:** Shrub 2-3m, **Status:** , **Habitat:** Moist gravel or stony areas, often besides rivers or streams & **Flowering:** April - July.



FLACOURTIACEAE

Trees and Shrubs, sometimes spiny on trunk or branches. Leaves simple, alternate, usually distichous, pinnately veined, entire, crenate or serrate; stipules caduceous. Flowers in axillary fascicles or racemes, occasionally borne on trunk, actinomorphic, bisexual or unisexual (then plants dioecious). Calyx 4-5 lobed. Petals absent, usually equaling sepals in number. Stamens 4-many; staminodes sometimes present, sometimes alternating with stamens. Ovary superior or rarely partly inferior, 1 celled; ovules numerous, parietal; styles free or united. Fruit a fleshy capsule or berry.



1. *Casearia* Jacquin

Casearia glomerata Roxb.

Barkaunle (Nep). **Habit:** Shrub or tree to 10m, **Status:** Unknown, **Habitat:** Mixed evergreen and Warm broad-leaved forests & **Flowering:** April - May.



2. *Itoa* Hemsley

Itoa orientalis Hemsley. Synm: *Carrierea vieillardii* Gagnep., *Mesaulosperma vieillardii* Slooten.

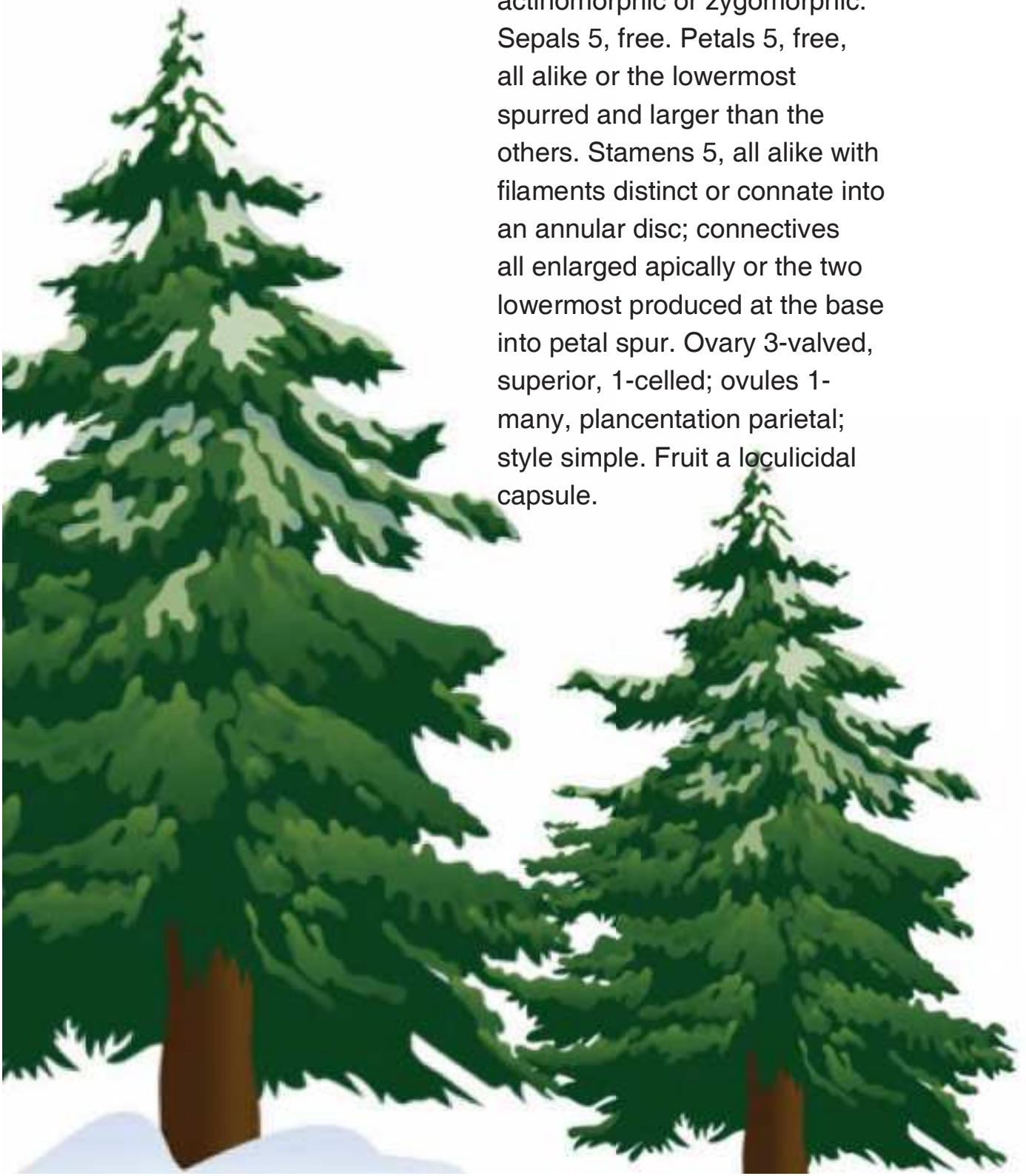
Golong nang shing (Sha). **Habit:** Deciduous tree, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** May.



VIOLACEAE

(Violet family)

Herbs, shrubs or small trees. Leaves alternate, simple, stipulate. Flowers solitary or fasciculate, bisexual, actinomorphic or zygomorphic. Sepals 5, free. Petals 5, free, all alike or the lowermost spurred and larger than the others. Stamens 5, all alike with filaments distinct or connate into an annular disc; connectives all enlarged apically or the two lowermost produced at the base into petal spur. Ovary 3-valved, superior, 1-celled; ovules 1-many, placentation parietal; style simple. Fruit a loculicidal capsule.



1. *Viola* L.

Viola biflora L. Synm: *V. reniformis*

Yellow Wood Violet (Eng). **Habit:** Perennial herb with nodular rootstock, nodes rounded, pale, estoloniferous, **Status:** LC, **Habitat:** In damp, shaded margins of Spruce and Fir forests and road side drains & **Flowering:** May – July.



Viola bhutanica Hara.

Baree (Ura). **Habit:** Estoloniferous perennial herb, **Status:** LC, **Habitat:** Damp, wooded banks & **Flowering:** May - June.



Viola tricolor L.

Heartsease/ Love-in-idleness (Eng), Rigsum metog (Kurtoed/ Kheng)

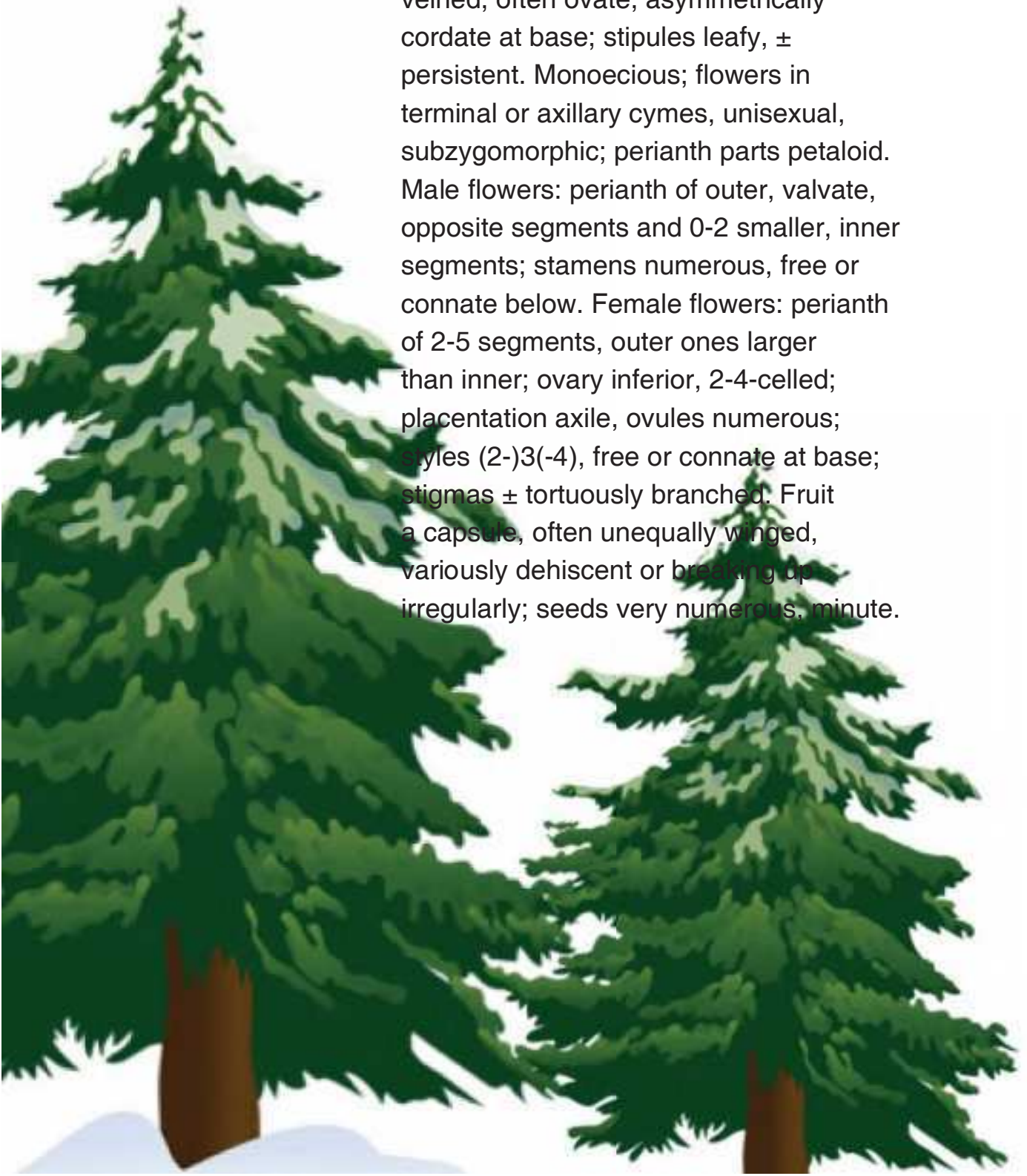
Habit: Perennial herb, **Status:** Not evaluated (cultivated), **Habitat:** Cultivated in flower pots and gardens & **Flowering:** May – September.



BEGONIACEAE

(Begonia family)

Succulent herbs; rootstocks tuberous or rhizomatous; stemless or stemmed. Leaves alternate, simple, palmately or pinnately veined, often ovate, asymmetrically cordate at base; stipules leafy, \pm persistent. Monoecious; flowers in terminal or axillary cymes, unisexual, subzygomorphic; perianth parts petaloid. Male flowers: perianth of outer, valvate, opposite segments and 0-2 smaller, inner segments; stamens numerous, free or connate below. Female flowers: perianth of 2-5 segments, outer ones larger than inner; ovary inferior, 2-4-celled; placentation axile, ovules numerous; styles (2-)3(-4), free or connate at base; stigmas \pm tortuously branched. Fruit a capsule, often unequally winged, variously dehiscent or breaking up irregularly; seeds very numerous, minute.



1. *Begonia* L.

Begonia josephii A.DC.

Habit: Rootstock tuberous, **Status:** LC, **Habitat:** Moist rocks in shady situations & **Flowering:** July – September.



Begonia hatacoa D.Don.

Habit: Herb, **Status:** Unknown, **Habitat:** Streamsides in warm broad-leaved forest & **Flowering:** July.



Begonia annulata K.Koch.

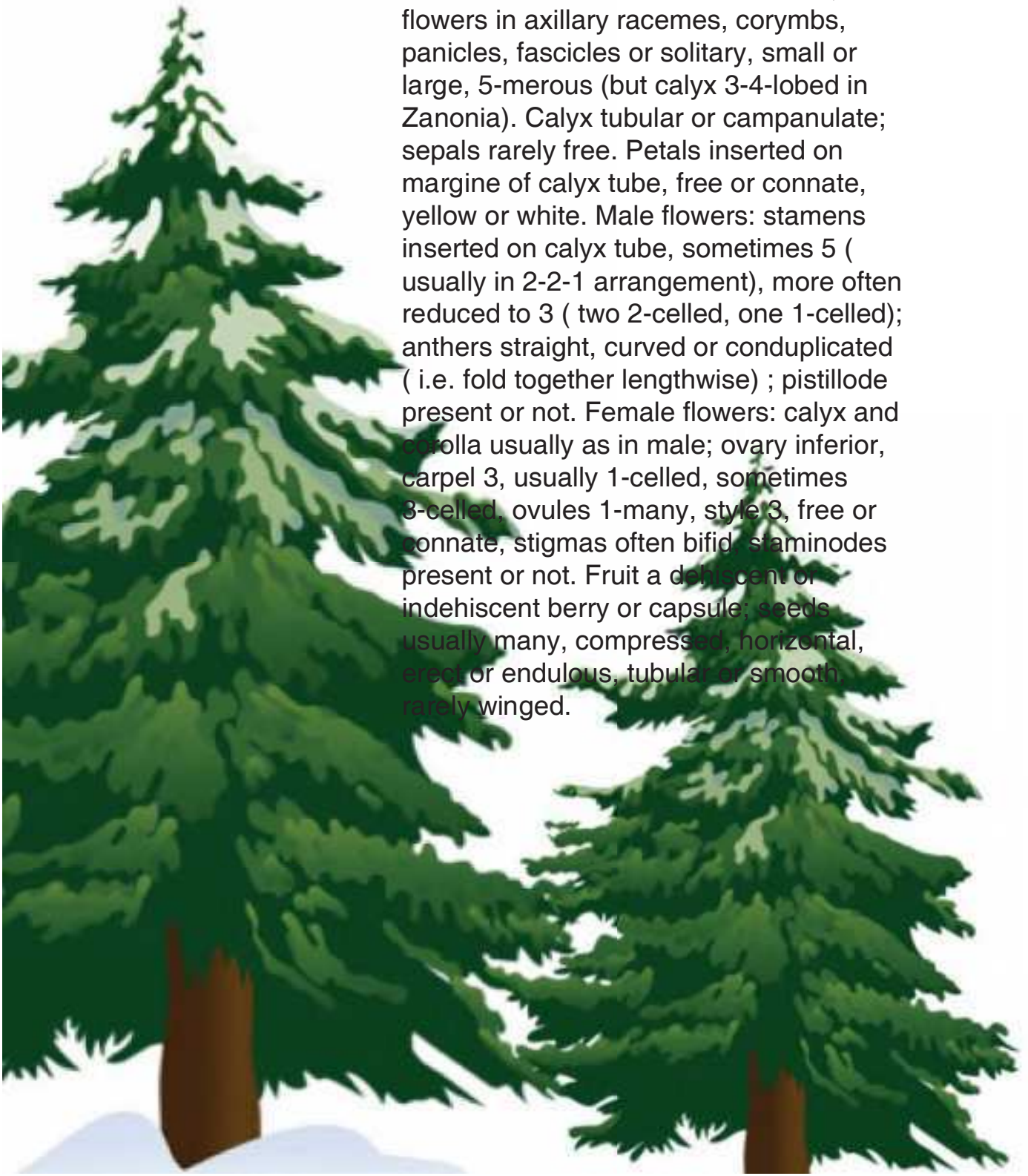
Habit: Herb, **Status:** , **Habitat:** Rocky areas in Warm broad-leaved forest & **Flowering:** .



CUCURBITACEAE

(Gourd or Cucumber family)

Climbing or trailing herbs or subshrubs. Leaves alternate, simple, palmately or pedately lobed, or compound, exstipulate; tendrils axillary, solitary, simple or branched. Monoecious or dioecious; flowers in axillary racemes, corymbs, panicles, fascicles or solitary, small or large, 5-merous (but calyx 3-4-lobed in Zanonina). Calyx tubular or campanulate; sepals rarely free. Petals inserted on margin of calyx tube, free or connate, yellow or white. Male flowers: stamens inserted on calyx tube, sometimes 5 (usually in 2-2-1 arrangement), more often reduced to 3 (two 2-celled, one 1-celled); anthers straight, curved or conduplicate (i.e. fold together lengthwise); pistillode present or not. Female flowers: calyx and corolla usually as in male; ovary inferior, carpel 3, usually 1-celled, sometimes 3-celled, ovules 1-many, style 3, free or connate, stigmas often bifid, staminodes present or not. Fruit a dehiscent or indehiscent berry or capsule; seeds usually many, compressed, horizontal, erect or endulous, tubular or smooth, rarely winged.



1. *Herpetospermum* Hook. f.

Herpetospermum pedunculatum (Seringe) Clarke. Synm:
H. caudigerum

Sergi Metog (Med). **Habit:** Climbing herbs, **Status:** LC,
Habitat: On river banks & **Flowering:** August – October.



LYTHRACEAE

(Loosestrife family)

Anual or perennial herbs, shrubs or trees. Leaves opposite, often decussate, or whorled, simple, entire, pinnately veined, exstipulate or minute stipules (lagerstroemia). Flowers solitary or in clusters in leaf or bracts axils, often forming terminal racemes, spikes or panicles, bisexual, actinomorphic or weakly zygomorphic. Floral parts perigynous. Calyx tubular at base, 4-6-lobed, often persistent. Petals 4 or 6, free, borne on rim of calyx tube, sometimes minute or absent. Stamens 4- 12 or many, inserted within calyx tube. Ovary superior, 2-6-celled, base attached to calyx tube and surrounded by an annular nectary disc; style 1, slender; stigma capitate; ovules numerous, axile. Fruit a capsule, dehiscent by valves, sometimes circumscissile or irregularly fragmenting, usually subtended or enclosed by persistent calyx, seeds many.



1. *Lagerstroemia* L.

Lagerstroemia hirsuta (Lamarck) Wildenow. Synm: *L. reginae* Roxb., *L. flos-reginae* Retzius.

དོང་ཀ་ཤིང་/Dhongka shing (Dzo), Buram shing (Sha), Jarul (Nep)

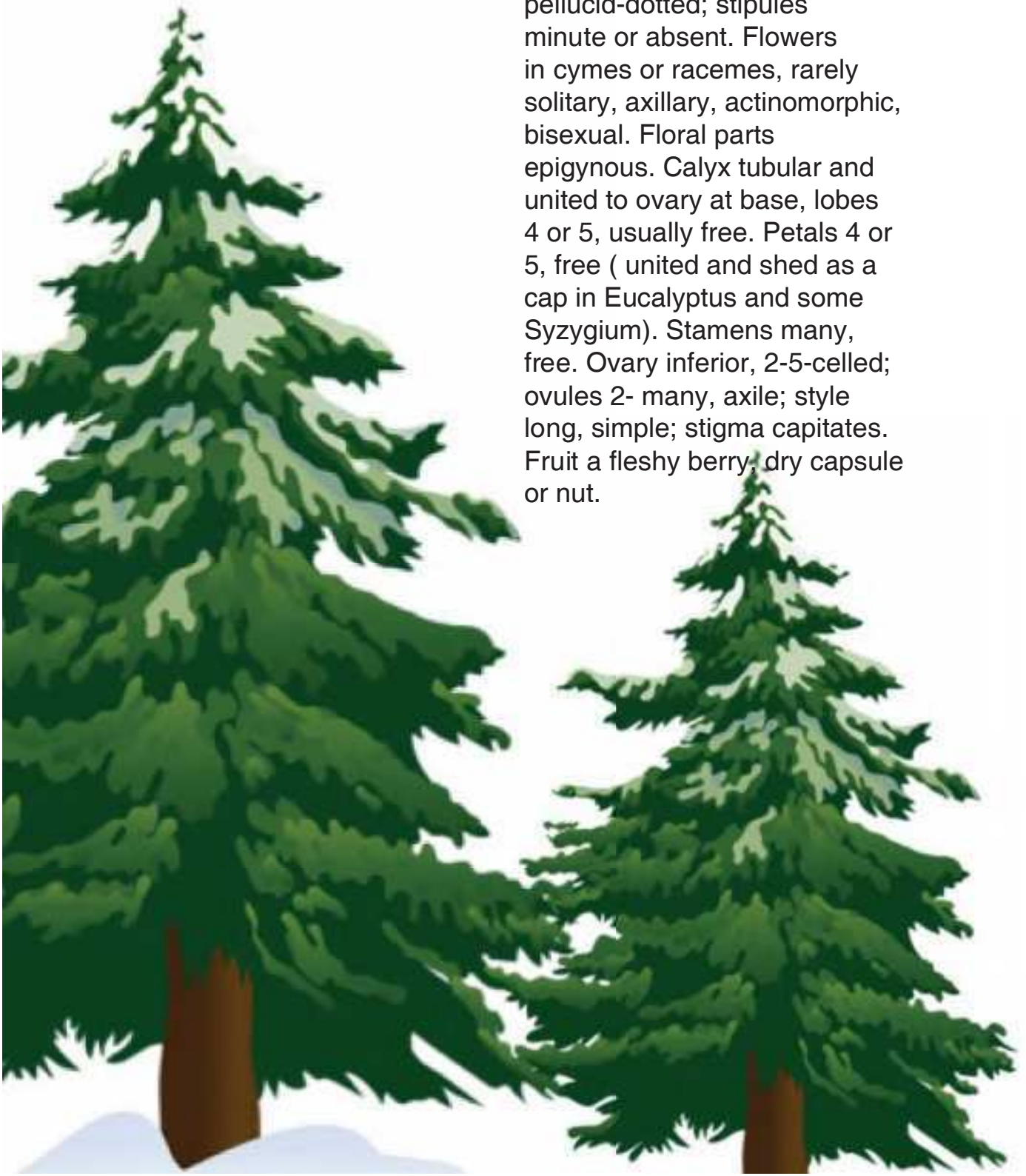
Habit: Tree 6-10m, **Status:** Not evaluated (cultivated), **Habitat:** Planted as avenue plants in Sub-tropical forest & **Flowering:** May - July.



MYRTACEAE

(Myrtle family)

Evergreen trees or shrubs. Leaves leathery, opposite or alternate, rarely in whorls of 3, entire, pinnately veined, usually pellucid-dotted; stipules minute or absent. Flowers in cymes or racemes, rarely solitary, axillary, actinomorphic, bisexual. Floral parts epigynous. Calyx tubular and united to ovary at base, lobes 4 or 5, usually free. Petals 4 or 5, free (united and shed as a cap in *Eucalyptus* and some *Syzygium*). Stamens many, free. Ovary inferior, 2-5-celled; ovules 2- many, axile; style long, simple; stigma capitate. Fruit a fleshy berry, dry capsule or nut.



1. *Syzygium* Gaertner

Syzygium sp.

Phui Pamneyla (Kheng). **Habit:** Tree, **Status:** Unknown, **Habitat:** Warm broad-leaved forest.



2. *Psidium* L.

Psidium guajava L. **Guava**(Eng)

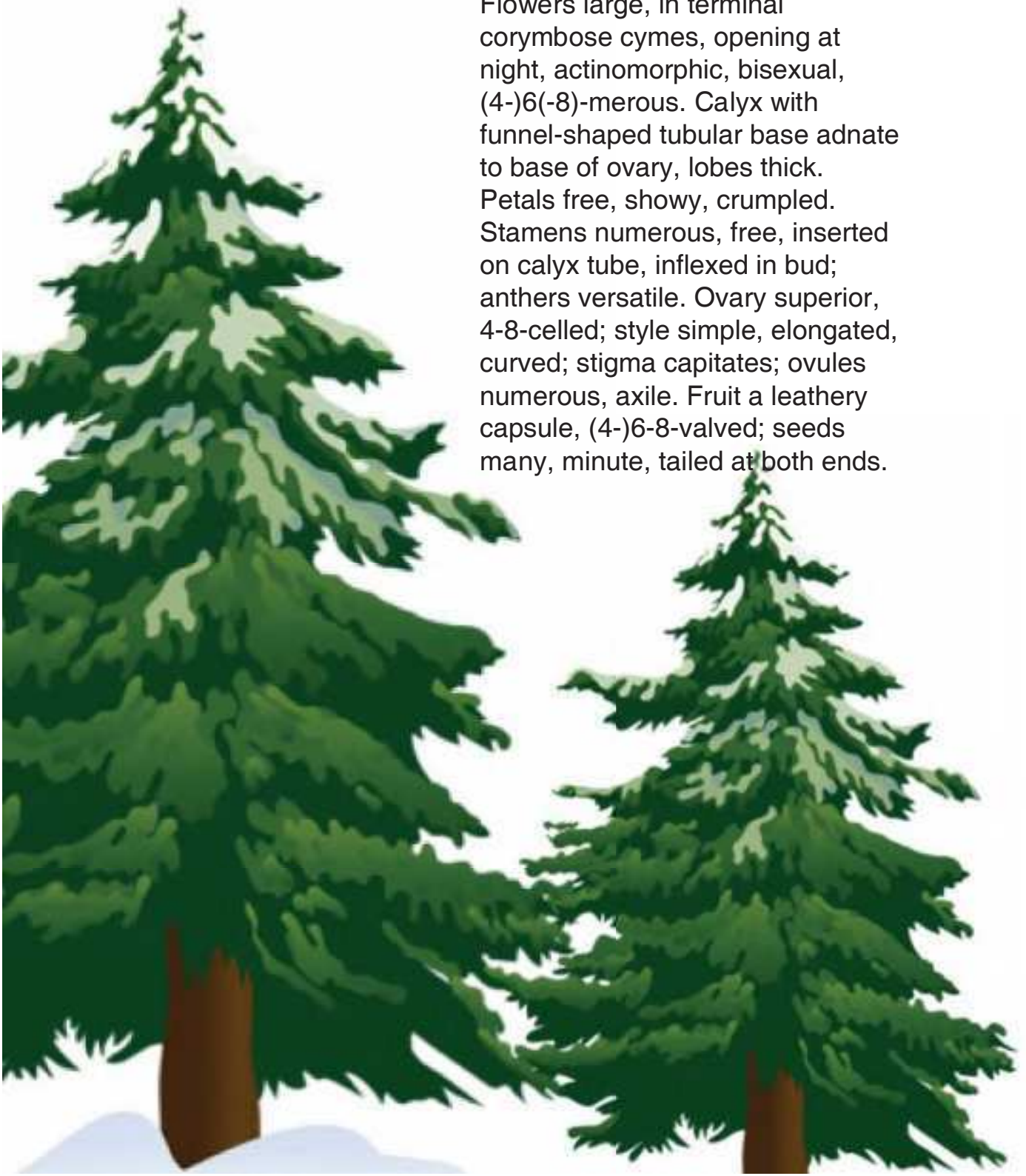
Beppasive (Sha), Bepseu (Ura), Ambak (Nep). **Habit:** Large shrub or small to 10m, **Status:** Not evaluated (cultivated), **Habitat:** Orchard plantations in Sub-tropical region & **Flowering:** April – July.



SONNERATIACEAE

(Crape Myrtle family)

Large evergreen glabrous trees; trunk often buttressed. Leaves opposite, borne in one plane, simple, pinnately veined, entire, exstipulate. Flowers large, in terminal corymbose cymes, opening at night, actinomorphic, bisexual, (4-)6(-8)-merous. Calyx with funnel-shaped tubular base adnate to base of ovary, lobes thick. Petals free, showy, crumpled. Stamens numerous, free, inserted on calyx tube, inflexed in bud; anthers versatile. Ovary superior, 4-8-celled; style simple, elongated, curved; stigma capitate; ovules numerous, axile. Fruit a leathery capsule, (4-)6-8-valved; seeds many, minute, tailed at both ends.



1. *Duabanga* Hamilton

Duabanga grandiflora (DC.) Walpers. Synm: *D. sonneratioides* Hamilton.

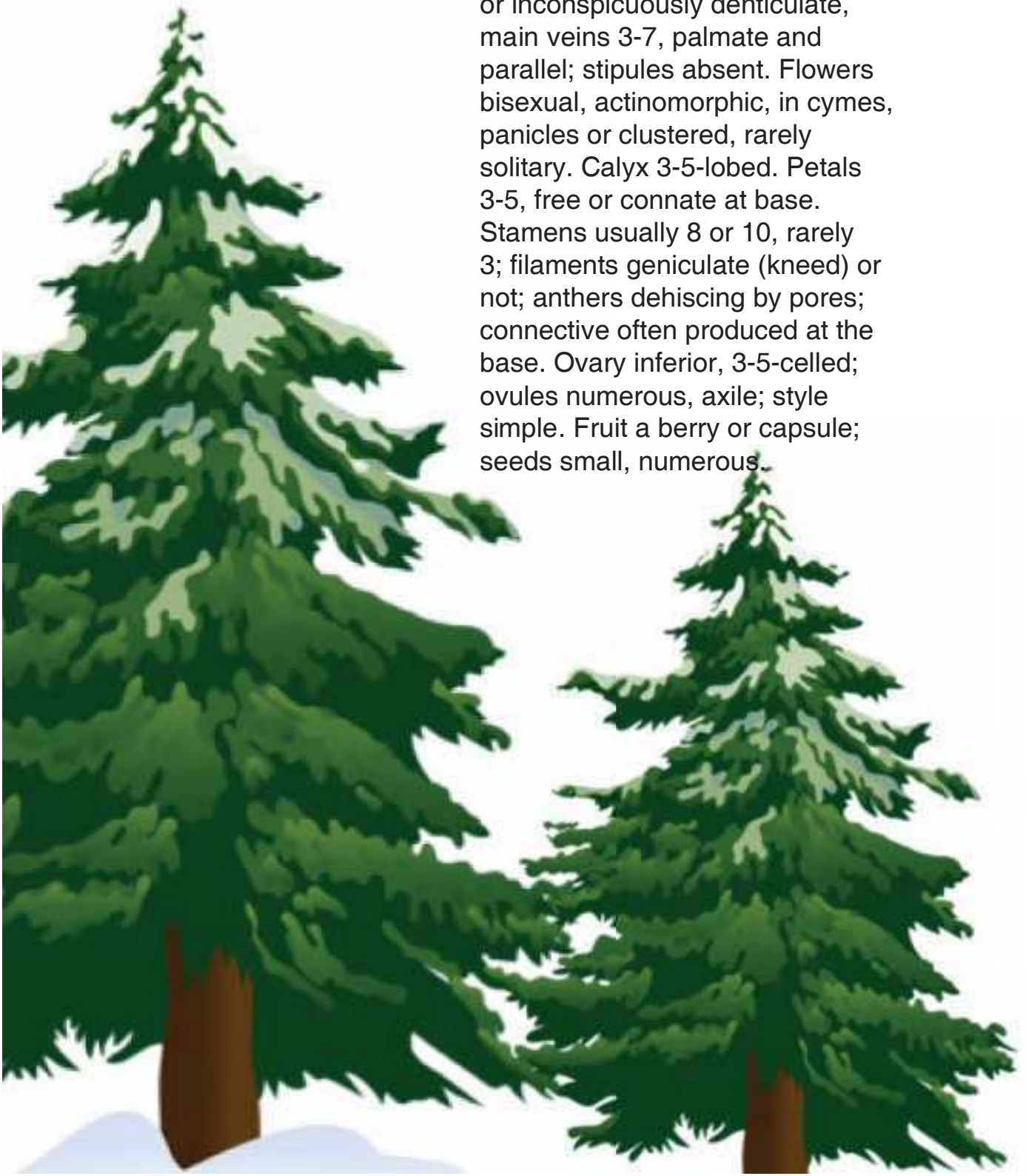
པ་ཏང་ཤིང་/Patang shing (Dzo), Bakala shing/ Grandangla shing (Sha), Lampate (Nep). **Habit:** Tree 20-30m, **Status:** LC, **Habitat:** Deep valleys and river banks in Sub-tropical forests & **Flowering:** December – March.



MELASTOMACEAE

(Melastome family)

Shrubs or herbs; indumentum of sellate, scale-like or simple hairs. Leaves opposite, decussate, rarely alternate by abortion, sessile or petiolate, entire or inconspicuously denticulate, main veins 3-7, palmate and parallel; stipules absent. Flowers bisexual, actinomorphic, in cymes, panicles or clustered, rarely solitary. Calyx 3-5-lobed. Petals 3-5, free or connate at base. Stamens usually 8 or 10, rarely 3; filaments geniculate (kneel) or not; anthers dehiscing by pores; connective often produced at the base. Ovary inferior, 3-5-celled; ovules numerous, axile; style simple. Fruit a berry or capsule; seeds small, numerous.



1. *Osbeckia* L.

Osbeckia stellata Ker-Gawler var. *stellata*, Synm: *O. sikkimensis* Craib.

Starry Osbeckia (Eng).
Ardongmo shing (Sha), Lal
angeri (Nep)

Habit: Perennial herb or
shrub 60-100 (-300)cm,

Status: LC, **Habitat:** In
grassland and clearings in
warm broad-leaved forests &
Flowering: August – October.



2. *Melastoma* L.

Melastoma normale D. Don. Synm: *M. malabathricum* (L.)
Smith subsp. *normale*.

Himalayan Melastome (Eng), Tekaling shing (Sha), Domcha
(Kheng), Angarey. **Habit:** Bushy shrub up to 4m, **Status:** LC,
Habitat: Among shrubs and on forest margins & **Flowering:**
December – June.



3. *Oxyspora* A.DC.

Oxyspora paniculata (D.Don) DC., Synm: *Arthrostemma paniculatum* D.Don.

Bristletips (Eng), Mizuma laga (Sha), Tulasi (Nep).

Habit: Shrub up to 2.5m, **Status:** LC, **Habitat:** Among shrubs in Sub-tropical forests & **Flowering:** August – October.



4. *Medinilla* Gaudichaud-Beaupre

Medinilla himalayana Hook.f.

Habit: Pendulous shrub, **Status:** Unknown **Habitat:** Warm broad-leaved forests (Norbugang - Namling)



COMBRETACEAE

(Rangoon Creeper family)

Trees, shrubs (often climbing) or subshrubs. Leaves alternate, opposite or whorled, simple, usually entire, petiolate, sometimes with glands at base of lamina or on petiole; stipules absent. Flowers in spikes, often arranged as a panicle, or in globose heads, bisexual, upper flowers sometimes male. Calyx 4- or 5-lobed; tube adnate to ovary, upper part breaking off after anthesis. Petals 4 or 5 or absent. Stamens twice number of calyx lobes; anthers usually versatile. Disc present or absent. Ovary inferior, 1-celled; style simple. Fruit indehiscent or dehiscent, 1-seeded.



1. *Terminalia* L.

Terminalia myriocarpa Heurck & Mueller

Bakala shing (Thridangbi), Panisaj (Nep). **Habit:** Semi-evergreen tree up to 45m, **Status:** Not evaluated, **Habitat:** Sub-tropical forests & **Flowering:** October - November.

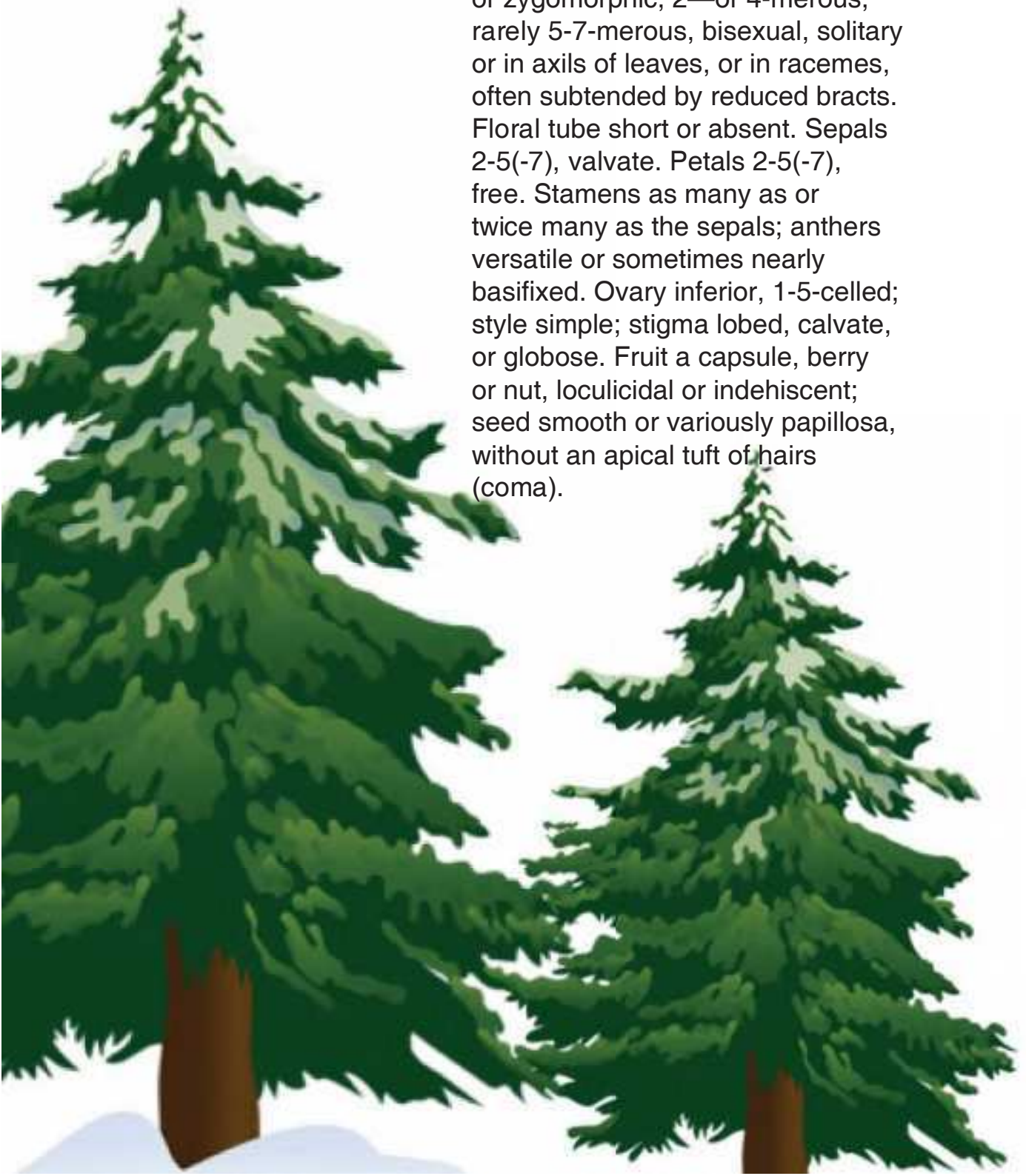


ONAGRACEAE

(Evening Primrose family)

Perennial or annual herbs (in Bhutan), some woody at base, rarely aquatic.

Leaves opposite or spiral, simple, entire or toothed; stipules absent or reduced. Flowers actinomorphic or zygomorphic, 2—or 4-merous, rarely 5-7-merous, bisexual, solitary or in axils of leaves, or in racemes, often subtended by reduced bracts. Floral tube short or absent. Sepals 2-5(-7), valvate. Petals 2-5(-7), free. Stamens as many as or twice many as the sepals; anthers versatile or sometimes nearly basifixed. Ovary inferior, 1-5-celled; style simple; stigma lobed, calvate, or globose. Fruit a capsule, berry or nut, loculicidal or indehiscent; seed smooth or variously papillose, without an apical tuft of hairs (coma).



1. *Epilobium* L.

Epilobium angustifolium L., Synm: *E.spicatum* Lamarck, *Chamaenerion angustifolium* (L.) Scopoli, *Chamerion angustifolium* (L.) Holub.

Fireweed/ Rosebay Willow-Herb (Eng). **Habit:** Robust rhizomatous herb forming large colonies; stems rect simple, 30-250 cm, **Status:** LC, **Habitat:** Open/ exposed disturbed montane areas & **Flowering:** July - September.



Epilobium sp

Habit: Erect and branched herb, **Status:** LC, **Habitat:** Moist and muddy or wet places & **Flowering:** August.



Epilobium tibetanum Haussknecht. Synm: *E.pseudobscurum* Haussknecht, *E.leiospermum* Haussknecht.

Habit: Erect herb with leafy or fleshy basal soboles; stems 13-100cm, **Status:** LC, **Habitat:** Moist places by ditches streams and rivers in mountains & **Flowering:** June - September.



Epilobium royleanum Haussknechtz. Synm: *E.nepalense*, *E.himalayense*

Royle's Willow-Herb (Eng). **Habit:** Ascending or erect herb with fleshy basal soboles that leave dark scales on stem (10-65cm), **Status:** DD, **Habitat:** Moist weedy places in mountains, near streams and roadsides & **Flowering:** July - October.



Epilobium sp.

Cinnamon Willow-Herb/ Purpleleaf Willow-Herb (Eng). **Habit:** Ascending and erect herb, **Status:** LC, **Habitat:** Moist places and near streams and roadsides in disturbed areas & **Flowering:** September.



CORNACEAE

(Dogwood family)

Trees or shrubs. Leaves opposite or alternate, simple, entire, serrate or denticulate, petiolate; stipules absent, although bristles may be present at the base of young petioles (Helwingia). Inflorescence a panicle, corymb or umbel, sometimes with showy bractes. Flowers actinomorphic, bisexual or unisexual (then plants dioecious). Calyx 4-5-lobed; tube adnate to ovary inferior, 1-4-celled. Style simple; stigma capitate or lobed. Fruit a drupe or berry, few-seeded.



1. *Benthamidia* Spach

Benthamidia capitata (Wall.) Hara. Synm: *Cornus capitata* Wall.

Himalayan Strawberry Tree/ Evergreen Dogwood/ Bentham's Cornel (Eng). ཕོ་ཅེ་མེ་/ Phoe-tsee (Dzo), Poi-tsee/ Nameddhpashing (Sha), Poi-tsa (Ura), Rankatar (Nep). **Habit:** Shrub or tree, 2-10m **Status:** LC, **Habitat:** Moist broad-leaved forest, occasionally on open hillsides & **Flowering:** May – July.



2. *Toricellia* DC.

Toricellia tiliifolia DC.

Dhengboor-laga (Sha). **Habit:** Tree or shrub, 2.5-5m, **Status:** LC, **Habitat:** Warm broad-leaved forest, often in disturbed areas & **Flowering:** April.

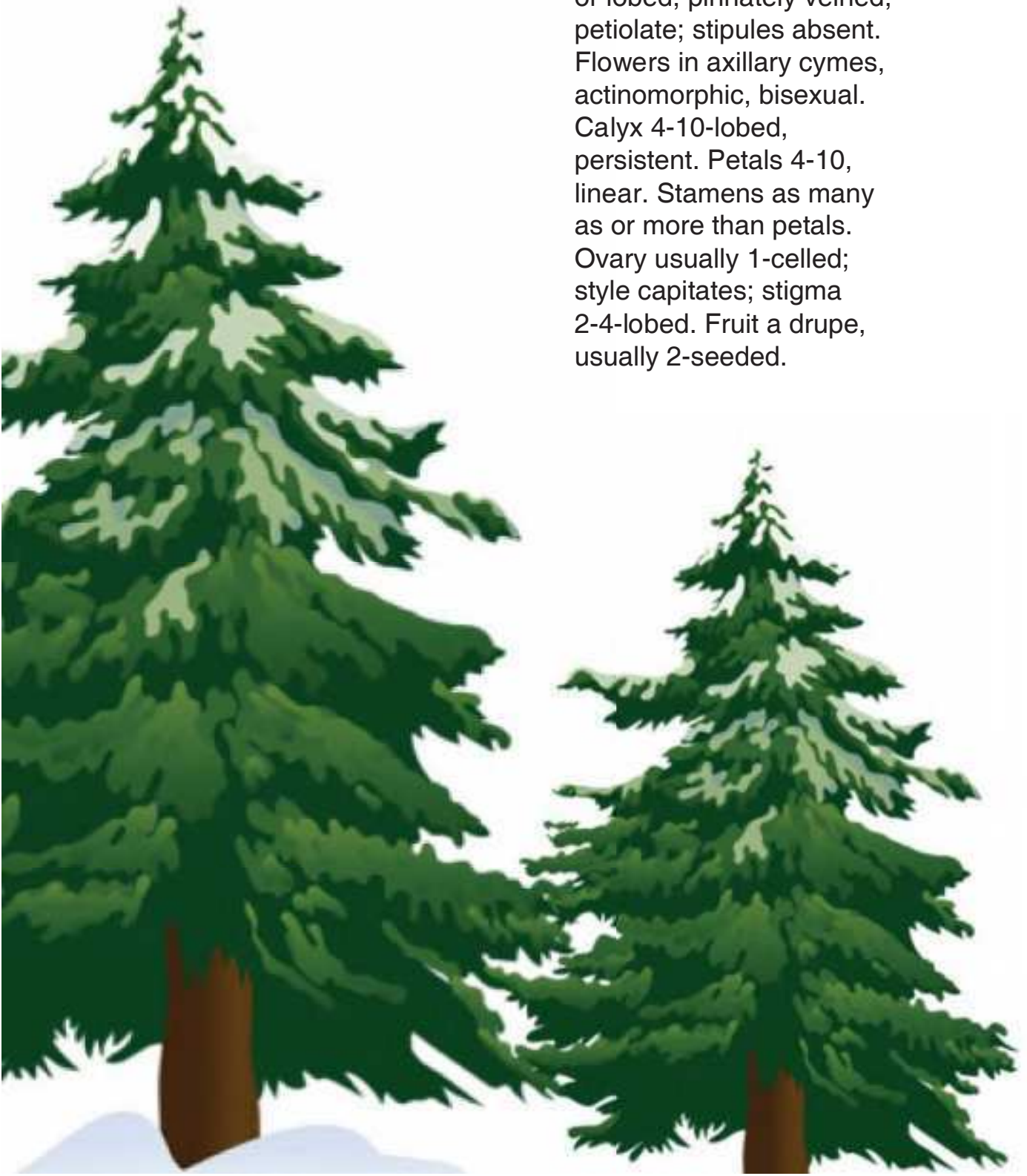


ALANGIACEAE

(Alangium family)

Trees or shrubs with characteristically horizontal branches.

Leaves alternate, distichous, simple, entire or lobed, pinnately veined, petiolate; stipules absent. Flowers in axillary cymes, actinomorphic, bisexual. Calyx 4-10-lobed, persistent. Petals 4-10, linear. Stamens as many as or more than petals. Ovary usually 1-celled; style capitate; stigma 2-4-lobed. Fruit a drupe, usually 2-seeded.



1. *Alangium* Lamarck

Alangium alpinum (Clarke) W.W.Smith & Cave. Synm: *Marlea begoniifolia* Roxb. var. *alpina* Clarke.

Mountain Alangium (Eng). Galasune (Nep). **Habit:** Tree or shrub up to 15m, **Status:** LC, **Habitat:** Moist forest in Subtropical region & **Flowering:** May - June.



ARALIACEAE

(Ivy/Aralia family)

Trees or shrubs, sometimes climbing, rarely herbs; indumentum stellate, rarely simple. Leaves alternate or whorled, sometimes very large, pinnately or palmately compound., trifoliolate or simple sometimes palmately lobed. Flowers in umbels (seldom in racemes), umbels usually borne in panicles, perfect or unisexual, very often 5-merous, sometimes doubly so; pedicels often articulate at flower base. Calyx represented by small teeth around apex of ovary, sometimes obsolete. Petals mostly 5-10, sometimes coherent and falling together, valvate or sometimes imbricate. Stamens as many as and alternating with petals; anthers opening by slits as many as cells, distinct or connate, sometimes \pm swollen at base to form a stylopodium. Fruit a drupe or berry.



1. *Brassaiopsis* Decaisne & Planchon

Brassaiopsis hainla (D.Don.) Seemann. Synm: *B.palmata* Kurz, *B.polyacantha* (Wall.) Banerjee, *Panax curcifolia* Griff.

Chuletro (Nep). **Habit:** Tree 3-8m, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** February - April.



Brassaiopsis hispida Seemann.

Habit: Shrub, **Status:** Unknown, **Habitat:** Cool broad-leaved forest.



2. *Schefflera* Forster

Schefflera impressa (Clarke) Harms. Synm: *Heptapleurum impressum* Clarke. Omtongla (Ura), Bhalu Chinde/ Bhalu Phutta (Nep)

Habit: Tree 4-12m, **Status:** LC, **Habitat:** Hemlock and Rhododendron forest and Evergreen Oak forest & **Flowering:** August - September.



3. *Hedera* L.

Hedera nepalensis K.Koch. Synm: *H. helix* L.

Himalayan Ivy (Eng). ལོ་ཡི་མི་ཁ/ Loyee-mekha (Dzo), Paan Roo (Sha), Lek Bori/ Doode Lahara (Nep).

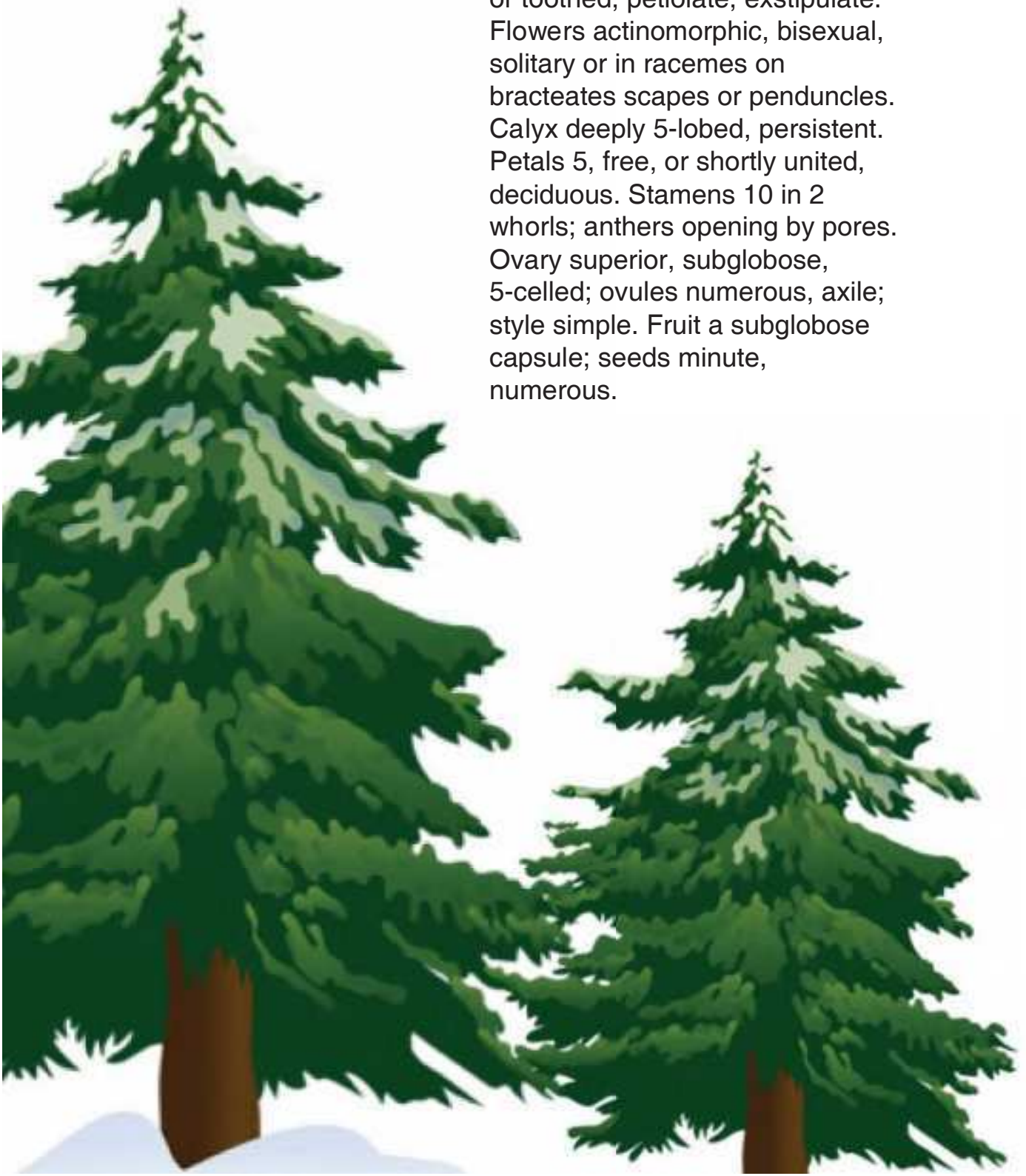
Habit: Unarmed climbing shrub, **Status:** LC, **Habitat:** In moist areas of Blue Pine and Hemlock forest & **Flowering:** October - November.



PYROLACEAE

(Wintergreen family)

Rhizomatous, evergreen, perennial herbs or dwarf shrubs. Leaves alternate, opposite or subverticillate, pinnately veined, entire, subentire or toothed, petiolate, exstipulate. Flowers actinomorphic, bisexual, solitary or in racemes on bracteates scapes or peduncles. Calyx deeply 5-lobed, persistent. Petals 5, free, or shortly united, deciduous. Stamens 10 in 2 whorls; anthers opening by pores. Ovary superior, subglobose, 5-celled; ovules numerous, axile; style simple. Fruit a subglobose capsule; seeds minute, numerous.



1. *Pyrola* L.

Pyrola sikkimensis Krisa. Synm: *P. roduntifolia* L., var. *asarifolia* Clarke, *P. media* Swartz subsp. *sikkimensis* (Krisa) Sarvela, *P. karakoramica* Krisa

Habit: Erect glabrous herb, 20-30cm, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** June - August.



Pyrola corbieri Leveille. Synm: *P. decorata* Andres, *P. chlorantha*, Swartz subsp. *fallax* Krisa

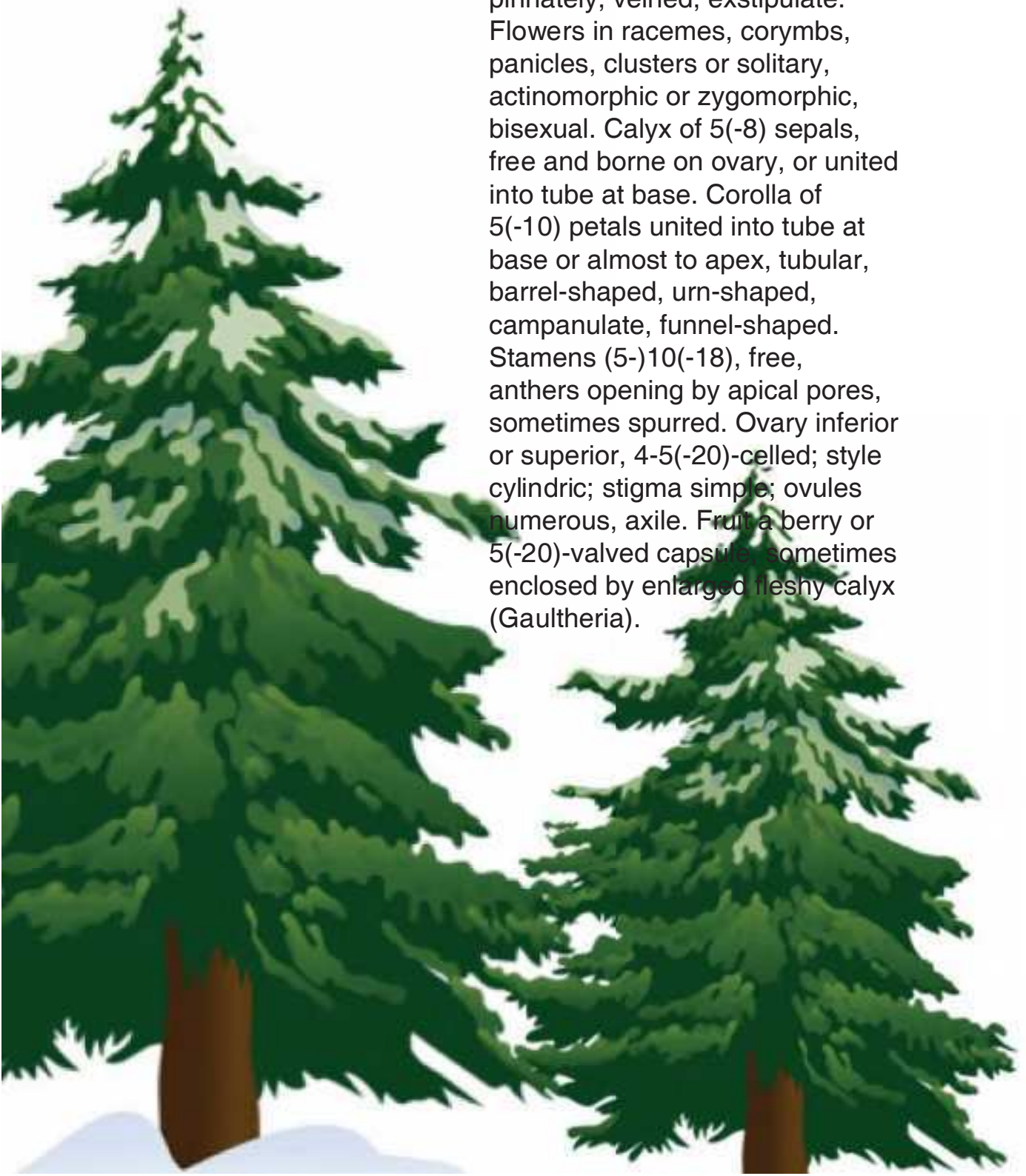
Habit: Erect glabrous herb and smaller than *P. sikkimensis*, 11-30cm, **Status:** LC, **Habitat:** Stream sides in Blue Pine forest & **Flowering:** June.



ERICACEAE

(Heath family)

Trees, shrubs, or subshrubs, often evergreen, sometimes epiphytic. Leaves alternate, sometimes becoming aggregated into pseudo-whorls, simple, pinnately veined, exstipulate. Flowers in racemes, corymbs, panicles, clusters or solitary, actinomorphic or zygomorphic, bisexual. Calyx of 5(-8) sepals, free and borne on ovary, or united into tube at base. Corolla of 5(-10) petals united into tube at base or almost to apex, tubular, barrel-shaped, urn-shaped, campanulate, funnel-shaped. Stamens (5-)10(-18), free, anthers opening by apical pores, sometimes spurred. Ovary inferior or superior, 4-5(-20)-celled; style cylindrical; stigma simple; ovules numerous, axile. Fruit a berry or 5(-20)-valved capsule, sometimes enclosed by enlarged fleshy calyx (Gaultheria).



1. Rhododendron L. (by D.G. Long)

Rhododendron griffithianum Wight. Synm: *R.aucklandii* Hook, *R.oblongum* Griff., *R.griffithianum* var.*aucklandii* (Hook.f.) Hook.f.

ལྷག་ཤར་མེ་ཉླག/ Tag-shar metog (Dzo & Sha), Seto Chimal (Nep)
Habit: Shrub or Tree, 2-10m, **Status:** LC, **Habitat:** River banks, ravines and cliffs in cool broad-leaved forest and evergreen Oak forests & **Flowering:** April - May.



Rhododendron grande Wight. Synm: *R.argenteum* Hook.f., *R.longifolium* Nuttall

ཚེ་དབང་མེ་ཉླག/ Tshewang metog (Dzo & Sha), Patle Korlinga (Nep)

Habit: Tree 8-15m, bark rough, young shoots glabrous, **Status:** LC, **Habitat:** Moits evergreen oak and Hemlock forest & **Flowering:** January - April.



Rhododendron kesangiae Long & Rushforth

ཏ་ལ་མེ་རྟོག། Tala metog (Dzo & Sha), Laa-kharte (Ura). **Habit:** Simillar to R.grande but young shoots often closely white floccose, leaves broadly elliptic to almost obovate, **Status:** Endemic, **Habitat:** Amongst Rhododendrons and bamboos in Fir and Hemlock forest & **Flowering:** April - May.



Rhododendron falconeri Hook.f.

ཁང་ལེ་མེ་རྟོག། Khangley metog (Dzo & Sha), Korlinga (Nep). **Habit:** Large shrub or tree 5-15m; bark smooth, branchlets thinly brown tomentose, **Status:** LC, **Habitat:** Hemlock/ Rhododendrons and cool broad-leaved forests & **Flowering:** April - May.



***Rhododendron hodgsonii* Hook.f.**

ཨེ་ཏོག་མེ་ཏོག་/ Aetoh-metog (Dzo), Zhudhang metog (Sha), Laa-zhinte (Ura), Korlinga (Nep)

Habit: Simillar to *R.falconeri* and *R.kesangiae* but branchlets matted white tomentose; leaves usu. more narrowly obovate-elliptic, **Status:** LC, **Habitat:** Fir/Rhododendrons and Hemlock forest & **Flowering:** April - May.



Rhododendron campylocarpum* Hook.f. subsp *campylocarpum

ཨེ་ཏོག་མེ་ཏོག་གསེར་པ་/ Aetoh-metog serp (Dzo), Zhudhang metog serboo (Sha)

Habit: Aromatic shrub 2-4m or small tree to 6m, **Status:** LC, **Habitat:** Hemlock and Fir/ Rhododendrons forest & **Flowering:** May - July.



Rhododendron kendrickii Nuttall

ཨེ་རྟོག་མེ་རྟོག་/ Aetoh-metog (Dzo), Zhudhang metog (Sha)

Habit: Shrub or small tree to 6m; branchlets glabrous and leaves narrowly oblong-elliptic, **Status:** LC, **Habitat:** Spruce and Hemlock/Rhododendron forest & **Flowering:** March - April.



Rhododendron papillatum Balfour f. & Cooper, Synm: *R. epapillatum* Balfour f. & Cooper

ཨེ་རྟོག་མེ་རྟོག་ཅུང་ཀུ་/ Aetoh-metog chungku (Dzo), Zhudhang metog dhaza (Sha)

Habit: Similar to *R. kendrickii* but branchlets thinly tomentose at first, leaves elliptic or oblanceolate, **Status:** LC, **Habitat:** Hemlock & Fir forest & **Flowering:** March - April.



Rhododendron arboreum Smith. subsp *cinnamomeum* (G.Don) Tagg, Synm:*R.cinnamomeum* G.Don, *R.campbelliae* Hook.f., *R.arboreum* subsp. *campbelliae* (Hook.f.) Tagg

ཨེ་རྟོག་མེ་རྟོག་/ Aetoh-metog (Dzo), Zhudhang metog (Sha), Zhinchung mentog (Ura), Gurass/ Gurans (Nep)

Habit: Shrub 1-2m or tree up to 15m to *R.kendrickii* but branchlets thinly tomentose at first, leaves elliptic or oblanceolate, **Status:** LC, **Habitat:** Fir/ Rhododendron forests & **Flowering:** March - May.



Rhododendron wightii Hook.f.

ཨེ་རྟོག་གསེར་མདོག་ཅན་/ Aetoh-serdogchen (Dzo). **Habit:** Shrub 2-5m; branchlets glabrous or puberulous, **Status:** LC, **Habitat:** Fir forests and Juniper/ Rhododendron scrub & **Flowering:** May - July.



Rhododendron lanatum Hook.f.

ལ་གྱི་ཨེ་རྟོག་དཀར་པོ་/ La-gee Aetoh karp (Dzo), La-ga zhudhang karmo (Sha), Tagshing mentog (Ura)

Habit: Shrub 1.5-4m, **Status:** LC, **Habitat:** Fir forest and Rhododendron scrub & **Flowering:** May - June.



***Rhododendron wallichii* Hook.f.**

Meezuma Zhudhang (Sha).

Habit: Large shrub 1.5-4m or small tree to 6m, **Status:** LC, **Habitat:** Fir and Rhododendron forests and in Juniper/Rhododendron scrub & **Flowering:** April - May.



***Rhododendron barbatum* G.Don. Synm: *R.lancifolium* Hook.f.**

ལྷག་ཤིང་/ Tag shing (Dzo & Sha), Lal chimal (Nep)

Habit: Shrub or small tree 2-6m, young shoots with stiff spreading bristles, **Status:** LC, **Habitat:** Spruce, Hemlock and Fir forests & **Flowering:** April - May.



***Rhododendron succothii* Davidhian. Synm: *R.nishiokae* Hara**

ཨེ་ཏོག་མེ་ཏོག་/ Aetoh-metog (Dzo), Zhudhang metog (Sha), Tag-khram zhingtte (Ura). **Habit:** Shrub 1-2m or small tree to 6m, **Status:** LC, **Habitat:** Fir/ Rhododendron forests & **Flowering:** April - May.



Rhododendron thomsonii Hook.f. subsp. *thomsonii*

ཁིམ་པ་མེ་རྟོག། Khempa metog (Dzo & Sha), Tag-khram zhinte (Ura), Khema (Trongsa). **Habit:** Shrub 1.5-5m, **Status:** LC, **Habitat:** Fir forests and open hillsides with secondary bamboo & **Flowering:** April - July.



Rhododendron edgeworthii Hook.f.

Zhudhang shakha (Sha), Poso metog (Trongsa), Lahare chimal (Nep)

Habit: Shrub 1-4m, **Status:** LC, **Habitat:** Evergreen oak forests, often epiphytic on rocks by rivers and on cliffs & **Flowering:** April - May.



Rhododendron pendulum Hook.f.

Zhudhang dhumbu (Sha). **Habit:** Similar to *R.edgeworthii* but a smaller shrub up to 1 m, **Status:** LC, **Habitat:** Epiphytic and on cliffs and rocks in conifer and rhododendron forests & **Flowering:** April - June.



Rhododendron maddenii Hook.f., Synm: *R.brachysiphon* Hutchinson, *R.brevitubum* Balfour f. & Cooper non Smith, *R.clophyllum* Nuttall, *R.jenkinsii* Nuttall, *R.macranthum* Griff., *R.polyandrum* Hutchinson subsp.*maddenii*

Habit: Shrub 1-2(-4)m; branchlets scally, **Status:** LC, **Habitat:** Rocks and cliffs in evergreen oak forests and in *R.arboreum* scrub & **Flowering:** May - July.



Rhododendron dalhousiae Hook.f. var.*rhabdotum* (Balfour f.) & Cooper) Cullen. Synm: *R.rhabdotum* Balfour f. & Copper Lahare chimal (Nep). **Habit:** Similar to *R.maddenii* but young shoots scally and sparsely bristly, **Status:** LC, **Habitat:** On trees and rocks in warm and cool broad-leaved forests & **Flowering:** April - June.



Rhododendron lindleyi Moore. Synm: *R.bhotanicum* Clarke, *R.grothausii* Davidian

Lahare chimal (Nep). **Habit:** Similar to *R.maddenii* & *R.dalhousiae* but shoots and petioles scaly, not bristly, **Status:** LC, **Habitat:** Evergreen oak and Hemlock forests & **Flowering:** April - May.



Rhododendron triflorum Hook.f., Synm: *R.deflexum* Griff.

Pahenle chimal (Nep). **Habit:** Evergreen or semi-deciduous shrub 1-5m; branchlets minutely scaly, **Status:** LC, **Habitat:** Blue Pine, Spruce and *Quercus griffithii* forests & **Flowering:** April - June.



Rhododendron setosum D.Don.

ཕྱུ་ལྷོ/ Sulu (Dzo/Sha), Baalu (Ura), Sanu sunpate (Nep). **Habit:** Compact, strongly aromatic subshrub 10-60cm, **Status:** LC, **Habitat:** Open mountain slopes and Rhododendron scrub & **Flowering:** June - August.



Rhododendron cinnabarinum Hook.f. subsp. *xanthocodon* (Hutchinson) Cullen. Synm: *R.xanthocodon* Hutchinson
Khaima (Ura), Sanu chimal (Nep). **Habit:** Shrub or small tree 2-6m; branchlets densely scaly, **Status:** LC, **Habitat:** Blue Pine, Spruce and *Quercus griffithii* forests & **Flowering:** April - June.



Rhododendron keysii Nuttall
མྱིད་པ་མེ་ཉལ།/ Kidhpa metog (Dzo & Sha). **Habit:** Shrub 1.5-6m; shoots densely scaly, **Status:** LC, **Habitat:** Spruce, Hemlock and Fir forests, and in Juniper/ Rhododendron scrub & **Flowering:** May - September.



Rhododendron virgatum Hook.f.
Habit: Shrub 0.4-1.3m; branchlets minutely scaly, **Status:** LC, **Habitat:** Blue Pine and evergreen oak forests & **Flowering:** April - May.



Rhododendron glaucophyllum Rehder. Synm: *Azelea glauca* Kuntze.

Habit: Shrub (1.5m), **Status:** LC, **Habitat:** Blue Pine, Spruce and Hemlock forests & **Flowering:** April - June.



Rhododendron lepidotum G.Don. Synm: *R. elaeagnoides* Hook.f., *R. obovatum* Hook.f., *R. salignum* Hook.f.

ལྷ་ལི་མེ་ཉླག/ Dhali metog (Dzo/Sho/Med), Khwue Balu (Ura), Balu Sun Pate/ Bhale Sunpate (Nep). **Habit:** Evergreen or semi-deciduous shrub 1-5m; branchlets minutely scaly, **Status:** LC, **Habitat:** Blue Pine, Spruce and Quercus griffithii forests & **Flowering:** April - June.



Rhododendron anthopogon D.Don. subsp. anthopogon

ལྷ་ལི་མེ་ཉླག/ Dhali metog (Dzo/Sho/Med), Saalu (Ura), Dhupi (Nep)

Habit: Small erect aromatic shrub 15-60cm, **Status:** LC, **Habitat:** Open hillsides, rocky slopes and cliff edges and in dwarf Rhododendron scrub above tree line & **Flowering:** May - August.



Rhododendron arboreum Smith. subsp *delavayi* (Franchet) Chamberlain.

Habit: Shrub or small tree, **Status:** Unknown, **Habitat:** Blue Pine forest (Chamkhar chu bank below Tangsibi, Ura.



2. *Gaultheria* L. (by S.J. Rae)

Gaultheria fragrantissima Wall.

ལུམ་ཟླ་སྐལ་/ Chamze kam (Dzo), Momdhang (Ura), Machino (Nep)

Habit: Shrub 2-3m, **Status:** LC, **Habitat:** Roadside banks in warm broad-leaved and evergreen oak forests & **Flowering:** March - June.



Gaultheria glaucophyllum C.Y.Wu & R.C. Fang

Zheb (Ura). **Habit:** Shrub 1-2m, **Status:** LC, **Habitat:** Along foot trails and open slopes along forest edges in conifer and broad-leaved forest & **Fruiting:** December - January.



Gaultheria pyroloides Miquel. Synm: *G.pyrolifolia* Clarke

Habit: Mat-forming dwarf shrub with creeping rhizomes and short erect glabrous leafy shoots 4-10cm, **Status:** LC, **Habitat:** On open banks in Juniper/ Rhododendrons scrub and on rocky slopes and screes & **Flowering:** May - August.



Gaultheria nummularioides D.Don.

Kwaile mereb (Ura), Khwe shokpa (Trongsa). **Habit:** Prostrate dwarf shrub with creeping, bristly leafy shoots 5-20cm long, **Status:** LC, **Habitat:** Evergreen oak forests and on open rocky slopes & **Flowering:** August - September.



***Gaultheria trichophylla* Royle.**

Aoow-mereb (Ura), Zum (Laya). **Habit:** Prostrate dwarf shrub with creeping leafless stems and short, erect, bristly leafy shoots 3-9cm, **Status:** LC, **Habitat:** On cliffs, screes and rocky streamsidess & **Flowering:** May - June.



***Gaultheria* sp.**

Habit: Low ground shrub, **Status:** Unknown, **Habitat:** Rocky streamsidess and slopes (Chamkharchu bank below Tangsibi, Ura).



3. *Cassiope* D.Don (by S.J. Rae)

***Cassiope fastigata* (Wall.) D.Don. Synm: *Andromeda fastiagata* Wall, *A.cupressiformis* D.Don.**

Habit: Erect shrub 15-30cm, **Status:** LC, **Habitat:** Grassy mountainsides, river banks and Juniper/ Rhododendron scrub & **Flowering:** May - September.



4. *Enkianthus* Loureiro (by S.J.Rae)

Enkianthus deflexus (Griff.) Schneider. Synm: *E.himalaicus* Hook.f. & Thomson

Sindure/ Khorsane (Nep). **Habit:** Shrub or small tree 3-6m, **Status:** LC, **Habitat:** Evergreen oak, Spruce and Henlock forests & **Flowering:** May - June.



5. *Lyonia* Nuttall (by S.J.Rae)

Lyonia ovalifolia (Wall.) Drude.

Shajula shing (Sha), Angeri (Nep). **Habit:** Deciduous or semi-evergreen shrub or tree 2-10m, **Status:** LC, **Habitat:** Moist conifer/ Rhododendron forests & **Flowering:** June - August.



6. *Pieris* D.Don (by S.J.Rae)

Pieris formosa (Wall.) D.Don. *Andromeda Formosa* Wall.

Balu (Nep). **Habit:** Small shrub or tree 1-5m, **Status:** LC, **Habitat:** River banks, scrub, etc., in Blue Pine forests & **Flowering:** February - June.



7. *Vaccinium* L. (by S.J.Rae)

Vaccinium retusum (Griff.) Hook.f., Synm: *Thibaudia retusa* Griff.

Ra-te (Nep) **Habit:** Epiphytic shrub 1-2m, **Status:** LC, **Habitat:** Wet broad-leaved and coniferous forests & **Flowering:** April - June.



Vaccinium nummularia Clarke

Habit: Similar to *V.retusum* but smaller, 0.5-1m, **Status:** LC, **Habitat:** On wet rocks and trees in evergreen oak and Hemlock/ Rhododendron forests & **Flowering:** April - June.



Vaccinium sikkimensis Clarke

Habit: Prostrate shrub, **Status:** LC, **Habitat:** On cliffs, screes and rocky streamsides & **Flowering:** May.



8. *Agapetes* L. (by D.G. Long & S.J.Rae)

Agapetes serpens (Wight) Sleumer. Synm: *Pentapterygium serpens* (Wight) Klotzsch.

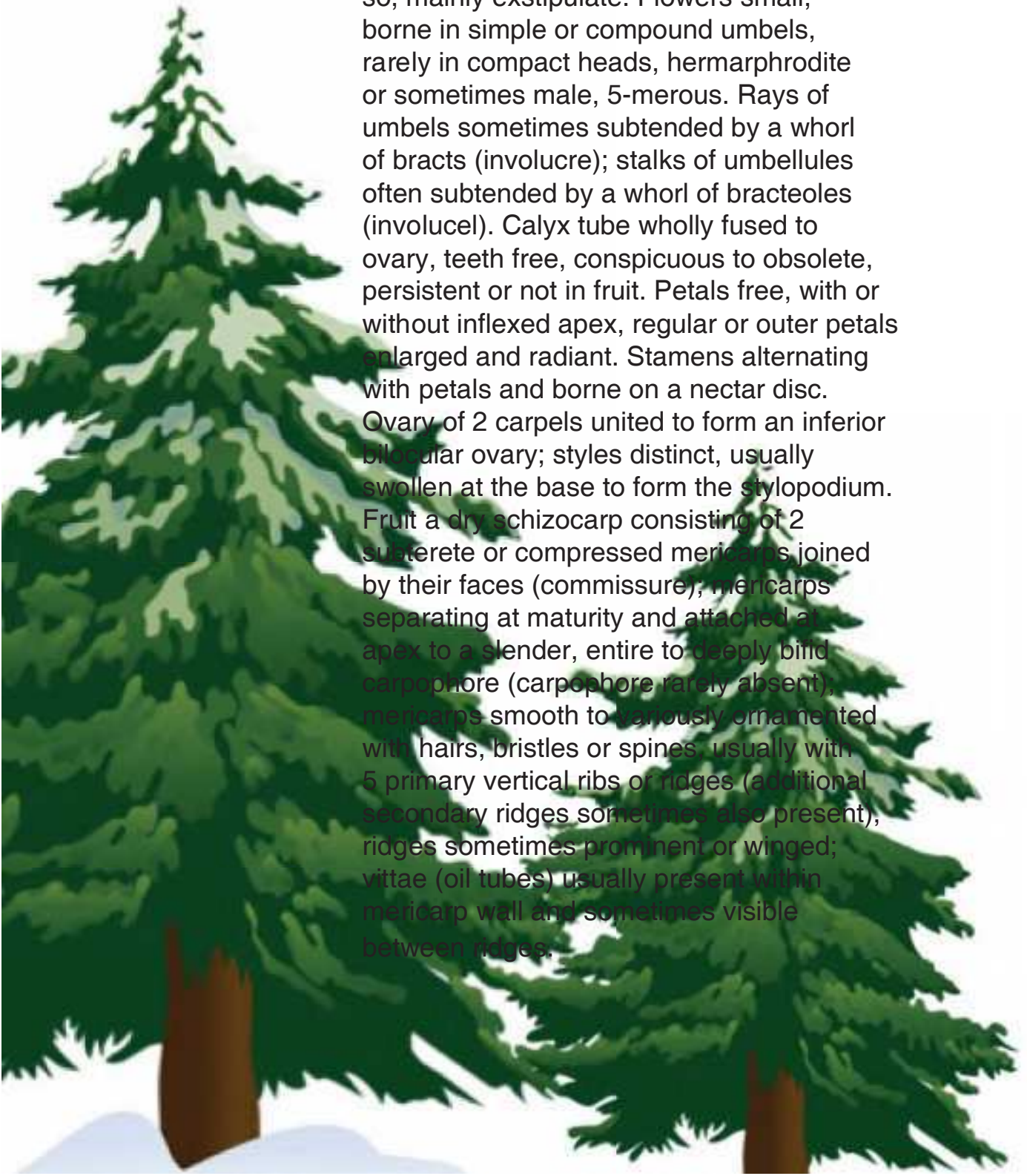
Gerchu (Trongsa), Harchur/ Banmakai (Nep). **Habit:** Pendulous epiphytic shrub 0.5-1.5m, **Status:** LC, **Habitat:** On trees and sometimes rocks in warm broad-leaved, evergreen oak, and *Quercus griffithii*/ *Rhododendron arboreum* forests & **Flowering:** February - May.



UMBELLIFERAE

(Umbellifer family)

Annual, biennial or perennial herbs. Leaves basal or alternate, rarely simple, usually pinnately or ternately divided; petioles usually with a sheathing base clasping the stem, often broadly so; mainly exstipulate. Flowers small, borne in simple or compound umbels, rarely in compact heads, hermaphrodite or sometimes male, 5-merous. Rays of umbels sometimes subtended by a whorl of bracts (involucre); stalks of umbellules often subtended by a whorl of bracteoles (involucel). Calyx tube wholly fused to ovary, teeth free, conspicuous to obsolete, persistent or not in fruit. Petals free, with or without inflexed apex, regular or outer petals enlarged and radiant. Stamens alternating with petals and borne on a nectar disc. Ovary of 2 carpels united to form an inferior bilocular ovary; styles distinct, usually swollen at the base to form the stylopodium. Fruit a dry schizocarp consisting of 2 subterete or compressed mericarps joined by their faces (commissure); mericarps separating at maturity and attached at apex to a slender, entire to deeply bifid carpophore (carpophore rarely absent); mericarps smooth to variously ornamented with hairs, bristles or spines, usually with 5 primary vertical ribs or ridges (additional secondary ridges sometimes also present), ridges sometimes prominent or winged; vittae (oil tubes) usually present within mericarp wall and sometimes visible between ridges.



1. *Coriandrum* L.

Coriandrum sativum L.

Coriander (Eng), རྫོང་ལྷ་མོ་/ Yoe-sey (Dzo), U-su (Sha/Med), Yoe-su (Ura), Dhaniya (Nep)

Habit: Foetid annual herb; stems erect, 18-60cm tall, **Status:** Not evaluated (introduced), **Habitat:** Cultivated as a culinary herb (leaves) and spice (fruit), and sometimes naturalised & **Flowering:** February - May.



2. *Bupleurum* L.

Bupleurum candollei DC.

Himalayan Thorowax/ Hare's Ear (Eng), Chai hu (Chinese)

Habit: Erect perennial herb 75-130cm tall, **Status:** LC, **Habitat:** Open grassy hillsides, stream sides, forest clearings, etc. & **Flowering:** June - August.



3. *Selinum* L

Selinum wallichianum (DC.) Raizadae & Saxena. Synm: *S.tenuifolium* Clarke

Rabe Tsed (Med). **Habit:** Foetid herb 50-95(-120)cm tall, with stout tap-root and erect or ascending stem surrounded by fibrous leaf remains at base, **Status:** LC, **Habitat:** Open well-drained rough grassland, yak pasture, tracksides, in coniferous forest clearings, scrubland, etc. & **Flowering:** July - September.



Selinum sp

Habit: Perennial herb with slender elongate stolons, woolly puberulous, **Status:** LC, **Habitat:** Opening in degraded evergreen broad-leaved forest & **Flowering:** July.



4. *Cortia* DC.

Cortia depressa (D.Don) Norman. Synm: *Athamanta depressa* D.Don, *C.lindleyi* DC., *C.oreomyrrhiformis* Farille & Malla, *C.nepalensis* Norman

Bam-po (Med). **Habit:** Acaulous ascending perennial; leaf rachis and main veins, petioles and inflorescence branches densely puberulent to almost glabrous, **Status:** LC, **Habitat:** Alpine turf and grass-covered rocks, amongst rocks, on free-draining hillsides or banks, etc., & **Flowering:** July - August.



5. *Heracleum* L.

Heracleum obtusifolium DC. Synm: *Tetrataenium obtusifolium* (DC.) Mandenova

Trucha/ Tukar (Med). **Habit:** Erect stout biennial, 30-150cm tall from a stout woody rootstock, plant finely pubescent; stem base surrounded by leafy remains, **Status:** LC, **Habitat:** Frequent on well-grazed pasture in dry areas & **Flowering:** April - September.



Heracleum nepalense D.Don.

Habit: Erect stout herb with woody stem, **Status:** Unknown,

Habitat: Disturbed sites with effect of grazing in Spruce forest

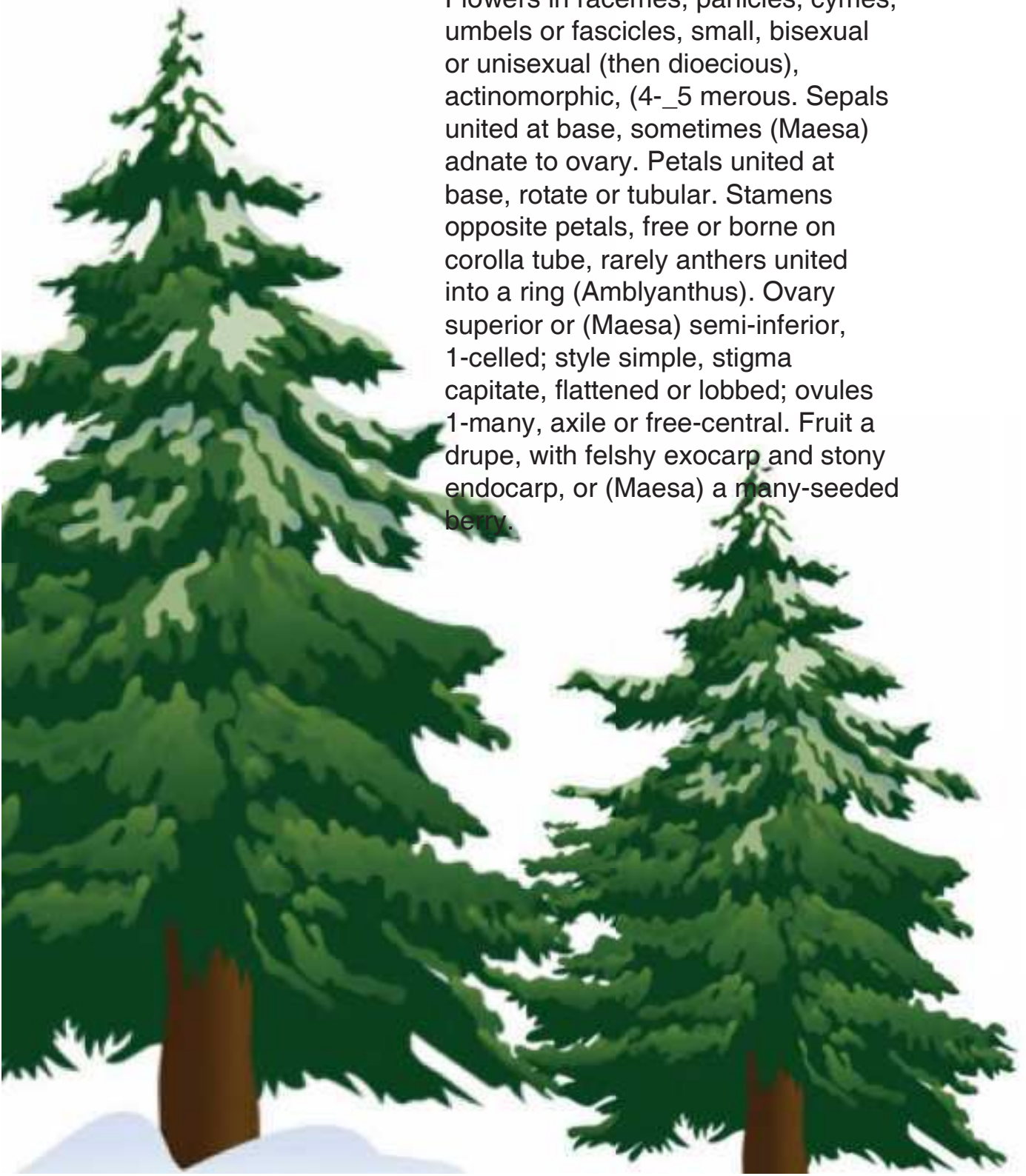
& **Flowering:** July - August.



MYRSINACEAE

(Myrsine family)

Trees, shrubs or woody climbers, often evergreen. Leaves alternate, simple, pinnately veined, exstipulate, often gland-dotted or with pellucid reticulations. Flowers in racemes, panicles, cymes, umbels or fascicles, small, bisexual or unisexual (then dioecious), actinomorphic, (4-5 merous. Sepals united at base, sometimes (Maesa) adnate to ovary. Petals united at base, rotate or tubular. Stamens opposite petals, free or borne on corolla tube, rarely anthers united into a ring (Amblyanthus). Ovary superior or (Maesa) semi-inferior, 1-celled; style simple, stigma capitate, flattened or lobbed; ovules 1-many, axile or free-central. Fruit a drupe, with fleshy exocarp and stony endocarp, or (Maesa) a many-seeded berry.



1. *Maesa* Forsskal

Maesa chisia D. Don

Sang (Kheng), Bilaune (Nep)

Habit: Shrub or more rarely a small tree 2-6m, **Status:** LC,

Habitat: Margins of evergreen oak and warm broad-leaved forests, often on rocky slopes and cliffs & **Flowering:** February - May.



2. *Ardisia* Gaertner

Ardisia macrocarpa Wall. Himalayan Corallberry (Eng)

རེ་སེམ/ Ressim (Dzo), Re-khawai Jaree (Ura), Damai Gera/ Khalo Argale/ Damai Phal (Nep), Dangpeyong-kung (Lepcha)

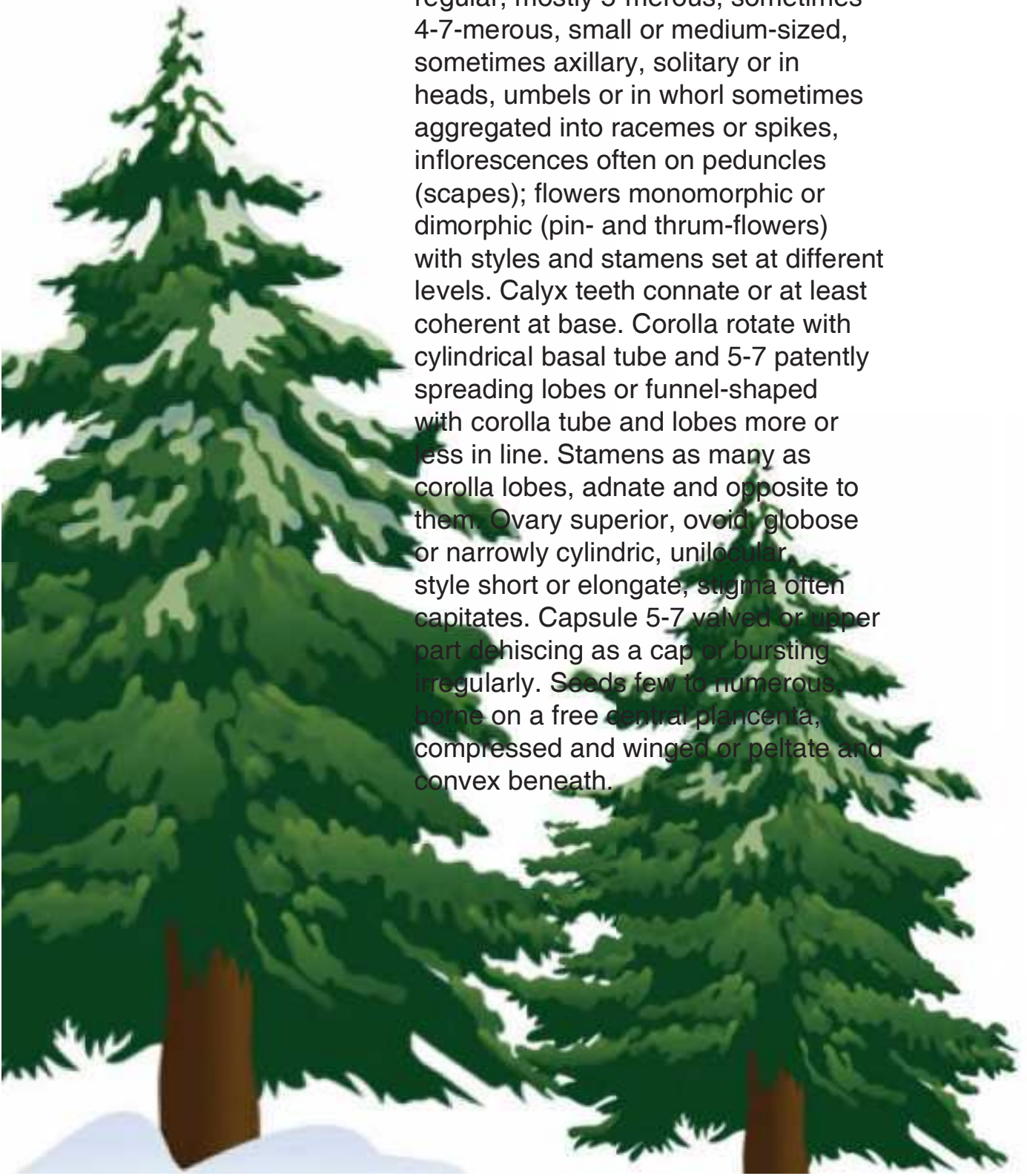
Habit: Shrub 0.6-1.5m, **Status:** LC, **Habitat:** Evergreen oak and cool broad-leaved forests & **Flowering:** May - July.



PRIMULACEAE

(Primrose family)

Herbs, usually rhizomatous, perennial or annual. Leaves simple, sometimes all radial or sometimes cauline, alternate or opposite, exstipulate. Flowers bisexual, regular, mostly 5-merous, sometimes 4-7-merous, small or medium-sized, sometimes axillary, solitary or in heads, umbels or in whorl sometimes aggregated into racemes or spikes, inflorescences often on peduncles (scapes); flowers monomorphic or dimorphic (pin- and thrum-flowers) with styles and stamens set at different levels. Calyx teeth connate or at least coherent at base. Corolla rotate with cylindrical basal tube and 5-7 patently spreading lobes or funnel-shaped with corolla tube and lobes more or less in line. Stamens as many as corolla lobes, adnate and opposite to them. Ovary superior, ovoid, globose or narrowly cylindrical, unilocular, style short or elongate, stigma often capitate. Capsule 5-7 valved or upper part dehiscent as a cap or bursting irregularly. Seeds few to numerous, borne on a free central placenta, compressed and winged or peltate and convex beneath.



1. *Primula* L.

Primula gracilipes Craib. Synm: *P.scullyi* Craib

Edgeworth's Primrose (Eng), Sa-metog (Sha), Chu-mento (Ura)

Habit: Evergreen herb; winter buds and persistent bud scales absent, **Status:** LC, **Habitat:** On damp shady banks, streamsides, mossy rocks and in ravines, in *Abies*/ *Rhododendron* forests or *Rhododendron* scrub & **Flowering:** February - June.



Primula calderiana Balfour f. & Cooper, Synm: *P.dianae* Balfour f. & Cooper, *P.gammieana* Balfour f., *P.roylei* (Hook.f.) Balfour f. & W.W.Smith, *P.obtusifolia* Royle var. *roylei* Hook.f., *P.roylei* subsp.*dianae* (Balfour f. & Cooper) W.W.Smith & Forrest, *P.roylei* subsp.*calderiana* (Balfour f. & Cooper) W.W.Smith & Forrest.

Purple Golden-Eyed Primrose (Eng). **Habit:** Deciduous herb with winter resting bud, **Status:** LC, **Habitat:** Clearings and streamsides in *Abies* forest, and in damp alpine meadows & **Flowering:** May - August.



Primula tanneri King. subsp. *nepalensis* (W.W.Smith) Richards,
Synm: *P.nepalensis* W.W.Smith

Habit: Efarinose herb with small winter resting buds, **Status:** DD, **Habitat:** Moist mossy grounds in Abies/ Rhododendron forests & **Flowering:** April - May.



Primula dickieana Watt. Synm: *P.pantlingii* Watt. var. *dickieana*
Dickie's Primrose (Eng).

Habit: Perennial efarinose herb with small winter resting buds and few flowers, **Status:** LC, **Habitat:** Boggy ground and marshes in alpine pastures and Rhododendron scrub & **Flowering:** May - August.



Primula smithiana Craib

Singmai-mento (Ura). **Habit:** Perennial herb without winter resting buds, **Status:** LC, **Habitat:** Boggy places besides streams & **Flowering:** April - June.



Primula sikkimensis Hook. f. var. *sikkimensis*

Chang chang metog (Sha), Shangshang-Drilbu (Med)
Habit: Perennial herb without winter resting buds, **Status:** LC, **Habitat:** Marshy ground besides streams, damp meadows, amongst scrub and in Abies forest & **Flowering:** May - August.



Primula denticulata J.E.Smith. Synm: *P.aequalis* Craib, *P.platycrana* Craib

Drumstick Primrose (Eng), རྫོ་ཚད་མེ་ཉླག/ Doched Metog (Dzo), Gurgur Metog (Sha/ Trongsa/ Ura), Simphul (Nep). **Habit:** Deciduous herb with winter buds and persistent bud scales at flowering, **Status:** LC, **Habitat:** Open damp meadows and flushes, marshy clearings in Oak, Pine and Spruce forests & **Flowering:** February - June.



Primula capitata Hook.f., subsp. *crispate* (Balfour f. & W.W.Smith) W.W.Smith & Forrest

Capitata Primrose (Eng), ཉླ་གེ་མེ་ཉླག/ Tokey-metog (Dzo), Jabu-metog (Sha). **Habit:** Herb without winter buds or persistent bud scales, **Status:** LC, **Habitat:** Open grassy areas and clearings in Abies/ Rhododendron forest and Spruce forest & **Flowering:** July - November.



Primula bhutanica Fletcher

Habit: Herb on the ground floor, **Status:** Unknown, **Habitat:** Abies/ Rhododendron forest (Lower chumey area) & **Flowering:** July - November.



2. Androsace L. (by E.Aitken)

Androsace hookeriana Klatt, Synm: *Primula hookeriana* (Klatt) Bennet & Raizada

Common Rock Jasmine (Eng). **Habit:** Stoloniferous herb forming clumps, **Status:** LC, **Habitat:** Open grassy hillsides & **Flowering:** June - August.



Androsae geraniifolia Watt

Habit: Creeping herb, **Status:** Unknown, **Habitat:** Mixed coniferous forest (between Ura and Khandupang) & **Flowering:** May.



OLEACEAE

(Olive family)

Trees or shrubs, occasionally lianes. Leaves opposite, rarely alternate, simple, trifoliate or pinnate, peltate glands present on undersurface; stipules usually absent. Flowers bisexual (unisexual in *Fraxinus*), actinomorphic, in axillary or terminal inflorescences. Calyx 4-lobed (sometimes 4-5-lobed, as in *Jasminum*), rarely absent. Petals united into a tube, typically 4-(occasionally 6-12)-lobed, sometimes deeply so, rarely absent, imbricate in bud. Stamens 2, epipetalous, anther 2-celled, introrse, with longitudinal dehiscence. Pistil 1, ovary superior, of 2 fused carpels with axile placentation; ovules usually 2 per locule (4-10 in *Forsythia*), anatropous. Style 1 or none; stigmas 1-2. Fruit a berry, drupe, loculicidal capsule or samara.



1. *Fraxinus* L.

Fraxinus paxiana Lingelsheim var. *sikkimensis* Lingelsheim,
Synm: *F. suaveolens* W.W. Smith

Tab-seng (Med), Lankuri (Nep), Paizhu (Lep). **Habit:** Large tree (20m tall), **Status:** LC, **Habitat:** Open temperate mixed forest & **Flowering:** May - June.



2. *Osmanthus* Loureiro

Osmanthus suaveis Clarke

མ་ཚེ/ Chhatse (Dzo), Silingi (Nep). **Habit:** Shrub or small tree (2-10m tall), **Status:** LC, **Habitat:** Sub-alpine areas, Rhododendrons forest, dry forests, open hillsides & **Flowering:** April - June.



3. *Ligustrum* L.

Ligustrum confusum Decaisne. Synm: *L.indicum* (Loureiro) Merrill, *L.nepalense* Wall.

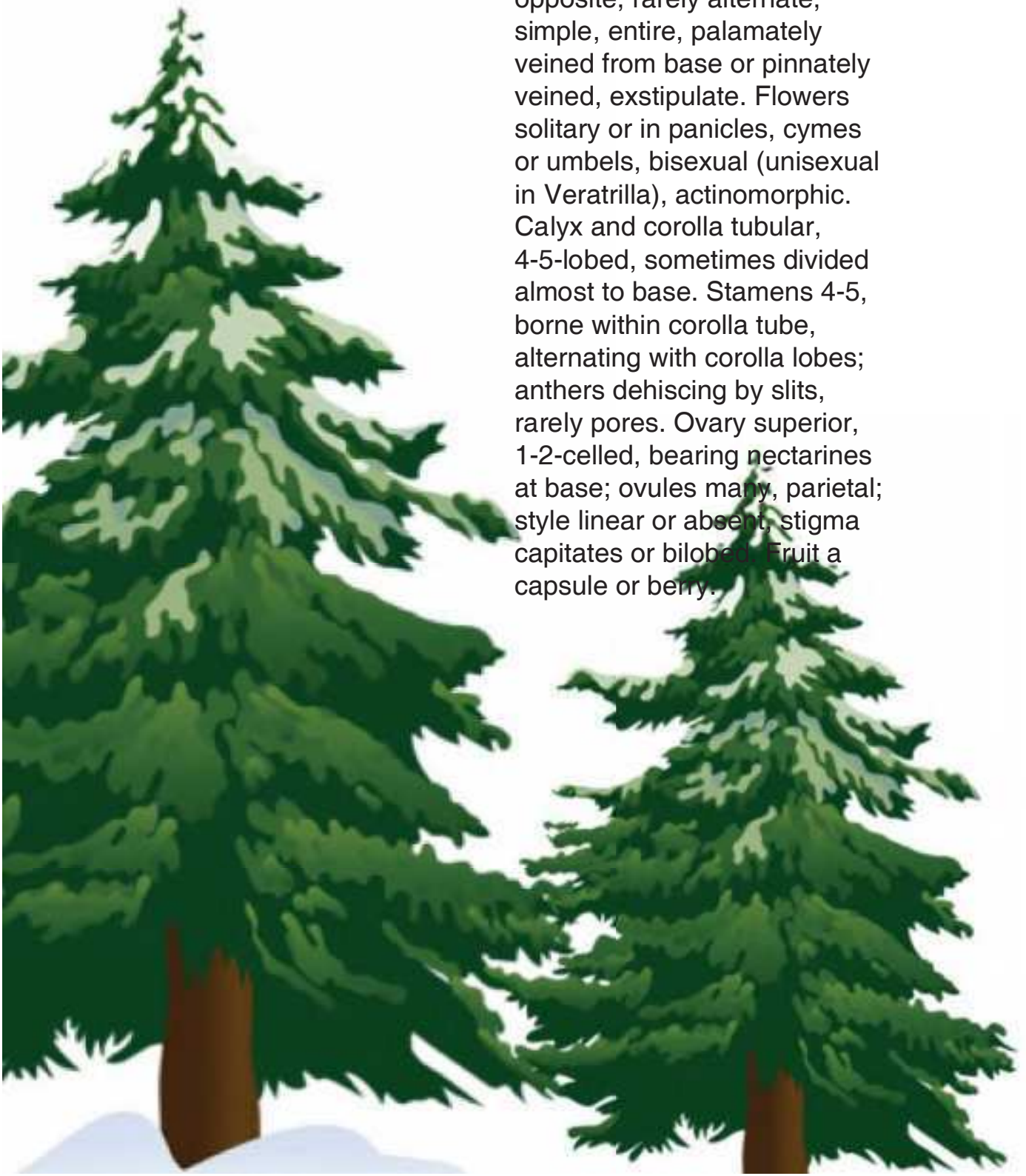
ཇམ་ཚེ་ཤིང་/ Jangtse shing (Dzo), Goomgacha (Nep). **Habit:** Shrub or small tree (3-10m tall), **Status:** LC, **Habitat:** Oak & Rhododendron forest, mixed wet forests and open scrub vegetation & **Flowering:** April - July.



GENTIANACEAE

(Gentian family)

Annual or perennial herbs (trees or shrubs in *Fagraea*), erect, twinning or sometimes saprophytic, usually glabrous. Leaves opposite, rarely alternate, simple, entire, palmately veined from base or pinnately veined, exstipulate. Flowers solitary or in panicles, cymes or umbels, bisexual (unisexual in *Veratilla*), actinomorphic. Calyx and corolla tubular, 4-5-lobed, sometimes divided almost to base. Stamens 4-5, borne within corolla tube, alternating with corolla lobes; anthers dehiscent by slits, rarely pores. Ovary superior, 1-2-celled, bearing nectarines at base; ovules many, parietal; style linear or absent, stigma capitate or bilobed. Fruit a capsule or berry.



1. *Crawfurdia* Wall.

Crawfurdia speciosa Wall., Synm: *C. wardii* Marquand

Showy Gentian Vine (Eng), རྫིལ་བུ་ཕམ་བ།/ Drilbu-faab (Dzo), Tseelingma yangrem (Sha) **Habit:** Twinning perennial herb, **Status:** LC, **Habitat:** Climbing over shrubs by paths and over bamboo in forest clearings & **Flowering:** September - November.



2. *Halenia* Borkhausen

Halenia elliptica D.Don., Synm: *Swertia centrostemma* Wall.

Spurred Gentian (Eng), རྩལ་མ་ཉིག།/ Chaktig (Dzo/Sho/Med)

Habit: Erect annual herb to 90cm, **Status:** LC, **Habitat:** Open hillsides, sandy peat, coarse turf, in forest clearings, below cliffs and on marshy grounds at roadside & **Flowering:** May - September.



3. *Megacodon* (Hemsley) H. Smith

Megacodon stylophorus (Clarke) H. Smith, Synm: *Gentiana stylophora* Clarke

Yellow Gentian Lily (Eng), Garpa metog (Sha), Kechey-karpo (Med) **Habit:** Perennial herb to 2m, **Status:** LC, **Habitat:** Grassy hillsides and meadows in Fir and Rhododendron forest & **Flowering:** June - August.



4. *Swertia* L.

Swertia bimaculata (Siebold & Zuccarini) Clarke, Synm: *Ophelia bimaculata* Siebold & Zuccarini

Double-Spotted Swertia (Eng), Chirata (Nep). **Habit:** Annual or biennial to 70cm, **Status:** LC, **Habitat:** On sandy loam in evergreen oak forest & **Flowering:** July - October.



Swertia chirayita (Roxb.) Karsten.

Habit: Erect annual herb, **Status:** Unknown, **Habitat:** Along roadsides in cool broad-leaved forest and open grounds (Namling) & **Flowering:** August.



Swertia sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Warm and Cool broad-leaved forest (Namling area).



Swertia sp.

Habit: Herb, **Status:** Unknown, **Habitat:** Alpine meadows (Below Phurchela i.e.above Geyzamchu) & **Flowering:** July.



5. *Gentiana L.*

Gentiana robusta Hook.f., Synm: *G.tibetica* Hook.f. var. *robusta* (Hook.f.) Kusnezow, *G.pharica* Burkill, *G.lhakangensis* Marquand

Keychi-karpo (Med)

Habit: Erect perennial herb to 30cm, **Status:** LC, **Habitat:** Open grazing grounds and banks & **Flowering:** August - September.



Gentiana veitchiorum Hemsley. Synm: *Gentianodes veitchiorum* (Hemsley) Love & Love

Habit: Trailing, procumbent perennial herb, **Status:** LC,

Habitat: On grassy moorland & **Flowering:** August – October.



Gentiana capitata D.Don, Synm: *G.marginata* Wall. (D.Don)

Grisebach, *G.andersonii* Clarke, *G.capitata* D.Don var.

andersonii (Clarke) Clarke, *G.cephalodes* Edgeworth, var.

andersonii (Clarke) Sunita & Battacharya, *G.carinata* (D.Don)

Omer, *G.capitata* (D.Don) Omer var.*andersonii* (Clarke) Omer,

Ericala marginata G.Don, *E.capitata* (D.Don) D.Don

Segmento (Ura), Bankauli/ Hansphul (Nep)

Habit: Erect annual herb 3-17cm, **Status:** LC, **Habitat:** Open

hillsides, roadsides and on river banks in forest & **Flowering:**

February – June (Occasionally October).



Gentiana sp.

Habit: Annual herb, **Status:** Unknown, **Habitat:** Ground floor in fir forest edges (Phrumsengla top and below shamzur in Shingkar) & **Flowering:** November



Gentiana depressa D.Don.

Habit: Prostrate annual herb, **Status:** Unknown, **Habitat:** Mossy rocks in sub-alpine region & **Flowering:** October.



Gentiana sp.

Habit: Annual herb, **Status:** Unknown, **Habitat:** Open hillsides & **Flowering:** July.



Gentiana elwesii Clarke

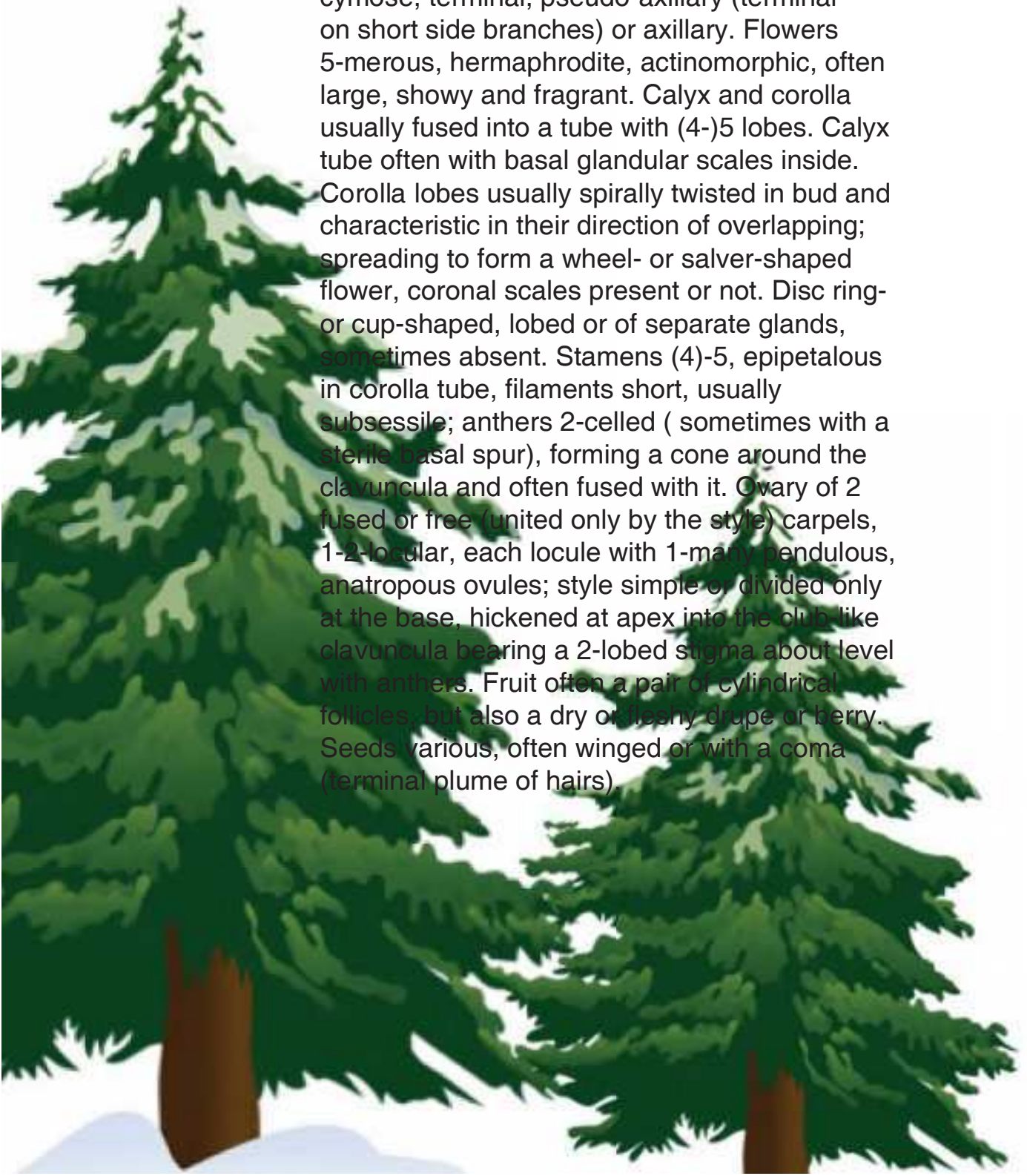
Habit: Herb, **Status:** Unknown, **Habitat:** ground floor in Fir forest & **Flowering:** August.



APOCYNACEAE

(Oleander family)

Trees, shrubs or woody climbers, rarely perennial herbs. Sap a milky latex. Leaves simple, entire, opposite or whorled, occasionally alternate, very rarely stipulate, but often with scales at base. Inflorescence cymose, terminal, pseudo-axillary (terminal on short side branches) or axillary. Flowers 5-merous, hermaphrodite, actinomorphic, often large, showy and fragrant. Calyx and corolla usually fused into a tube with (4-)5 lobes. Calyx tube often with basal glandular scales inside. Corolla lobes usually spirally twisted in bud and characteristic in their direction of overlapping; spreading to form a wheel- or salver-shaped flower, coronal scales present or not. Disc ring- or cup-shaped, lobed or of separate glands, sometimes absent. Stamens (4)-5, epipetalous in corolla tube, filaments short, usually subsessile; anthers 2-celled (sometimes with a sterile basal spur), forming a cone around the clavuncula and often fused with it. Ovary of 2 fused or free (united only by the style) carpels, 1-2-locular, each locule with 1-many pendulous, anatropous ovules; style simple or divided only at the base, hickened at apex into the club-like clavuncula bearing a 2-lobed stigma about level with anthers. Fruit often a pair of cylindrical follicles, but also a dry or fleshy drupe or berry. Seeds various, often winged or with a coma (terminal plume of hairs).



1. *Tabernaemontana* L.

Tabernaemontana divercata (L.) Roemer & Schutles. Synm: *T.coronaria* (Jacquin) Willdenow, *T.recurva* Lindley, *Nerium divaricatum* L., *Ervatamia divericata* (L.) Burkill, *E.coronaria* Stapf, *Testudipes recurva* (Lindley) Markgraf.

Crape Jasmine/ Carnation of India (Eng), Tagar/ Assamey (Nep)

Habit: Freely branching shrub to 5m, **Status:** Not evaluated,

Habitat: Widespread in sub-tropical areas, in dense evergreen forests to river banks, often cultivated & **Flowering:** August - June.



ASCLEPIADACEAE

(Milkweed family)

Woody climbers, shrubs or perennial herbs, sap of white latex usually present. Leaves simple, generally entire, opposite or whorled in Bhutanese species, usually with a small group of extrafloral nectarines (stiff glandular hairs) on upper surface of midrib at base of lamina; stipules minute or absent. Inflorescence cymose often umbellate, sometimes racemose, usually axillary. Flowers 5-merous, actinomorphic, hermaphrodite. Calyx fused and deeply divided almost to base. Corolla fused with lobes contorted or valvate; tube often with a ring of hairs within; both or either corolla lobes or stamens bearing scales or appendages which form coralline and stamina (double or single) coronas respectively. Stamens inserted at base of corolla or in corolline scales; filaments short to absent; anthers usually fused into a ring and united with style apex (alternating with stigmatic lobes) forming gynostegium, filaments or backs of anthers usually bearing cartilaginous appendages involved in pollination mechanisms (not in subfamily Periplocoideae: *Cryptolepis*, *Hemidesmus*, *Streptocaulon* and *Periploca*); pollen in each half of bilocular anthers usually united into a waxy pollinium which aids pollen transfer; translator consisting of two translator arms (horny wings or retinaculi) attaching pollinia to a corpusculum (or glang); pollens in subfamily Periplocoideae granular, not forming pollinia, instead the translator or arms have sticky, spoon-shaped end (viscidium) to which pollen adheres. Ovary superior or partly inferior, of 2 free carpels united only by style apices; styles 2, short, each bearing peltate stigma of 5 spreading lobes; carpels containing numerous anatropous ovules in several rows on single adaxial placenta. Fruit a pair of erect to divergent follicles, or solitary by abortion. Seeds flattened, ovate to oblong, with deciduous terminal coma of long, silky white hairs.



1. *Vincetoxicum* Wolf

Vincetoxicum hirundinaria Medicus subsp. *hirundinaria*,
Synm: *V. album* (Miller) Ascherson, *Cynanchum vincetoxicum*
(L.) Persoon

Swallow-Wort (Eng), Ngo-dhug mo-nyung (Med)

Habit: Stems erect, 30-100cm, usu. simple or branched at base,
Status: LC, **Habitat:** Open, dry habitats in varied situations
from pine woodland to grassland and river banks & **Flowering:**
April - August.



2. *Hoya* R. Brown

Hoya lanceolata D. Don.

Habit: Stout stemmed, epiphytic shrub with long pendulous
branches, **Status:** LC, **Habitat:** n trees and rock faces in sub-
tropical and warm broad-leaved forests & **Flowering:** May -
July.



Hoya polyneura Hook.f.

Habit: Stout-stemmed shrub, plagrous epiphyte with long branches, **Status:** LC, **Habitat:** Epiphyte on trees in mixed broad-leaved forests & **Flowering:** July - February.



Hoya sp.

Habit: Long pendulous shrub **Status:** Unknown, **Habitat:** Warm and cool broad-leaved forest (Norbugang/Namling) & **Flowering:** September.



Hoya sp.

Habit: Glabrous, extensive climber or creeper with stout stems (Milky juice oozes out when broken), **Status:** Unknown, **Habitat:** Epiphytic on shrubs in bushes along roadsides (Between Sengor and Latongla) & **Flowering:** September.



Hoya sp.

Habit: Glabrous and creeping extensive shrub (fruit a pod containing seeds with fibres), **Status:** Unknown, **Habitat:** Epiphytic on shrubs in cool broad-leaved forest (Latongla/below Khandupang).



RUBIACEAE

(Madder/Coffee family)

Trees, shrubs or herbs. Leaves opposite and decussate or whorled, usually entire, domatia sometimes present beneath in axils of primary veins; stipules interpetiolar, rarely leaf-like. Inflorescence axillary or terminal, usually cymose, sometimes forming diffuse panicles, capitates, fasciculate or flowers solitary. Flowers actinomorphic (rarely weakly zygomorphic), bisexual (rarely polygamous), sometimes dimorphic, 4-5(-6)-merous. Calyx united at base with ovary into a hypanthium, usually with tubular portion above ovary (the 'calyx tube' of the following descriptions except where stated to include the hypanthium), usually regularly 4-5(-6)-lobed above, sometimes lobes reduced to denticles absent, irregular, one enlarged and showy or supernumerary lobes or denticles present. Corolla (in E Himalayan species) infundibular, hypocrateriform, campanulate or rarely rotate, 4-5(-6)-lobed; tube rarely curved. Stamens 4-5(-6), alternating with corolla lobes and inserted on tube, anthers dehiscing by slits or pores. Ovary inferior, 2(-5)-celled with septal placentation, rarely 1-celled with parietal placentation, usually crowned with a large nectariferous disc, ovules 2-many; style 1, terminal, with capitates or 2(-5)-lobed stigma or with fusiform or mitriform stigmatic head; rarely styles 2, with simple capitates or cylindrical stigmas. Fruit a capsule, berry or drupe, sometimes schizocarpic.



1. *Mussaenda* L. (by J.R.I. Wood)

Mussaenda roxburghii Hook.f. Himalayan Mussaenda (Eng), Neptenta (Dzo), Menchha Patong (Sha), Dhobine phul (Nep), Tumberh (Lepcha). **Habit:** Much branched shrub 1.5-6m, **Status:** LC, **Habitat:** Dense valley forest, often clearings and by rivers & **Flowering:** May -July.



2. *Pavetta* L. (by J.R.I. Wood)

Pavetta polyantha Bremekamp. Synm: *P.indica* L. var. *polyantha* Hook.f., *P.griffithii* Bremekamp, *P.naucleiflora* G.Don var.*glabrituba* Bremekamp
Indian Pavetta (Eng), Kanjol Phul/ Tite Phul/ Kangya Phul (Nep)
Habit: Shrub 1.5-3m tall, **Status:** LC, **Habitat:** Moist sub-tropical forest & **Flowering:** April - June.



3. *Rubia* L. (by D.G. Long)

Rubia manjith Roxb., Synm: *R.cordifolia* L.

Indian Madder (Eng), བཙོད་/ Tsoedh (Dzo/Med), La-nyi.roo (Sha), Tsud (Ura), Manjit (Nep)

Habit: Climbing herb to 3m, **Status:** LC, **Habitat:** Scrambling on rocks and shrubs at forest margins, along foothpaths, hedgerows in sub-tropical and warm broad-leaved forests & **Flowering:** June - October.



Rubia charifolia G.Don.

Habit: Scrambling Asparagus-like herb to 1m or more, **Status:** Unknown, **Habitat:** Sub-tropical and warm broad-leaved forest scrubs & **Flowering:** September - October.



4. *Galium* L. (by R.R. Mill)

Galium aparine L. var. *echniospermum* (Wallroth) Cufodontis, Synm: *G. agreste* Wallroth var. *echniospermum* Wallroth. Goose Grass (Eng), Zangtsey (Med), Tiithranma (Ura)

Habit: Scrambling or trailing herb, sometimes forming mats or patches, **Status:** Not evaluated, **Habitat:** Weed of corn fields, potato fields and other crops, and in open ground in Fir/Rhododendron forest & **Flowering:** July - September.



BORAGINACEAE

(Borage/Forget-me-not family)

Trees, shrubs or most commonly herbs. Leaves usually alternate (occasionally some \pm opposite), simple, stipules absent. Inflorescence paniculate, corymbose, racemose or spike-like, the basic unit a helically coiled (scorpioid) cyme which usually elongates and straightens in fruit; flowers sometimes solitary in axils of bracts or leaves. Flowers actinomorphic or sometimes slightly zygomorphic, hermaphrodite or occasionally polygamous. Calyx cylindrical to infundibular, gamosepalous, \pm divided into (4-)5 lobes or teeth. Corolla gamopetalous rotate to cylindrical or infundibular, usually with distinct tube and \pm deeply lobed limb; tube often with small appendages (throat scales) near top, which close mouth of corolla and are sometimes replaced by a ring of hairs or absent altogether; lobes (4-)5. Stamens (4-)5, epipetalous, alternating with corolla lobes, anthers included or exserted. Ovary superior, (2-)4-locular; style terminal or more usually gynobasic. Fruit usually a group up to 4 dry nutlets, occasionally (in certain woody genera) a fleshy or dry drupe which may separate into 2 corky mericarps or 2-seeded or four 1-seeded pyrenes. Nutlets attached to gynobase apically, laterally or basally; attachment scar varying in size, sometimes with a sub-basal ring or stipe; body of nutlets often differentiated into disc and margin, margin sometimes with a \pm broad wing; surface and/or margin smooth or variously ornamented, glabrous or with hairs, setules or glochidiate tubercles or spines.



1. *Onosma* L.

Onosma hookeri Clarke

མུག་ཅེ / Mug-tse (Dzo/Sho), Torma-tsampale (Ura), Dri-muk (Med).

Habit: Perennial herb with short sturdy rootstock yielding red dye, **Status:** LC, **Habitat:** Open grassy hillsides in Blue Pine forest & **Flowering:** May - September.



2. *Cynoglossum* L.

Cynoglossum furcatum Wall.

Cimba (Dzo), Brumzai (Ura), Bhende Kuro/ Khirpatey (Nep)

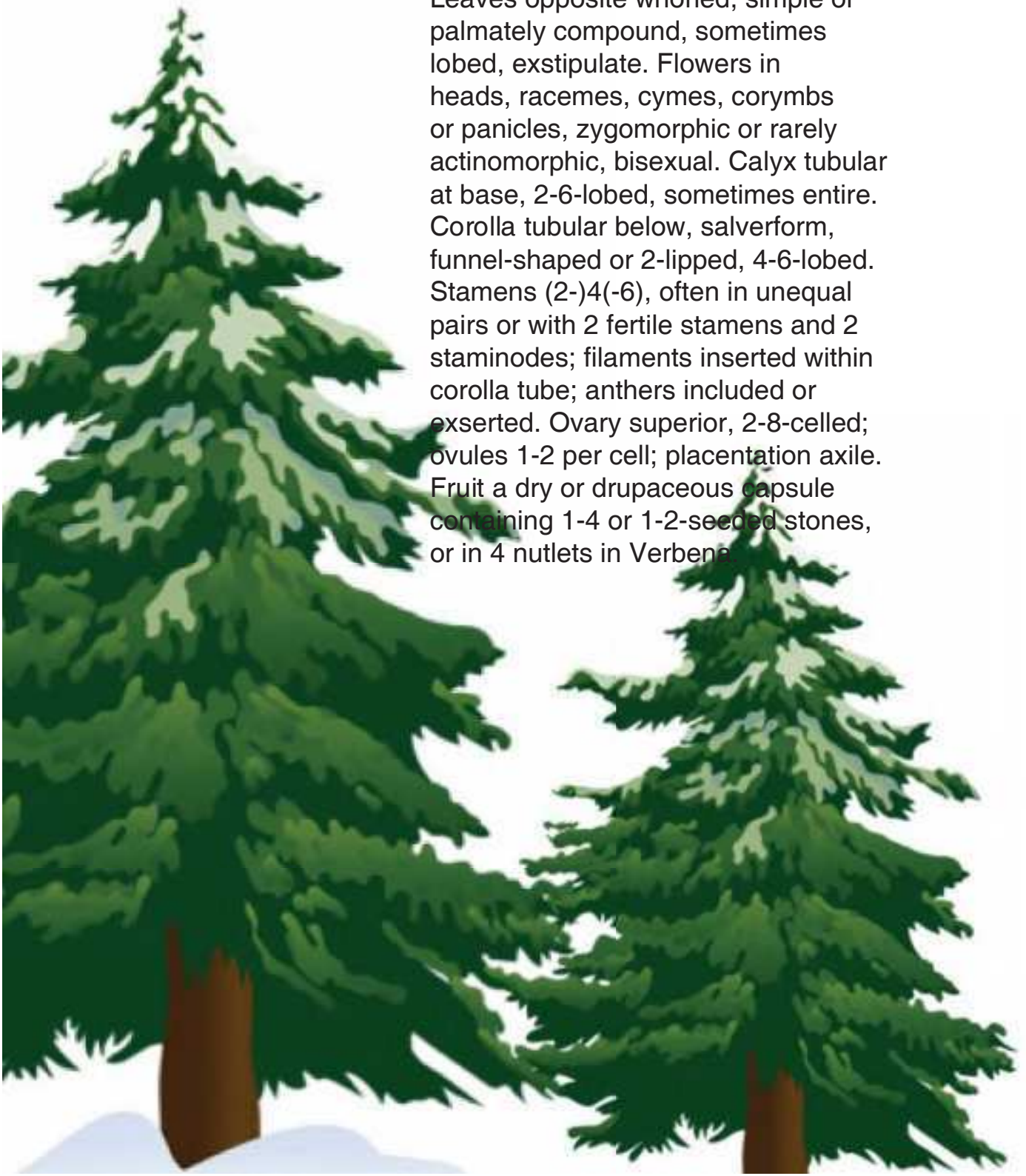
Habit: Biennial with or without stout rootstock, **Status:** Not evaluated, **Habitat:** Pasture fields, roadsides in Warm and cool broad-leaved forest & **Flowering:** April - October.



VERBENACEAE

(Verbena family)

Herbs, shrubs or trees; stems often quadrangular; indumentums of simple or stellate, rarely medifixed hairs, often with gland-dots or scales. Leaves opposite whorled, simple or palmately compound, sometimes lobed, exstipulate. Flowers in heads, racemes, cymes, corymbs or panicles, zygomorphic or rarely actinomorphic, bisexual. Calyx tubular at base, 2-6-lobed, sometimes entire. Corolla tubular below, salverform, funnel-shaped or 2-lipped, 4-6-lobed. Stamens (2-)4(-6), often in unequal pairs or with 2 fertile stamens and 2 staminodes; filaments inserted within corolla tube; anthers included or exerted. Ovary superior, 2-8-celled; ovules 1-2 per cell; placentation axile. Fruit a dry or drupaceous capsule containing 1-4 or 1-2-seeded stones, or in 4 nutlets in *Verbena*.



1. *Gmelina* L

Gmelina arborea Roxb.

Gamhar (Eng), གླ་དམར་ཤིང་/ Gamar shing (Dzo), Kholom shing (Sha), Gammari (Nep), Numbong kung (Lepcha)

Habit: Deciduous tree 10-20m, **Status:** Not evaluated, **Habitat:** On river banks in sub-tropical forest and cultivated & **Flowering:** February - April.



2. *Clerodendrum* L.

Clerodendrum sp.

Namala (Kheng)

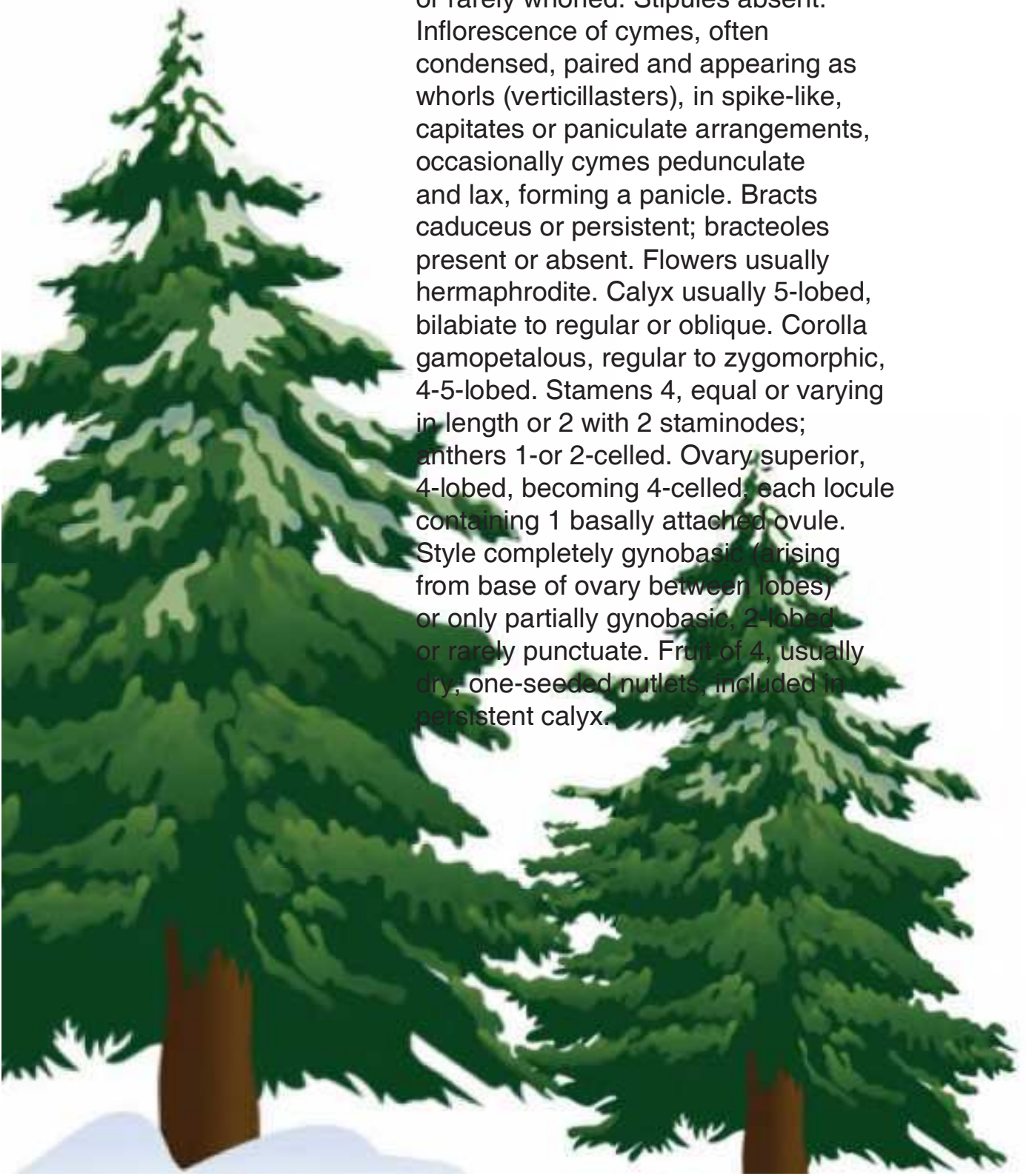
Habit: Medium shrub, **Status:** Unknown, **Habitat:** Underground vegetation in warm broad-leaved forest & **Flowering:** September.



LABIATAE

(Mint family)

Herbs, subshrubs or shrubs, often aromatic. Stems usually quadrangular. Leaves simple, rarely pinnatisect or compound, opposite and usually decussate or rarely whorled. Stipules absent. Inflorescence of cymes, often condensed, paired and appearing as whorls (verticillasters), in spike-like, capitate or paniculate arrangements, occasionally cymes pedunculate and lax, forming a panicle. Bracts caduceous or persistent; bracteoles present or absent. Flowers usually hermaphrodite. Calyx usually 5-lobed, bilabiate to regular or oblique. Corolla gamopetalous, regular to zygomorphic, 4-5-lobed. Stamens 4, equal or varying in length or 2 with 2 staminodes; anthers 1- or 2-celled. Ovary superior, 4-lobed, becoming 4-celled, each locule containing 1 basally attached ovule. Style completely gynobasic (arising from base of ovary between lobes) or only partially gynobasic, 2-lobed or rarely punctuate. Fruit of 4, usually dry, one-seeded nutlets, included in persistent calyx.



1. *Nepeta* L.

Prunella vulgaris L.

Common self-heal/ Heal all (Eng). **Habit:** Decumbent, perennial herb with somewhat tuberous roots, **Status:** LC, **Habitat:** Open grassy hillsides in low forest and damp sand and gravel areas & **Flowering:** June - July.



Nepeta connata Royle ex Benth.

Violet Himalayan Cat-Mint (Eng). **Habit:** Un-branched perennial herb, **Status:** LC, **Habitat:** Open grasslands and agriculture field edges & **Flowering:** August - September.



2. *Phlomis* L.

Phlomis tibetica Marquand & Shaw

Habit: Perennial herb, 7-72(-100)cm, **Status:** LC, **Habitat:** Open alpine meadows and grassy slopes, sometimes among shrubs & **Flowering:** May - September.



3. *Salvia* L.

Salvia campanulata Benth. Synm: *S.sikkimensis* Peter var. *chaenocalyx* Peter

Jibtsi-karpo (Med). **Habit:** Robust glandular, perennial herb, 40-75cm, **Status:** LC, **Habitat:** Clearings in Fir/ Rhododendron and Spruce forest and moist oak woodland & **Flowering:** June - September.



Salvia castanea Diels

Nagpaleng (Ura). **Habit:** Perennial herb, 7-72(-100)cm, **Status:** LC, **Habitat:** Open Spruce/ Pinus forest & **Flowering:** July, September & October.



Salvia sp.

Habit: Sub-alpine herb, **Status:** Unknown, **Habitat:** Grassland and meadows in Fir/ Rhododendron forest (Rodungla) & **Flowering:** May - July.



4. *Origanum* L.

Origanum vulgare L.

Habit: Rhizomatous Perennial herb, 28-85cm, **Status:** Not evaluated, **Habitat:** Roadsides, in Spruce forest, grassy slopes and sandy areas & **Flowering:** June - September.



5. *Elsholtzia* Willdenow

Elsholtzia fruticosa (D.Don) Rehder, Synm: *E.polystachya* (Bentham) Bentham

Shrubby Mint (Eng), Yas-curma (Ura), Bhote pate (Nep)

Habit: Shrub 1-5m, **Status:** LC, **Habitat:** Open hillsides among shrubs or in Spruce and Juniperus forest & **Flowering:** August - October.



Elsholtzia strobilifera (Bentham) Bentham

Aie tsun-tsun (Ura). **Habit:** Annual herb, (6-)12-38cm, **Status:** LC, **Habitat:** Roadsides and tracksides in Spruce and open Fir forest, among bamboo and also edges of agriculture fields & **Flowering:** September - November.



6. *Pogostemon Desfontaines*

Pogostemon amaranthoides Bentham

ལྷོལ་དྭ/ Namda (Dzo), Nam Tshodma/ Solomom (Sha), Badongma (Ura), Rudilo (Nep). **Habit:** Herb 60-150cm, **Status:** LC, **Habitat:** Evergreen oak and mixed broad-leaved forest & **Flowering:** September - October.



SOLANACEAE

(Potato family)

Herbs, shrubs, trees or lianas. Leaves usually simple and alternate (sometimes appearing falsely paired because of suppression of lateral branches), exstipulate, but often with smaller leaves (minor leaves) in their axils or intercalary. Flowers often showy, solitary and axillary or extra-axillary, or in racemes, spike, panicles, corymbs or cymes, usually hermaphrodite, actinomorphic or somewhat zygomorphic. Calyx (3-)5(-10)-lobed, copular, campanulate or tubular, usually persistent, often enlarged in fruit. Corolla rotate, campanulate, infundibular or salverform; lobes 5(-10), equal or somewhat unequal, often hairy, plicate or valvate in bud. Stamens (4-)5(-6), epipetalous and alternating with corolla lobes, sometimes didynamous; anthers sometimes connivent, dehiscing by terminal (and sometimes also basal) pores or by introrse longitudinal slits; fifth anther sometimes replaced by a staminode. Ovary superior, 2-4(-5)-locular placentation axile. Fruit a berry or capsule; seeds many, compressed, reniform or discoid; testa smooth or ornamented.



1. *Nicandra* Adanson

Nicandra physalodes (L.) Scopoli

Shoofly Plant/ Apple of Peru (Eng), Dong Dongey bin (Nep)

Habit: Robust annual herb (20-)100-200cm, **Status:** LC,

Habitat: Roadsides/tracksides, field margins and secondary scrub in sub-tropical and warm broad-leaved areas

& **Flowering:**

May – October
(Fruiting: July-December).



2. *Anisodus* Sprengel

Anisodus luridus Sprengel. Synm: *Scopolia lurida* (Sprengel)

Dunal, *Physalis starmonifolia* Wall., *S.stramonifolia* (Wall.)

Shrestha, *S.anomala* (Link & Otto) Airy-Shaw

Chitong metog (Sha), Halewa (Ura). **Habit:** Perennial herb with branched aerial stem (40-)100-200cm, **Status:** LC, **Habitat:** Open situations especially in and around villages and yak huts, also in cloud forest clearings & **Flowering:** June – July (Fruiting: Until October).



3. *Solanum L*

Solanum tuberosum L.

White potato (Eng), ཀེ་འུ་/ Kaewa (Dzo/Ura), Jogtang/ Pasang gong (Sha), Alu (Nep). **Habit:** Unarmed tuberous perennial 60-90cm, **Status:** Not evaluated, **Habitat:** Cultivated in gardens and agriculture fields & **Flowering:** June.



4. *Cyphomandra Sendtner*

Cyphomandra betacea (Cavanilles) Sendtner, Synm: *C. crassicaulis* (Ortega) Kuntze

Tree Tomato (Eng), Seng-gi Laem-benda (Ura). **Habit:** Large shrub or small tree about 2m, **Status:** Not evaluated, **Habitat:** Cultivated on terraced sub-tropical and warm temperate hillsides & **Flowering:** August – February (Fruiting starts from September onwards).



5. *Datura* L.

Datura stramonium L., Synm: *D.tatula* L. (purple flower)
Thorn Apple/ Jimsonweed (Eng), Nyanmo-throkchang (Sha),
Dha-dhura (Med), Dhatura (Nep).

Habit: Erect branched annual herb, sometimes becoming (soft) woody at base, **Status:** LC, **Habitat:** Fields, stony roadsides, camps and villages & **Flowering:** March - October.



6. *Brugmansia* Persoon

Brugmansia suaveolens (Willdenow) Berchtold & Presl.,
Synm: *Datura suaveolens* Willdenow

Angel's Trumpet (Eng), Nyanmo-throkchang (Sha), Dhokrey Phul (Nep). **Habit:** Shrub or small tree, 1-6m, branches brittle, young stems minutely pubescent, **Status:** Not evaluated, **Habitat:** Ravines in sub-tropical forest and by streams, near villages, always as an escape from cultivation & **Flowering:** February – September (Fruiting: September – April).



BUDDLEJACEAE

(Butterfly bush family)

Erect shrubs or small trees, hairs often stellate. Leaves simple, opposite, pinnately veined; stipules leafy, often interpetiolar, sometimes reduced to a line or absent. Flowers in terminal and axillary, often spike-like panicles, bisexual, actinomorphic. Calyx campanulate, shortly 4(-5)-lobed. Corolla narrowly or broadly tubular, with 4(-5) spreading or erect lobes. Stamens 4, inserted within corolla tube. Ovary superior, 2-celled, ovules numerous, placentation axile, style simple short, stigma clavate or capitate. Fruit a capsule, surrounded by persistent calyx, weakly laterally compressed. Seeds many, compressed.



1. *Buddleja* L.

Buddleja colvilei Hook.f. & Thomson

East Himalayan or Crimson Butterfly Bush/ Summer Lilac (Eng), Omsa nesma zhee metog (Sha). **Habit:** Shrub or small tree, 2-8m, **Status:** LC, **Habitat:** Amongst shrubs on open hillsides and margins of Hemlock and mixed forests & **Flowering:** June – August.



Buddleja crispa Bentham, Synm: *B.tibetica* W.E.Smith, *B.tibetica* var. *grandiflora* Marquand, *B.whitei* Kraenzlin

Himalayan Butterfly Bush (Eng), Omsa nesma - Jamog (Sha), Phangmai (Ura)

Habit: Deciduous shrub 1.5-3(-5)m, densely stellate-tomentose, **Status:** LC, **Habitat:** Amongst shrubs in Blue Pine forest, on open hillsides and on dry roadsides & **Flowering:** April - June.



Buddleja asiatica Lourerio

White Butterfly Bush/ Winter Lilac (Eng), Kangshing Chuwa (Dzo)

Habit: Shrub 5m, **Status:** LC, **Habitat:** In scrub on river banks, open hillsides and margins of sub-tropical and warm broad-leaved forests & **Flowering:** January – March.



Buddleja macrostachya Bentham, Synm: *B.griffithii* (Clarke) Marquand, *B.macrostachya* var.*griffithii* Clarke

Long Spiked Bush (Eng), Omsa nesma-Jamog (Sha)

Habit: Shrub or small tree, 2-3(-7)m, stellate pubescent, **Status:** LC, **Habitat:** Amongst shrubs on streamsides and margins of waorm broad-leaved forests & **Flowering:** August - October.



Buddleja paniculata Wall., Synm: *B.acutifolia* Wright

Panicked Butterfly Bush (Eng), Omsa nesma – karmo (Sha)

Habit: Similar to *B.macrostachya* but leaves ovate-lanceolate, margins denticulate or sub-entire, whitebor greyish stellate-pubescent or thinly tomentose above, **Status:** LC, **Habitat:** Warm broad-leaved forests & **Flowering:** April – May.



SCROPHULARIACEAE

(Figwort/Dog flower family)

Herbs, more rarely shrubs or trees (occasionally epiphytic), autotrophic, hemiparasitic or parasitic. Leaves alternate, opposite or sometimes whorled, simple, lobed or pinnately dissected. Inflorescence a thyrse, raceme or spike or flowers solitary. Flowers hermaphrodite, usually distinctly zygomorphic, sometimes \pm actinomorphic. Calyx \pm deeply divided into (2-)4-5 segments. Corolla sympetalous, (3-)4-5-lobed, bilabiate or not, sometimes spurred or saccate. Stamens attached to corolla tube and alternating with lobes, 2, 4 or 5, often didynamous; fifth (adaxial) stamen sometimes replaced by a staminode (e.g. Scrophularia) or absent; thecae sometimes unequal, often divergent and/or confluent at tips. Ovary superior, bilocular; style terminal; stigma capitate, punctiform, or 2-lobbed, usually wet. Ovules \pm numerous. Fruit usually a septicidal, loculicidal or poricidal capsule, less commonly a berry, rarely (Lagotis) a schizocarp. Seeds \pm numerous, angular or winged.



1. *Verbascum* L.

Verbascum thapsus L.

Great Mullein/ Adam's Flannel/ Beggar's Blanket (Eng), Kachum (Dzo), Mo-ngan barjen (Sha), Shingi-serBjey (Med), Tamphai (Ura)

Habit: Stout, erect biennial 30-150cm, densely tomentose and eglandular, **Status:** LC, **Habitat:** Dry, often abandoned fields, clearings in Blue Pine forest, often on sandy soil & **Flowering:** June – October.



2. *Hemiphragma* Wall.

Hemiphragma heterophyllum Wall. Var. *heterophyllum*

Habit: Slender creeping perennial, stems to 60cm, **Status:** LC, **Habitat:** Mixed broad-leaved (oak, birch, etc.), fir and pine/oak forests, Rhododendron, Juniper and bamboo scrub, open grassy hillsides and mountain rocks & **Flowering:** February – June (Buds forming by July and February – October forming fruits).



3. *Neopicrorhiza* Hong

Neopicrorhiza scrophulariiflora (Pennell) Hong, Synm: *Picrorhiza kurrooa* sensu. Hook.f., *P.scrophulariiflora* Pennell Figwort Picrorhiza (Eng), ཡུ་ཉི་ཤིང་/ Puti shing (Dzo, Ura), Kutki/Kutaki (Nep), Honglen (Med).

Habit: Perennial rhizomatous herb. **Status:** LC, **Habitat:** Among rocks and boulder on open grassy hillsides. **Flowering:** May-July.



4. *Lagotis* Gaertner

Lagotis kunawurensis (Bentham) Ruprecht var. *sikkimensis* (Hook.f.) Yamazaki, *L.glauca* Gaertner, *L.spectabilis* Hook.f.

Kinnaur Lagotis (Eng), **Habit:** Usually an erect with or without glabrous perennial, **Status:** LC, **Habitat:** Wet semi-stable scree and marshland & **Flowering:** June – August.



5. *Pedicularis* L.

Pedicularis siphonantha D.Don, Synm: *P.hookeriana* Tsoong
Tube Lousewort (Eng). Lukru-marpo (Med)

Habit: Perennial herb with or without stout vertical root-stock and fibrous roots, **Status:** LC, **Habitat:** Abies forest, Rhododendron scrub, damp alpine meadows and sedge moorland & **Flowering:** May – September.



Pedicularis pyramidata Royle subsp. *kashmiriana* (Penn.)
Tsoong Pyramid Lousewort (Eng). Lang-na (Med)

Habit: Perennial herb, **Status:** LC, **Habitat:** Open grassy slopes and roadsides in Spruce forest & **Flowering:** July – September.



BIGNONIACEAE

(Bignonia family)

Trees, shrubs and woody climbers, rarely herbs. Leaves opposite, decussate or alternate, rarely in whorls or rosettes, pinnately compound, 3-foolate with lower lobed, reflexed or spreading. Stamens 4, didynamous, long-exserted, inserted near base of corolla; anthers sagittate, thecae parallel, dehiscence \pm introrse. Style long, with incurved tip. Ovary glabrous. Fruit a 2-valved oblong or oblong-lanceolate septicidal capsule; valves separating from placentiferous axis. Seeds numerous, linear, with membranous broadly winged testa; endosperm absent.



1. *Oroxylum* Ventenat

Oroxylum indicum (L.) Ventnat, Synm: *Bignonia indica* L.,
Calosanthus indica (L.) Blume

Broken Bones Tree/ Indian Trumpet Flower/ Tree of Damocles
(Eng), ཙམ་པ་ཀ་མེ་ཉལ། Tsampakaye-metog (Dzo), Namkaling
metog (Sha), Tsampaka (Med), Namkhale mento (Ura), Totilla/
Totola (Nep)

Habit: Tree 4-6m, **Status:** LC, **Habitat:** In moist forest &
Flowering: May – June.



ACANTHACEAE

(Acanthus family)

Herbs or shrubs, rarely climbers (Thunbergia). Leaves opposite, decussate, simple without stipules; cystoliths commonly present on leaves and other vegetative parts appearing as white streaks. Flowers usually in cymes, racemes or spike but sometimes solitary or in axillary whorls, bisexual, often zygomorphic. Bracts and usually bracteoles present, bracts often prominent and concealing calyx, sometimes arranged in 3-4 levels especially in those genera with inflorescence. Calyx 4-5-lobed, lobes usually similar in genera with 5 lobes but often dissimilar in those with 4 lobes such as Barleria; much reduced in Thunbergia. Corolla usually 5-lobed but often 2-lipped with lower lip 3-lobed and upper lip notched or (in Acanthus) absent. Stamens attached to corolla, usually 4 in two dissimilar pairs, sometimes 2 with second paired reduced to staminodes; anthers 1-2-celled, sometimes spurred at base, cells at same level or one below the other; pollen very varied in appearance and often distinctive for a particular genus. Ovary superior, 2-celled; ovules 2-numerous. Style 1; stigma 2-lobed, posterior lobe often reduced and apparently absent. Fruit a loculicidal capsule, usually cylindrical or calvate in shape (globose and beaked in Thunbergia); seeds usually borne on short hook-like retinacula which eject the seed when ripe capsule opens. Seeds usually flattened, lens-shaped, glabrous or hairy, sometimes with elastic mucilaginous hair



1. *Strobilanthes* Blume

Strobilanthes sp.

Habit: Undershrub, **Status:** Unknown, **Habitat:** Warm broad-leaved forest & **Flowering:** November.



2. *Phlogacanthus* Nees

Phlogacanthus thrysiformis Nees

Habit: Perennial shrub, **Status:** LC, **Habitat:** Sub-tropical and warm broad-leaved forest & **Flowering:** January.



GESNERIACAE

(Gloxinia family)

Herbs or shrubs. Leaves simple, opposite, alternate or whorled, those of a pair equal or unequal; plant sometimes with only 1 leaf. Inflorescence usually cymose, rarely racemose, or flowers solitary. Flowers hermaphrodite, often protandrous, zygomorphic, sometimes cleistogamous with reduced corolla. Calyx 5-lobed or divided to base. Corolla with distinct tube, limb often 2-lipped. Stamens 2 or 4, inserted on corolla tube, staminodes 1 or 3. Disc annular or capular. Ovary superior, 1-celled with 2 parietal bilamellate placentae, usually inrolled. Ovules many. Fruit often a linear capsule, valves straight or twisted, rarely a berry.



1. *Aeschynanthus* Jack

Aeschynanthus parviflorus (D.Don) Sprengel, Synm: *Trichosporum parviflorum* D.Don, *A. ramosissimus* Wall.

Sikkim Blushwort (Eng). **Habit:** Shrub about 1m, stems spreading, laxly branched, **Status:** LC, **Habitat:** Evergreen forest, epiphytic or on cliff-faces & **Flowering:** July - September.



2. *Chirita* D.Don

Chirita pumila D.Don. Synm: *C. edgeworthii* DC., *C. diaphana* Royle, *Calosacme flava* Wall., *Bonnaya pumila* (D.Don) Sprengel, *Henckelia pumila* (D.Don) Sprengel

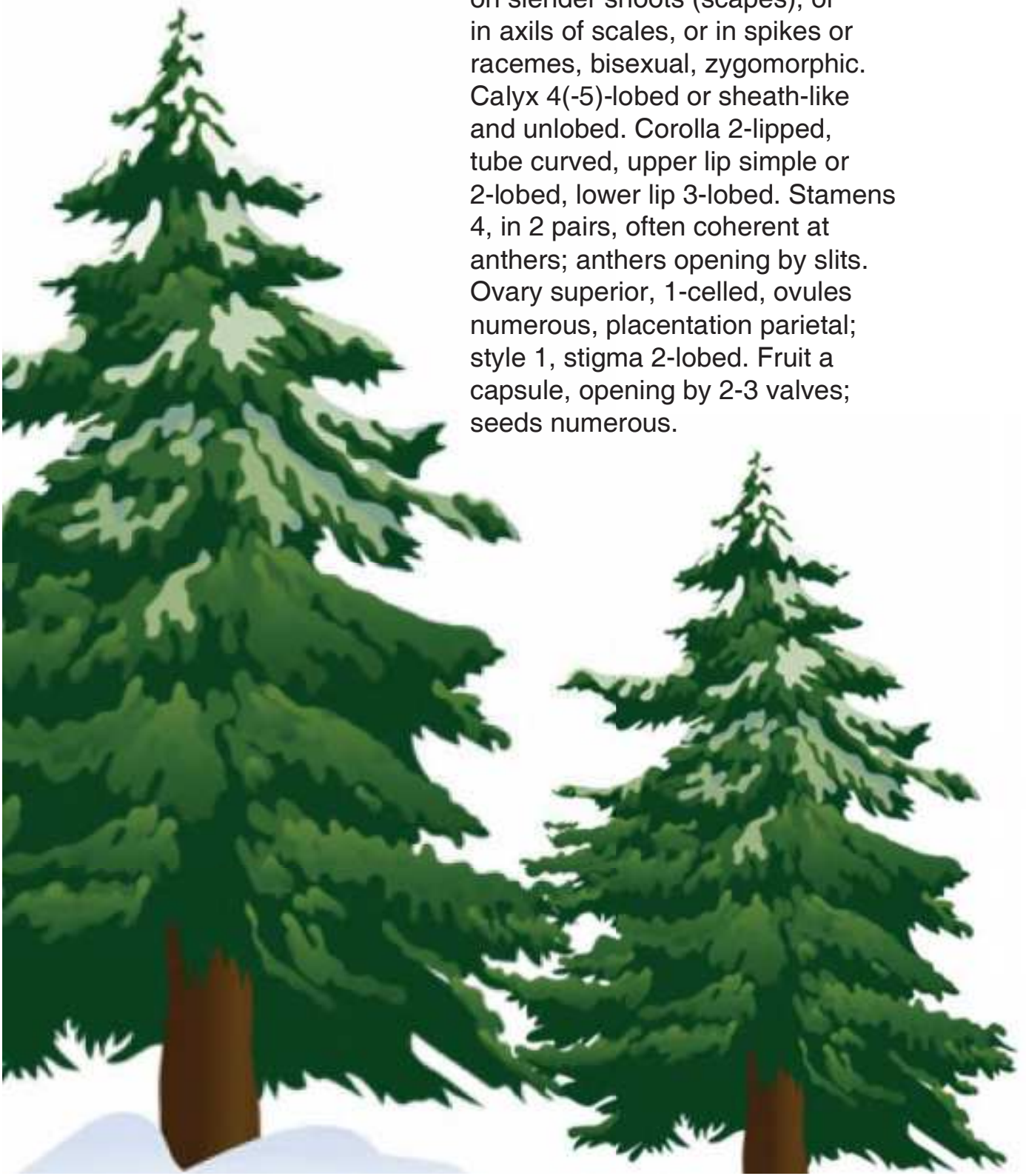
Habit: Annual herb 4-60cm tall, **Status:** , **Habitat:** Damp rock-faces and banks in broad-leaved forest & **Flowering:** July - October.



OROBANCHACEAE

(Broomrape family)

Anual or perennial, herbaceous root parasites, leafless and without chlorophyll. Stems usually simple, often short, scaly. Flowers solitary on slender shoots (scapes), or in axils of scales, or in spikes or racemes, bisexual, zygomorphic. Calyx 4(-5)-lobed or sheath-like and unlobed. Corolla 2-lipped, tube curved, upper lip simple or 2-lobed, lower lip 3-lobed. Stamens 4, in 2 pairs, often coherent at anthers; anthers opening by slits. Ovary superior, 1-celled, ovules numerous, placentation parietal; style 1, stigma 2-lobed. Fruit a capsule, opening by 2-3 valves; seeds numerous.



1. *Orobanche* L.

Orobanche solmsii Hook.f.

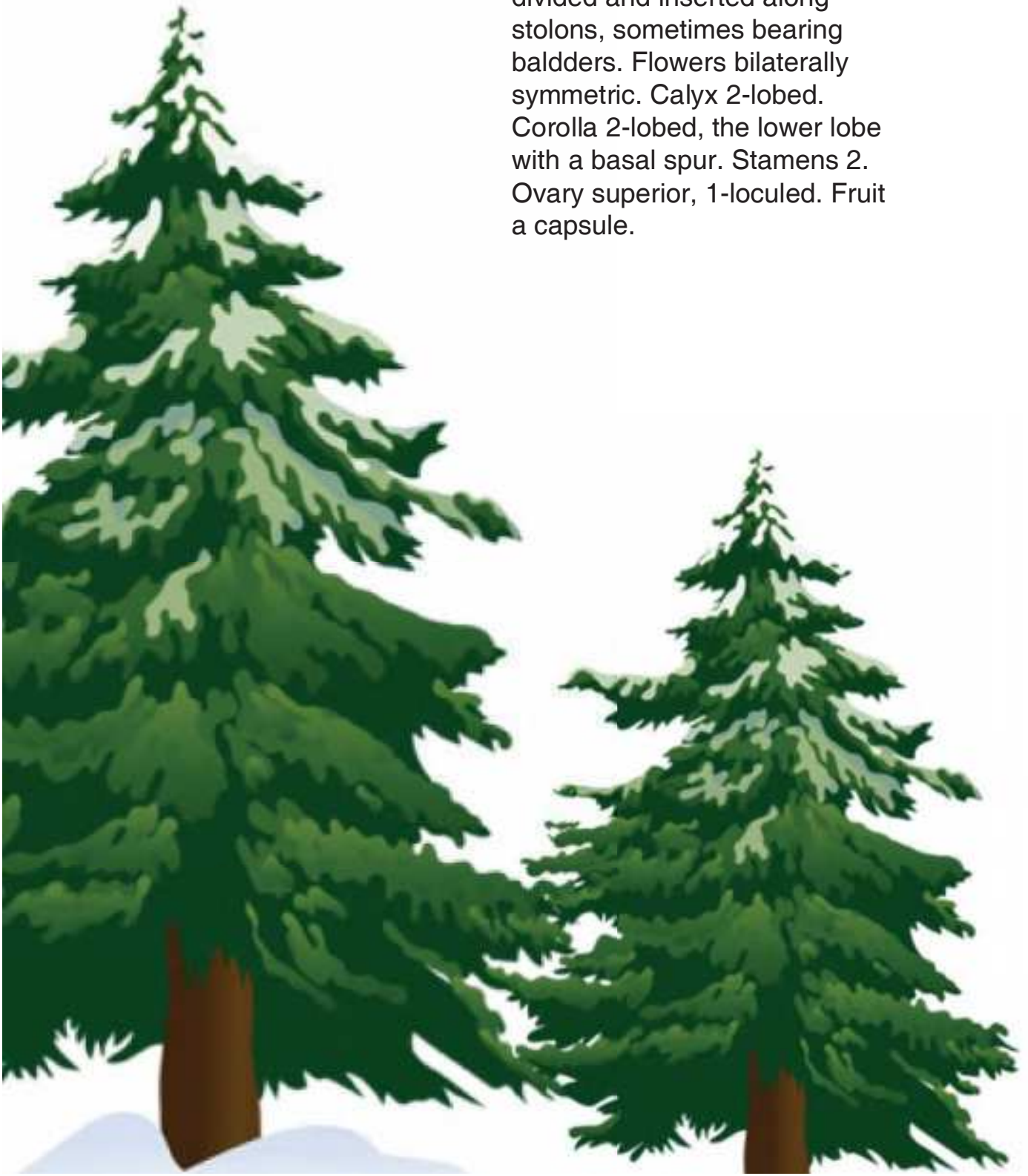
Habit: Robust biennial herb, **Status:** LC, **Habitat:** Hemlock and Rhododendron forest & **Flowering:** July - September.



LENTIBULARIACEAE

(Bladderwort family)

Insectivorous plants of wet places (aquatics, epiphytics or lithophytes). Leaves well developed and flat, in a rosette, or infilamentous and much divided and inserted along stolons, sometimes bearing baldders. Flowers bilaterally symmetric. Calyx 2-lobed. Corolla 2-lobed, the lower lobe with a basal spur. Stamens 2. Ovary superior, 1-loculed. Fruit a capsule.



1. *Utricularia* L.

Utricularia striatula Smith, Synm: *U.orbiculata* A. DC.

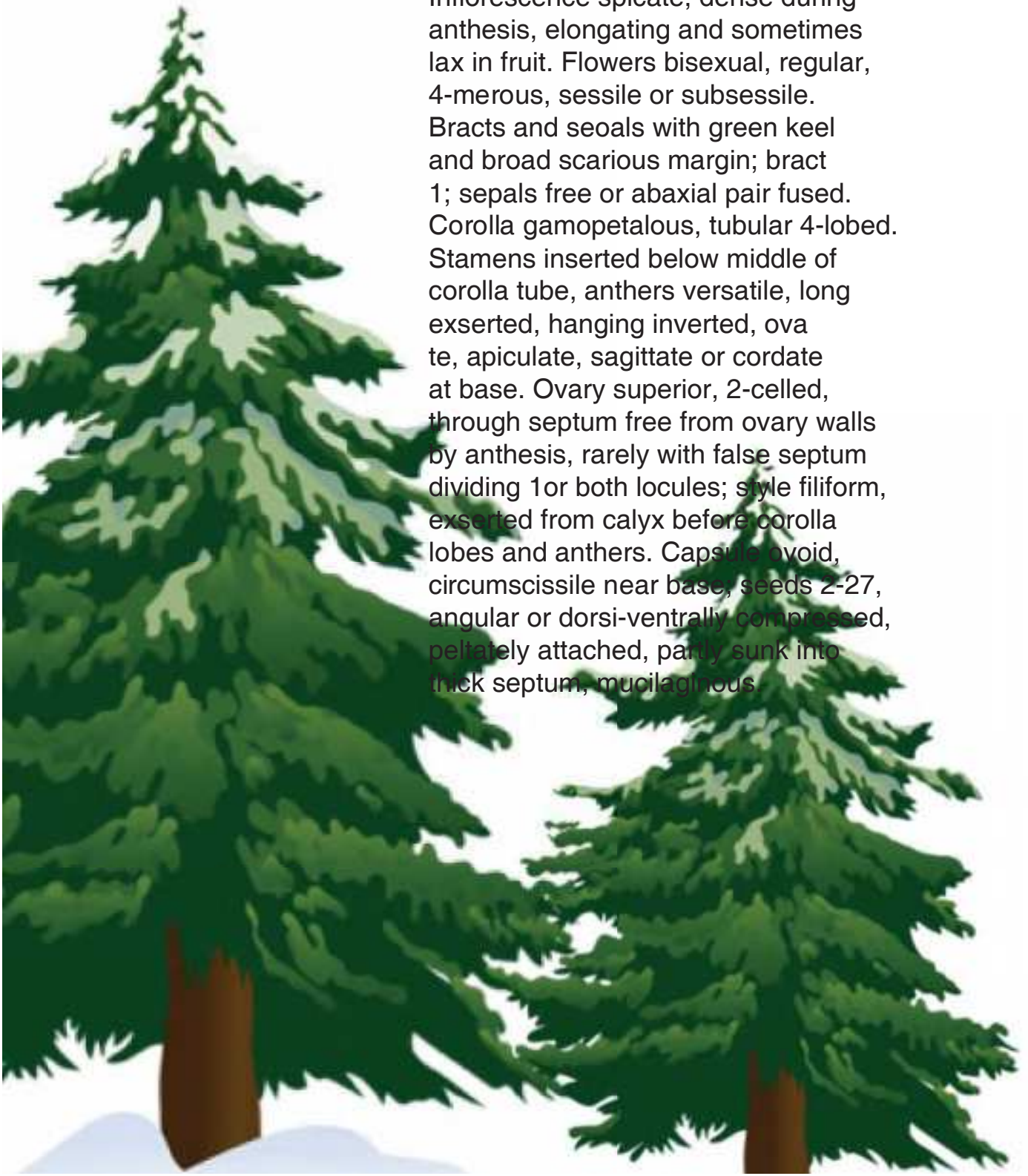
Striped Baldderwort (Eng). **Habit:** Delicate lithophytic annual herb; tuber absent, **Status:** LC, **Habitat:** Wet rocks including mossy turfs & **Flowering:** February - September.



PLANTAGINACEAE

(Isabgol family)

In our area one genus of rosulate scapose perennial herbs. Leaves simple, entire, dentate or sometimes lobulate towards base, with 3-5-parallel veins and broad channeled petiole. Inflorescence spicate, dense during anthesis, elongating and sometimes lax in fruit. Flowers bisexual, regular, 4-merous, sessile or subsessile. Bracts and seals with green keel and broad scarious margin; bract 1; sepals free or abaxial pair fused. Corolla gamopetalous, tubular 4-lobed. Stamens inserted below middle of corolla tube, anthers versatile, long exserted, hanging inverted, ovate, apiculate, sagittate or cordate at base. Ovary superior, 2-celled, through septum free from ovary walls by anthesis, rarely with false septum dividing 1 or both locules; style filiform, exserted from calyx before corolla lobes and anthers. Capsule ovoid, circumscissile near base, seeds 2-27, angular or dorsiventrally compressed, peltately attached, partly sunk into thick septum, mucilaginous.



1. *Plantago* L.

Plantago erosa Wall., Synm: *P. major* var. *asiatica* (L.) Decaisne

Common Plantain (Eng), Sa Shawa (Sha), Na-Tharam (Med)

Habit: Perennial herb; leaf blade elliptic 30-90cm x 15mm,

Status: LC, **Habitat:** Disturbed sites, waste ground, clearings, forest, field margins, grassland and riverside sands & **Flowering:**

March - August.



CAPRIFOLIACEAE

(Honeysuckle family)

Herbs, shrubs or small trees, sometimes climbing, usually with pith. Leaves simple or compound, opposite. Stipules present or absent. Flowers hermaphrodite, usually in corymbs or short spikes, rarely paniculate. Calyx adnate to ovary usually 5-lobed. Corolla gamopetalous, actinomorphic or zygomorphic; lobes usually 5, imbricate in bud. Stamens 5, rarely 6, inserted on corolla tube, alternating with corolla lobes. Ovary inferior, (1-)2-8-locular; style long or short; stigma capitate or lobed. Ovules solitary, few or many. Fruit a drupe or berry.



1. *Lonicera* L. (by P.W. Meyer)

Lonicera angustifolia DC.

Habit: Shrub to 4m, **Status:** LC, **Habitat:** Among Rhododendron in Fir forest along stream banks, and in Hemlock and Oak forests & **Flowering:** May - August.



Lonicera acuminata Wall., Synm: *L.loureiroi* DC, *L.henryi* Hemsley

Vine Honeysuckle (Eng). **Habit:** Climbing shrub to 4m, **Status:** LC, **Habitat:** Climbing over shrubs in Fir/ Rhododendron forests & **Flowering:** June - September.



2. *Leycesteria* Wall

Leycesteria formosa Wall.

Himalayan Nutmeg (Eng). **Habit:** Stems arching, hollow, 2-5m, **Status:** LC, **Habitat:** Gravel or loamy slopes, among shrubs in Hemlock or Fir forests & **Flowering:** June - August.



3. *Viburnum* L.

Viburnum nervosum D.Don, Synm: *V.cordifolium* DC.

Ola Sima (Dzo). **Habit:** Deciduous shrub, 2-6m, **Status:** LC, **Habitat:** Conifer/ Rhododendron forests, occasionally degraded areas & **Flowering:** April - June.



Virburnum foetidum Wall.

Habit: Deciduous shrub, 1.5-4m, **Status:** LC, **Habitat:** Broad-leaved conifer/ Rhododendron and evergreen oak forests, sometimes in degraded areas & **Flowering:** April - May.



Virburnum grandiflorum DC. , Synm: *V.nervosum* D.Don

Grand Viburnum (Eng). **Habit:** Deciduous shrub or small tree, 1.5-4m, **Status:** LC, **Habitat:** Conifer/ Rhododendron forests, stream banks and damp grassy hill slopes & **Flowering:** May - September.



Viburnum mullaha D.Don

Habit: Shrub or small tree, **Status:** Unknown, **Habitat:** Cool broad-leaved forest (Namling).



Viburnum erubescens DC.

Yadongdongla (Ura)

Habit: Medium shrub, **Status:** Unknown, **Habitat:** Among shrubs in Mixed conifer and Fir/ Rhododendron forest.



4. *Sambucus* L.

Sambucus adnata Reinwardt, Synm: *S.hookeri* Rehder

East Himalayan Elder (Eng). **Habit:** Shrubby herb, 0.3-1.5m

Status: LC, **Habitat:** Exposed hill slopes and clearings in mixed rain forest and Blue Pine forest & **Flowering:** June - September.



5. *Triosteum* L.

Triosteum himalayanum Wall., Synm: *T.hirsutum* Roxb.

Himalayan Horse-Gentain/ Himalayan Feverwort (Eng), Kram-kram (Ura)

Habit: Coarse erect herb with perennial root-stock, 45-60cm,

Status: LC, **Habitat:** Open or cleared Picea/ Tsuga forest often in damp ground & **Flowering:** June.



DIPSACACEAE

(Scabious family)

Herbs. Leaves opposite or whorled, simple, often pinnatifid or lobed, stipules absent. Flowers in cymes or dense heads, hermaphrodite, usually subtended by bracteoles. Calyx superior, very small or with long setae. Corolla superior, gamopetalous, zygomorphic (often obscurely so), 4-5-lobed. Stamens 4, attached to corolla tube. Style slender. Ovary inferior, unilocular with 1 pendulous ovule. Fruit 1-seeded, enclosed in persistent involucre and crowned with persistent calyx. Seeds with large straight embryo.



1. *Dipsacus* L.

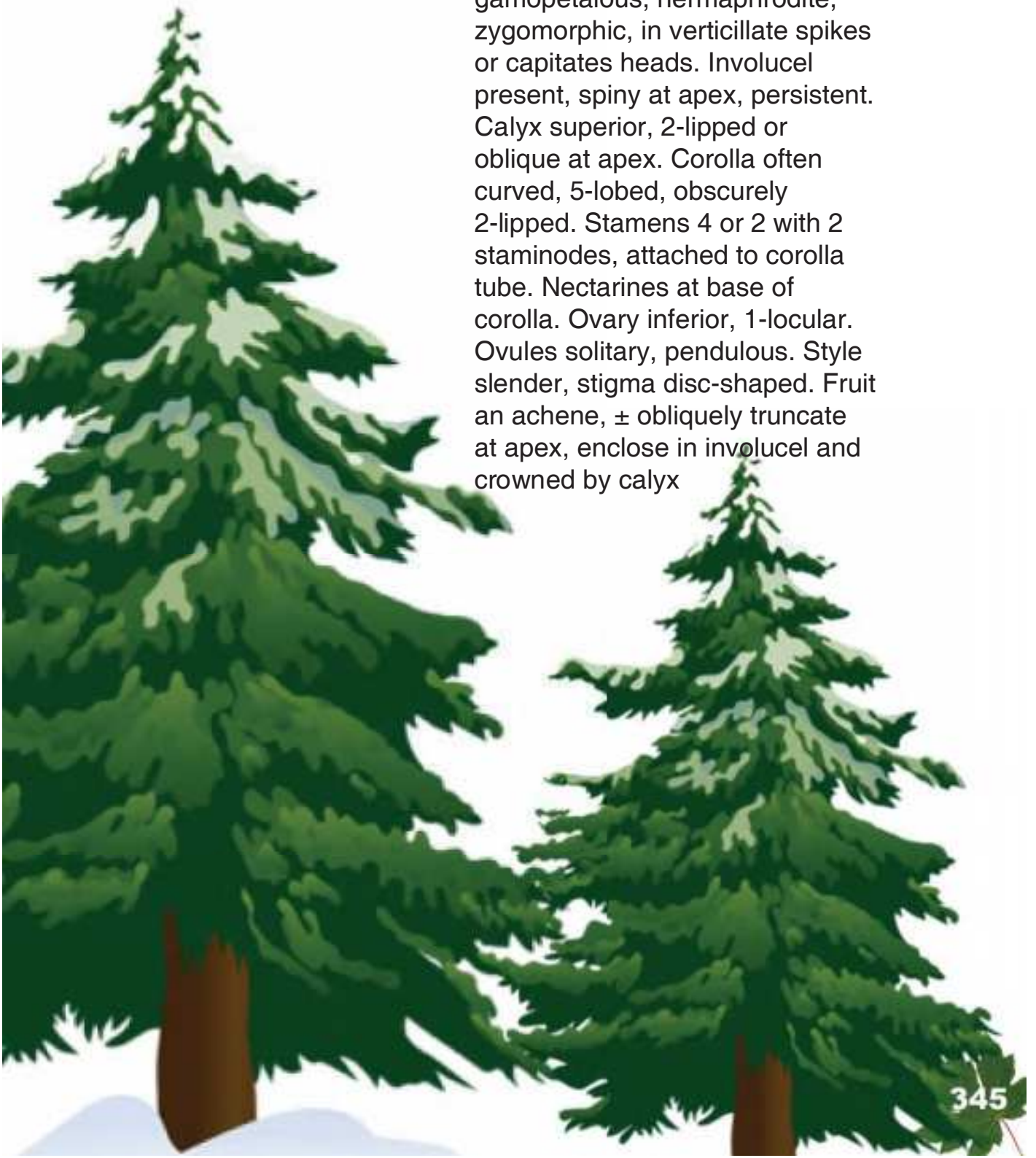
Dipsacus inermis Wall., Synm: *D.mitis* D.Don, *D.strictus* D.Don, *D.asper* DC.

Habit: Perennial herb, **Status:** LC, **Habitat:** Open hillsides or among shrubs & **Flowering:** August – September, December.



MORINACEAE

Perennial herbs. Leaves opposite or whorled, usually spiny; petioles connate forming sheaths around stems; stipules absent. Bractes conspicuous, at least partially obscuring flowers. Flowers gamopetalous, hermaphrodite, zygomorphic, in verticillate spikes or capitates heads. Involucel present, spiny at apex, persistent. Calyx superior, 2-lipped or oblique at apex. Corolla often curved, 5-lobed, obscurely 2-lipped. Stamens 4 or 2 with 2 staminodes, attached to corolla tube. Nectarines at base of corolla. Ovary inferior, 1-locular. Ovules solitary, pendulous. Style slender, stigma disc-shaped. Fruit an achene, \pm obliquely truncate at apex, enclose in involucel and crowned by calyx



1. *Acanthocalyx* (DC.) Cannon

Acanthocalyx nepalensis (D.Don) Cannon

Habit: Rhizome bearing perennial herb with some leaf base remains, **Status:** LC, **Habitat:** Open hillsides, among dwarf bamboo & **Flowering:** August - September.



CAMPANULACEAE

(Bellflower family)

Herbs (in Bhutan), usually with milky juice. Leaves simple, alternate, rarely opposite or spirally arranged; stipules absent. Flowers bisexual, actinomorphic or zygomorphic (lobelia), solitary or in racemose inflorescences. Calyx (4-)5-lobed, persistent. Corolla (4-)5-lobed, gamopetalous (occasionally divided virtually to base). Stamens 5, alternate with corolla lobes, filaments free, anthers free or connate, pollen often shed in bud and presented on style when flowers opens but before stigmatic surfaces are exposed. Ovary usually inferior, sometimes superior, 2-5-locular. Fruit a capsule or sometimes fleshy and berry-like. Seeds numerous, small.



1. *Campanula* L.

Campanula pallida Wall., Synm: *C.colorata* Wall., *C.ramulosa* Wall., *C.nervosa* Royle

Purple Bell Flower (Eng). **Habit:** Hirsute suffruticose herb, **Status:** LC, **Habitat:** Open rocky outcrops, mountain slopes, with shrubs & cultivated areas & **Flowering:** June - September.



2. *Adenophora* Fischer

Adenophora khasiana (Hook.f. & Thomson) Collett & Hemsley

Habit: Erect or suberect perennial herb, **Status:** LC, **Habitat:** Exposed slopes or open woodland & **Flowering:** July - October.



3. *Lobelia* L

Lobelia nummularia Lamarck, Synm: *Pratia nummularia* (Lamarck) A. Brown & Ascherson, *P.begonifolia* (Wall.) Lindley

Roundleaf Star Creeper (Eng)

Habit: Pubescent herb, stems creeping up to 30cm and rooting at base, **Status:** LC, **Habitat:** In damp or marshy ground in warm wet forest & **Flowering:** February, April – May, August - September.



Lobelia nubigena Anthony

Mazang Phurba (Ura), **Habit:** Robust biennial herb, stems erect, **Status:** Endemic to Bhutan, **Habitat:** In Alpine turf & **Flowering:** July.



Lobelia montana Blume, Synm: *Pratia montana* (Blume) Hasskarl

Habit: Glabrous herb except for flowers, stems erect or arching up to 130 cm, **Status:** LC, **Habitat:** On banks in mixed oak and broad-leaved forest & **Flowering:** July – August.



COMPOSITAE

(Daisy/Sunflower family)

Annual, biennial or perennial herbs, sometimes shrubs, rarely trees, tissues sometimes containing milky sap, glabrous, pubescent, tomentose, spinous or variously sessile- or stipitate-glandular. Leaves alternate or sometimes opposite, exstipulate (but sometimes with stipuliform appendages), entire, toothed, lobed or variously dissected. Individual flowers usually numerous, aggregated and \pm sessile (briefly impressed to very shortly stipitate) on a common receptacle and surrounded by an involucre of 1-many series of phyllaries (involucral bracts), the whole comprising a capitulum; phyllaries free, rarely connate; capitula solitary to very many, rarely aggregated into secondary capitulum-like glomerules. Receptacles sometimes bearing paleae (scales), hairs or bristles. Flowers (florets) epigenous, bisexual, female, male (at least functionally so) or neuter (sterile). Calyx absent, often replaced on apex of ovary by a pappus of 1 or more series of bristles and/ or scales. Corolla gamopetalous, tubular throughout or dilated or 1(-2)-lipped above, variously truncate or 1-5-toothed at apex (apices); rarely corolla absent. Stamens (1-5), epipetalous, filaments free, anther laterally connate into a cylinder around style (free in one species). Ovary inferior, 1-celled with one basal ovule; style usually divided above into two branches, sometimes entire on male flowers, emerging through anther cylinder first collecting and exposing pollen, later exposing stigmatic surfaces if bisexual. Fruit an achene (cypsela) usually bearing a persistent or deciduous pappus; pappus sessile or borne on a beak (rostrum).



1. *Mutisieae Ainsliaea* DC.

Ainsliaea aptera DC.

Wingless *Ainsliaea* (Eng). **Habit:** Perennial herb 6-120cm, leaves ovate, acute, cordate, more prominently dentate, subglabrous above and petiole unwinged (to 13 cm), **Status:** LC, **Habitat:** In deciduous and coniferous forest & **Flowering:** February - June.



Ainsliaea latifolia (D.Don) Schultz

Bipontinus

Habit: Leaves glabrous above, margins ciliate, **Status:** Unknown, **Habitat:** Tracksides in the cool broad-leaved forest.



2. *Cardueae Cirsium* Miller

Cirsium verutum (D.Don) Sprengel, Synm: *Cnicus argyracanthus* (DC.) Clarke

Common Thistle (Eng); Tagtserma (Ura). **Habit:** Stems 45-200cm, sparsely pubescent, **Status:** LC, **Habitat:** Grassy banks and roadsides & **Flowering:** June - September.



Cirsium wallichii DC.

Tagtserma (Ura). **Habit:** Bunch of stems with purple flowers, **Status:** Unknown, **Habitat:** Amongst dwarf bamboo in alpine grazing ground areas & **Flowering:** July - August.



3. *Cardueae Saussurea* DC.

Saussurea costus (Falc.) Lipsch, Synm: *Saussurea lappa* (Decaisne) Sch.Bip.

Costus/ Kuth (Eng); Shaba ruta (Ura), Ruta (Med). **Habit:** Perennial herb, **Status:** Not evaluated, **Habitat:** Cultivated for medicinal uses & **Flowering:** July.



4. *Lactueae Taraxacum* Weber

Taraxacum eriopodum DC., Synm: *T.officinale* Wiggers var. *eriopodum* Hook.f., *T.watii* Hook.f.

Dandelion (Eng). **Habit:** Perennial herb with leaves shallowly or moderately lobed, lateral lobes 2-4 pairs, triangular usually obtuse, entire to sparsely dentate, **Status:** LC, **Habitat:** Pasture and grassy banks & **Flowering:** July - October.



5. *Lactueae Picris* L.

Picris hieracioides L.

Hawk Weed (Eng). **Habit:** Plant 40-100cm, stem densely bristly below, **Status:** LC, **Habitat:** Roadsides, sands and gravels, dry slopes & meadows & **Flowering:** June - August.



6. *Vernonieae Vernonia* Schreber

Vernonia volkameriifolia DC.

Himalayan Tree Vernonia (Eng); Nundheki/ Nanriki (Nep)
Habit: Small evergreen tree 2-5m, stem densely bristly below, **Status:** LC, **Habitat:** Sub-tropical forest slopes & **Flowering:** October - March.



7. *Inuleae Inula* L.

Inula hookeri Clarke

Habit: Coarse perennial 0.6-1.5m, **Status:** LC, **Habitat:** Hillsides, forest clearings, coniferous and wet broad-leaved forest, riverside scrub on gravel & **Flowering:** August - October.



Inula racemosa Hook.f.

Indian Elecampane (Eng); Mani-rutu (Ura), Manu (Med).

Habit: Coarse perennial herb, **Status:** Not evaluated, **Habitat:** Cultivated in gardens and fields & **Flowering:** July - August.



Inula cappa (Buch.-Ham) DC

Sheep's Ear/ Fragrant Inula (Eng). **Habit:** Low shrub about 1-1.8m, **Status:** LC, **Habitat:** Dry Shaddy slopes in Chirpine and cool broad-leaved forest & **Flowering:** October.



8. *Carpesium* L.

Carpesium nepalense Lessing

Habit: Perennial herb, **Status:** LC, **Habitat:** Roadsides and along with shrubs in coniferous forest & **Flowering:** August - October.



9. Gnaphalieae *Anaphalis* DC.

Anaphalis busua (D.Don) DC, Synm: *A.araneosa* DC., *A.alata* Maximowicz

Tall Early Everlasting (Eng); ཨ་དི་སྤུ་སངས/ Wadepusang (Dzo), Buki Phul (Nep). **Habit:** Herb, 20-80cm, **Status:** LC, **Habitat:** Hillsides, among shrubs and roadsides & **Flowering:** February - November.



Anaphalis margaritacea (L.) Bentham & Hook.f., Synm: *A.cinnamomea* (DC.) Clarke

Pearly Everlasting (Eng); ད་མིང་གོ་ལྷ/ Daningon (Dzo)

Habit: Perennial herb 30-80cm, **Status:** LC, **Habitat:** Cleared forest, roadsides, rock crevices, etc., & **Flowering:** July - December.



Anaphalis contorta (D.Don) Hook.f., Synm: *A.tenella* DC.

Churkarp (Dzo)

Habit: lant woody at its base, 15-40cm, **Status:** LC, **Habitat:** Open slopes and screes & **Flowering:** February – July, November.



Anaphalis triplinervis (Sims) Clarke

Gurkeptang (Ura). **Habit:** Plant 23-50cm having semi-amplexicauli leaves, **Status:** LC, **Habitat:** Grassy slopes, open meadows, with dwarf bamboo and stony banks & **Flowering:** July - October.



Anaphalis nepalensis (Sprengel) Handel-Mazzetti

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Streamsides and roadsides in the Fir forest (Phrumsengla top area) & **Flowering:** July.



Anaphalis sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Waste grounds and roadsides (between Phrumsengla & Sengor) & **Flowering:** September.



Anaphalis sp.

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Roadside slopes in Fir/ Rhododendron forest & **Flowering:** September.



10. *Pseudognaphalium* Kirpichnikov

Pseudognaphalium affine (D.Don) Anderberg, Synm: *Gnaphalium affine* D.Don, *G.luteoalbum* L. var. *multiceps* (DC.) Hook.f.

Cotton Weed/ Jersey Cudweed (Eng); Mito kappa (Dzo), Hooki phul (Nep)

Habit: Annual herb, spreading and erect stems 10-40cm, **Status:** Not evaluated, **Habitat:** Common weed on roadsides and cultivated ground & **Flowering:** March - December.



Gnaphalium hypoleucum DC.

White-Leaved Cudweed (Eng). **Habit:** Annual herb, stems (20-80cm) simple, erect and branching above, **Status:** LC, **Habitat:** Hillsides, open ground, roadsides, fields, crops and pine forest & **Flowering:** March - October.



11. Astereae Aster L.

Aster albescens (DC.) Koehne, Synm: *Microglossa albescens* (DC.) Clarke

མཁའ་འགྲོ་མེ་ཉལ། / Khandro metog (Dzo/ Sha). **Habit:** Erect perennial shrub, 0.5-2m, **Status:** LC, **Habitat:** Clearings, forest margins and rocky scrub & **Flowering:** May - September.



Aster himalaicus Clarke

Himalayan Aster (Eng). **Habit:** Perennial herb, stems (3-)8-25cm, **Status:** LC, **Habitat:** Open area or Rhododendron scrub slopes or area with gravel or on cliffs & **Flowering:** August - October.



Aster neoelegans Grierson, Synm: *A.elegans* Clarke non willdenow, *A.tricephalus* Clarke

Habit: Erect stoloniferous perennial herb, stems 40-75(-100) cm, **Status:** LC, **Habitat:** Marshy ground, meadows, forest clearings, open hillsides & **Flowering:** May - September.



12. Anthemidae *Ajania* Poljakov

Ajania nubigena (DC.) Shih

Khamkar (Ura), Khen-nag (Med). **Habit:** Annual herb, stems woody, **Status:** Not evaluated, **Habitat:** Planted in gardens around goenpa and religious lhakhangs for insence use & **Flowering:** August - September.



13. Senecioneae *Ligularia* Cassini

Ligularia fisheri (Ledebour) Turczaninov, Synm: *L. sibirica* (L.) Cassini, *L. racemosa* DC., *Senecio ligularia* hook.f. var. *ligularia* Fisher's *Ligularia* (Eng).

Habit: Erect perennial herb, stems (47-90cm), **Status:** LC, **Habitat:** Streamsides, meadows and marshy slopes & **Flowering:** July - September.



Ligularia retusa DC.

Habit: Erect perennial herb, **Status:** LC, **Habitat:** Streamsides in the Sub-alpine area & **Flowering:** July - August.



ligularia mortonii (Clarke) Handel-Mazzetti

Madhang Shrok-shrokma (Ura)

Habit: Perennial herb, **Status:** Unknown, **Habitat:** Yak grazing areas, fire burnt areas and open hillsides in Fir forest & **Flowering:** June - August.



14. *Senecioneae* *Cremanthodium* Bentham

Cremanthodium reniforme (DC.) Bentham

Habit: Erect perennial herb, 10-40cm, **Status:** LC, **Habitat:** On peaty soils in turf and among rocks, in open, in Fir forest and among *Rhododendron* scrub & **Flowering:** June - October.



15. *Senecioneae* *Senecio* L.

Senecio scandens D. Don.

Climbing Senecio (Eng). **Habit:** Herbaceous perennial stems scrambling, **Status:** LC, **Habitat:** Roadsides and climbing over shrubs & **Flowering:** April - December.



Senecio raphanifolius DC.Sym: *S. diversifolius* DC. non Dumortier

Raddish Leaved Senecio (Eng). **Habit:** Rhizomatous perennial herb, stems 45-100(-150)cm, **Status:** LC, **Habitat:** Fields, openspaces, pasture, hillsides, among shrubs, in Abies forest & **Flowering:** June - November.



Senecio wallichii

Habit: Ground perennial herb, **Status:** LC, **Habitat:** Undergrowth in Fir and Hemlock forest & **Flowering:** August - October.



16. *Senecioneae Crassocephalum* Moench

Crassocephalum crepidioides (Bentham) S.Moore, Synm: *Gynura crepidioides* Bentham

Thickhead/ Fireweed/ Redflower ragleaf (Eng), Bodhpa-ngon (Sha), Dhadung phuley (Nep). **Habit:** Erect annual herb, **Status:** LC, **Habitat:** Roadsides, river shingle and among crops & **Flowering:** April - December.



17. *Heliantheae Galinsoga* Ruiz & Pavon

Galinsoga ciliata (Rafinesque) Blake

Bangali ahang (Ura). **Habit:** Annual herb, **Status:** Not evaluated (weed), **Habitat:** Roadsides, gardens and fields & **Flowering:** July.



18. *Eupatorieae Ageratina* Spach

Ageratina adenophora (Sprengel) King & Robinson, Synm: *Eupatorium adenophorum* Sprengel, *E. glandulosum* Humboldt, Bonpland & Kunth

Black weed/ Crofton weed/ Sticky snakeroot (Eng), Nayra-ngon (Sha), Kaley jhar (Nep). **Habit:** Herb or subshrub, **Status:** Not evaluated (weed), **Habitat:** Roadsides and cultivated sites & **Flowering:** January - June.



19. *Eupatorieae Chromolaena* DC

Chromolaena odoratum (L.) King & Robinson, Synm: *Eupatorium odoratum* L.

Siam Weed (Eng); Nayra-ngon (Sha). **Habit:** Smelly herbaceous perennial or shrub, erect or scrambling, **Status:** Not evaluated (weed), **Habitat:** Roadsides, forest clearings and plantations & **Flowering:** August - December.



From here onwards the treatment and arrangement of families largely follows Dahlgren Clifford and Yeo, 1985 (Noltie. H.J., 1994).

Monocotyletons

Monocotyledon, byname monocot, one of the two great groups of flowering plants, or angiosperms, the other being the dicotyledons (dicots). There are approximately 60,000 species of monocots, including the most economically important of all plant families, Poaceae (true grasses), and the largest of all plant families, Orchidaceae (orchids). Other prominent monocot families include Liliaceae (lilies), Arecaceae (palms), and Iridaceae (irises). Most of them are distinguished by the presence of only one seed leaf, or cotyledon, in the embryo contained in the seed.

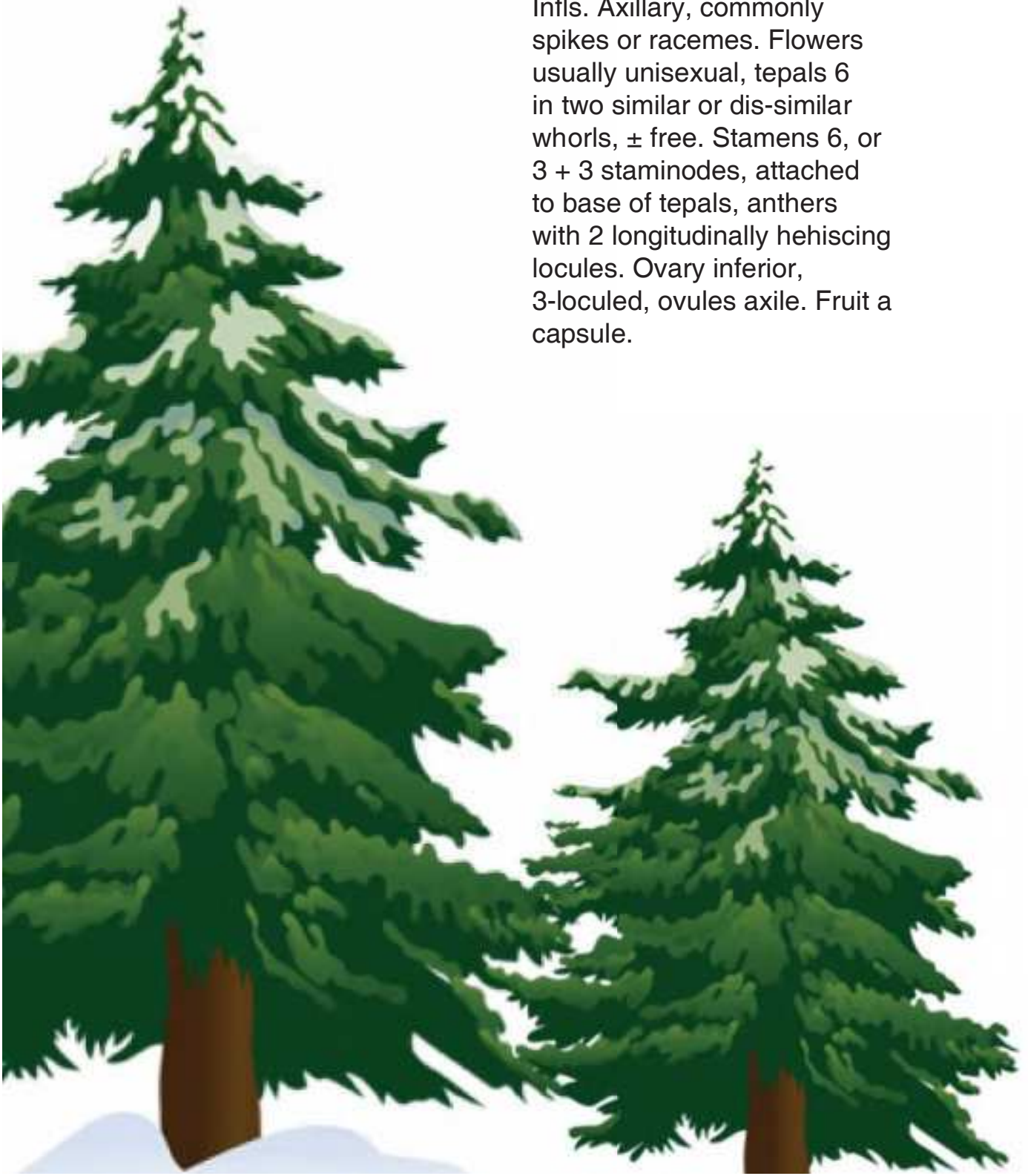
DIOSCOREACEAE

(Yam family)

Commonly herbaceous, twining perennials arising from tubers.

Leaves alternate or opposite, petiolate, simple or palmate.

Infls. Axillary, commonly spikes or racemes. Flowers usually unisexual, tepals 6 in two similar or dis-similar whorls, \pm free. Stamens 6, or 3 + 3 staminodes, attached to base of tepals, anthers with 2 longitudinally dehiscing locules. Ovary inferior, 3-loculed, ovules axile. Fruit a capsule.



1. *Dioscorea* L.

Dioscorea bulbifera L., Synm: *D.sativa* L.

Aerial Yam/ Air Potato/ Wild Yam (Eng); Key-sagthum (Ura),
Gittha (Nep), Zimikand (Hindi)

Habit: Tuberous perennial herbs, scrambling, **Status:** LC,

Habitat: Sub-tropical and warm broad-leaved forest, riverside
scrub & **Flowering:** June – September (Fruiting - September).



TRILLIACEAE

(Trillium/ Bunchflower family)

Rhizomatous perennials. Stem unbranched bearing a whorl of 3-6 simpl leaves. Flowers terminal, solitary, 3-10-merous, tepals in two whorls, all similar or outer sepaloid and inner either petaloid or filiform. Stamens equal in number to tepals; anthers basifixed, dehiscing inwards or outwards; connective sometimes prolonged upwards.. Ovary superior, of 3-6(-8) locules or \pm unilocular, apex sometimes with thickened rim; style divided at apex into stigmatic lobes. Fruit a berry or capsule. Seed sometimes with fleshy sarcotesta.



1. *Trillidium* Kunth

Trillidium govanianum (Wall. ex D.Don) Kunth, Synm:
Trillium govanianum Wall. ex. D.Don

Himalayan Trillium (Eng). **Habit:** Rhizomatous perennial herb; stem 5.5-24cm, erect; scale leaves pale brown, 6 ± similar, linear, reddish-purple tepals, anthers dehiscing outwards and stigma lobes erect, filiform, **Status:** LC, **Habitat:** Banks and streamsid es in forest (Abies, Tsuga, Rhododendron & Bamboo) & **Flowering:** April - June.



2. *Paris* L.

Paris polyphylla Smith

Love Apple/ Himalayan Paris (Eng), Thogsampa (Sha), Girchung-tsoema (Ura), Satuwa (Nep), Patar-ko (Hindi), Ch'i Yeh I Chih Hua (Chinese)

Habit: Rhizomatous perennial herb, **Status:** LC, **Habitat:** Broad-leaved and Tsuga forest and among shrub & **Flowering:** April - June.



Paris violacea Leveille, Synm: *P.marmorata* Stearn, *P.polyphylla* Smith subsp.*marmorata* (Stearn) Hara.

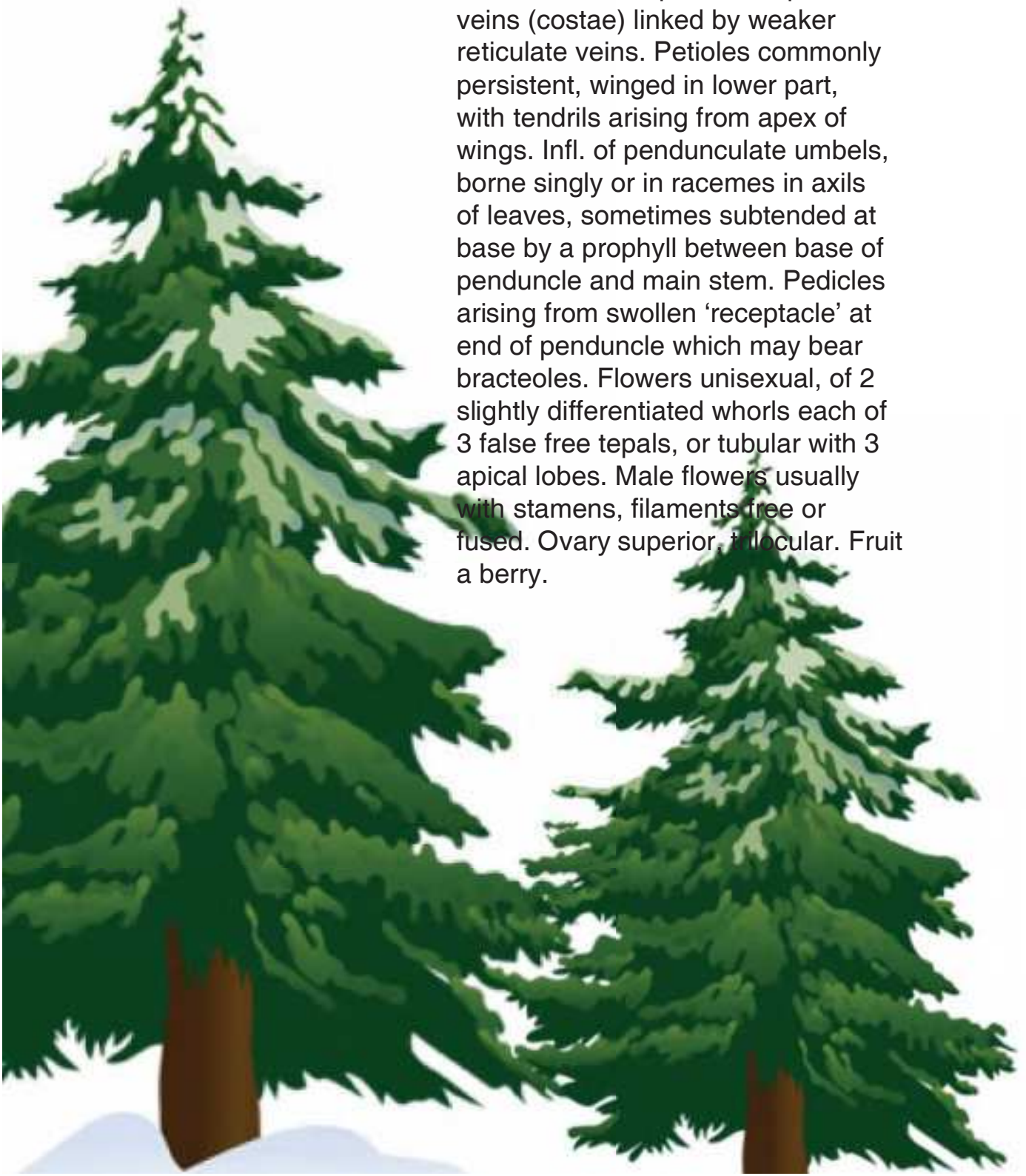
Habit: Rhizomatous perennial herb; smaller than *P.polyphylla* with fewer variegated leaves having whitish markings along the veins, margins wavy, **Status:** LC, **Habitat:** Damp mossy forest (including broad-leaved, evergreen and Blue Pine) & **Flowering:** April - May.



SMILACACEAE

(Smilax family)

Dioecious shrubs or semi-woody climbers. Roots tuberous. Stems often with stout recurved prickles. Leaves alternate, simple, often coriaceous, with prominent parallel veins (costae) linked by weaker reticulate veins. Petioles commonly persistent, winged in lower part, with tendrils arising from apex of wings. Infl. of pendunculate umbels, borne singly or in racemes in axils of leaves, sometimes subtended at base by a prophyll between base of penduncle and main stem. Pedicels arising from swollen 'receptacle' at end of penduncle which may bear bracteoles. Flowers unisexual, of 2 slightly differentiated whorls each of 3 false free tepals, or tubular with 3 apical lobes. Male flowers usually with stamens, filaments free or fused. Ovary superior, trilocular. Fruit a berry.



1. *Smilax* L.

Smilax aspera L.

Kukoorzoo khorwa (Sha), Gumandob (Ura)

Habit: Climber; stems zigzag, ridged, prickly, **Status:** LC,

Habitat: Among shrubs on dry hillsides & **Flowering:** October – November (Fruiting: April – August).



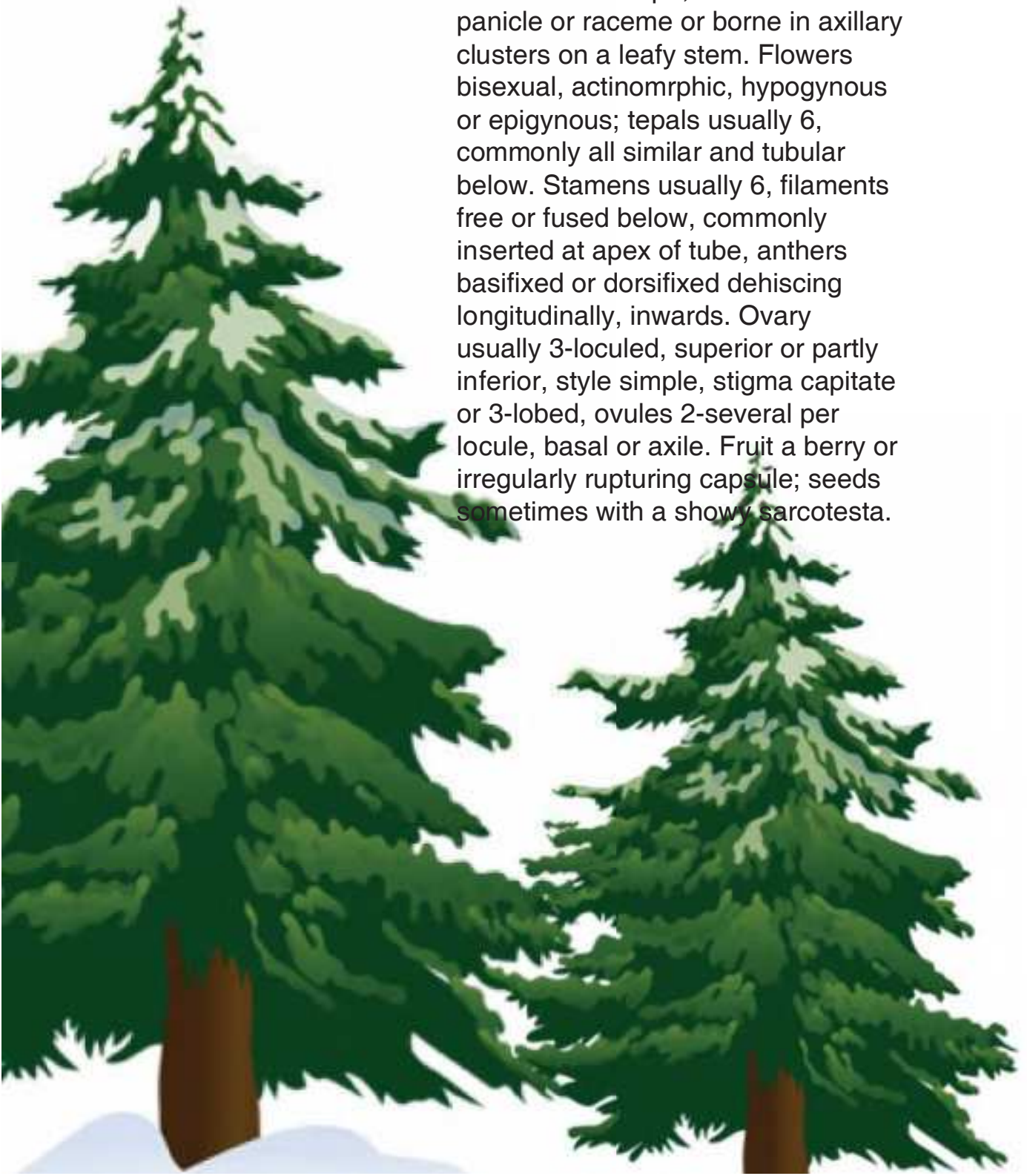
Smilax menispermoides A.DC.

Habit: Climber, **Status:** LC, **Habitat:** Among shrubs in cool broad-leaved forest (Saling, Mongar) & **Flowering/Fruiting:** May.



CONVALLARIACEAE

Perennial, usually rhizomatous herbs. Leaves in basal rosettes (sometimes distichous), or spiral, opposite or whorled along a stem, linear or differentiated into blade and petiole. Inflorescence a spike-like raceme on a leafless scape, or in a terminal panicle or raceme or borne in axillary clusters on a leafy stem. Flowers bisexual, actinomorphic, hypogynous or epigynous; tepals usually 6, commonly all similar and tubular below. Stamens usually 6, filaments free or fused below, commonly inserted at apex of tube, anthers basifixed or dorsifixed dehiscent longitudinally, inwards. Ovary usually 3-loculed, superior or partly inferior, style simple, stigma capitate or 3-lobed, ovules 2-several per locule, basal or axile. Fruit a berry or irregularly rupturing capsule; seeds sometimes with a showy sarcotesta.



1. *Tupistra Ker* Gawler

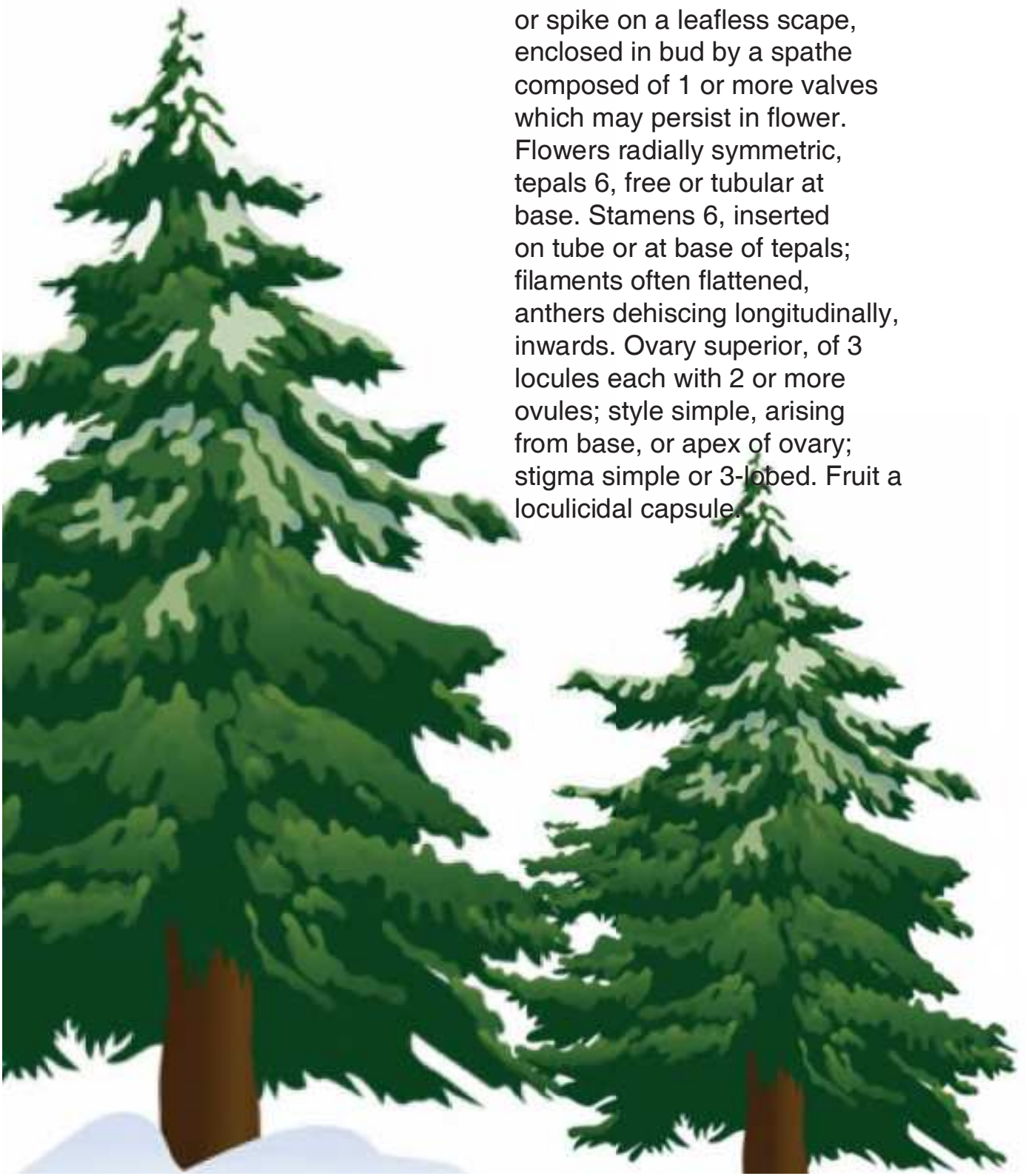
Tupistra wattii (C.B. Clarke) Hook.f., Synm: *Campylandra wattii* C.B. Clarke, *Rohdea wattii* (C.B. Clarke) Yamashita
Wattii (Eng), Khagtengma (Ura), Wangpemo (Masangdaza, Saling, Mongar), Tamurke (Nep). **Habit:** Herb with thick creeping rhizomes, **Status:** LC, **Habitat:** Evergreen oak forest & **Flowering:** October – May (Fruiting: July).



ALLIACEAE

(Onion family)

Perennial, bulbous or rhizomatous herbs, often strongly smelling. Leaves linear to ovate, basal or sheathing lower part of scape. Inflorescence a terminal umbel or spike on a leafless scape, enclosed in bud by a spathe composed of 1 or more valves which may persist in flower. Flowers radially symmetric, tepals 6, free or tubular at base. Stamens 6, inserted on tube or at base of tepals; filaments often flattened, anthers dehiscing longitudinally, inwards. Ovary superior, of 3 locules each with 2 or more ovules; style simple, arising from base, or apex of ovary; stigma simple or 3-lobed. Fruit a loculicidal capsule.



1. *Allium* L.

Allium wallichii Kunth

Himalayan Onion (Eng), ལགོབ་ལྗང་། Lagob (Dzo/Sho), Dunzema (Ura), Gopa (Nep)

Habit: Bulbous perennial herb, **Status:** LC, **Habitat:** Conifer including Juniper & Tsuga forest, open wet cliff-ledges and hillsides, among scrub & **Flowering:** July – October.



Allium hookeri Thwaites

Hooker's Chives (Eng), Maa (Ura). **Habit:** Bulbous (narrowly cylindrical) perennial herb, **Status:** LC, **Habitat:** Marshes & **Flowering:** July – August.



Allium sativum L.

Garlic (Eng), ཅ་གོབ/ Cha-gob (Dzo), Lam (Sha), Thrathru (Ura), Gogcha (Med), Lahsun (Nep)

Habit: Ovoid bulb perennial herb, composed of many branchlets, tunics papery, **Status:** Not evaluated, **Habitat:** Cultivate in the gardens & **Flowering:** August.



Allium schoenoprasum L.

Wild Chives (Eng)

Habit: Bulbous perennial herb, **Status:** Not evaluated, **Habitat:** Cultivate in the gardens & **Flowering:** September.



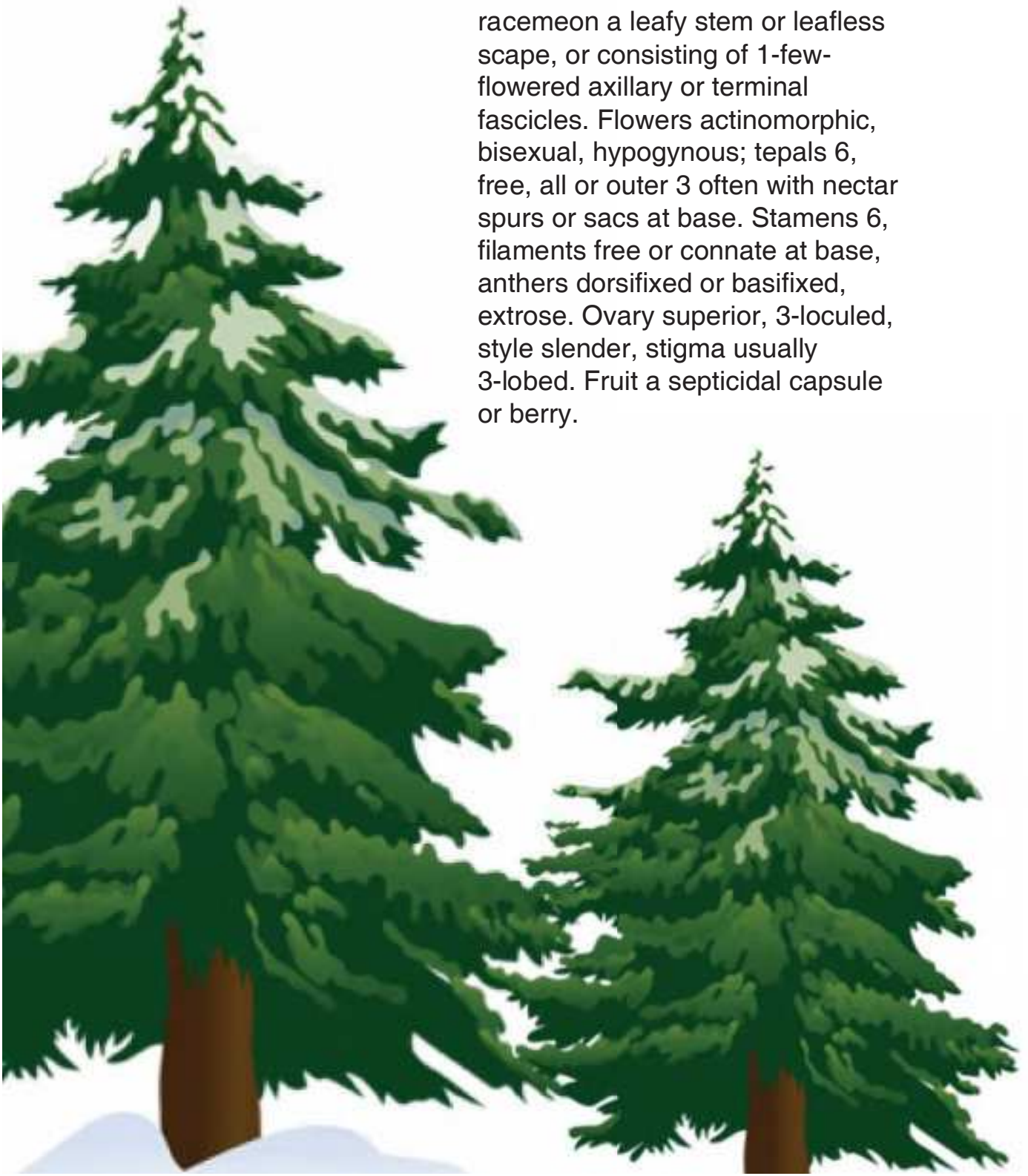
Allium sp.

Kewlee (Ura). **Habit:** Perennial herb, **Status:** Not evaluated,
Habitat: Grows in the gardens & **Flowering:** July.



UVULARIACEAE

Rhizomatous perennials. Leaves in basal rosettes or inserted spirally along a stem, commonly 'dicot-like' with elliptic blades and sometimes reticulate venation; scale leaves sometimes present at base of stem. Inflorescence a terminal raceme on a leafy stem or leafless scape, or consisting of 1-few-flowered axillary or terminal fascicles. Flowers actinomorphic, bisexual, hypogynous; tepals 6, free, all or outer 3 often with nectar spurs or sacs at base. Stamens 6, filaments free or connate at base, anthers dorsifixed or basifixed, exserted. Ovary superior, 3-loculed, style slender, stigma usually 3-lobed. Fruit a septicidal capsule or berry.



1. *Clintonia* Rafinesque

Clintonia udensis Trautvetter & C.A. Meyer subsp. *alpina*
(Kunth ex Baker) Hara

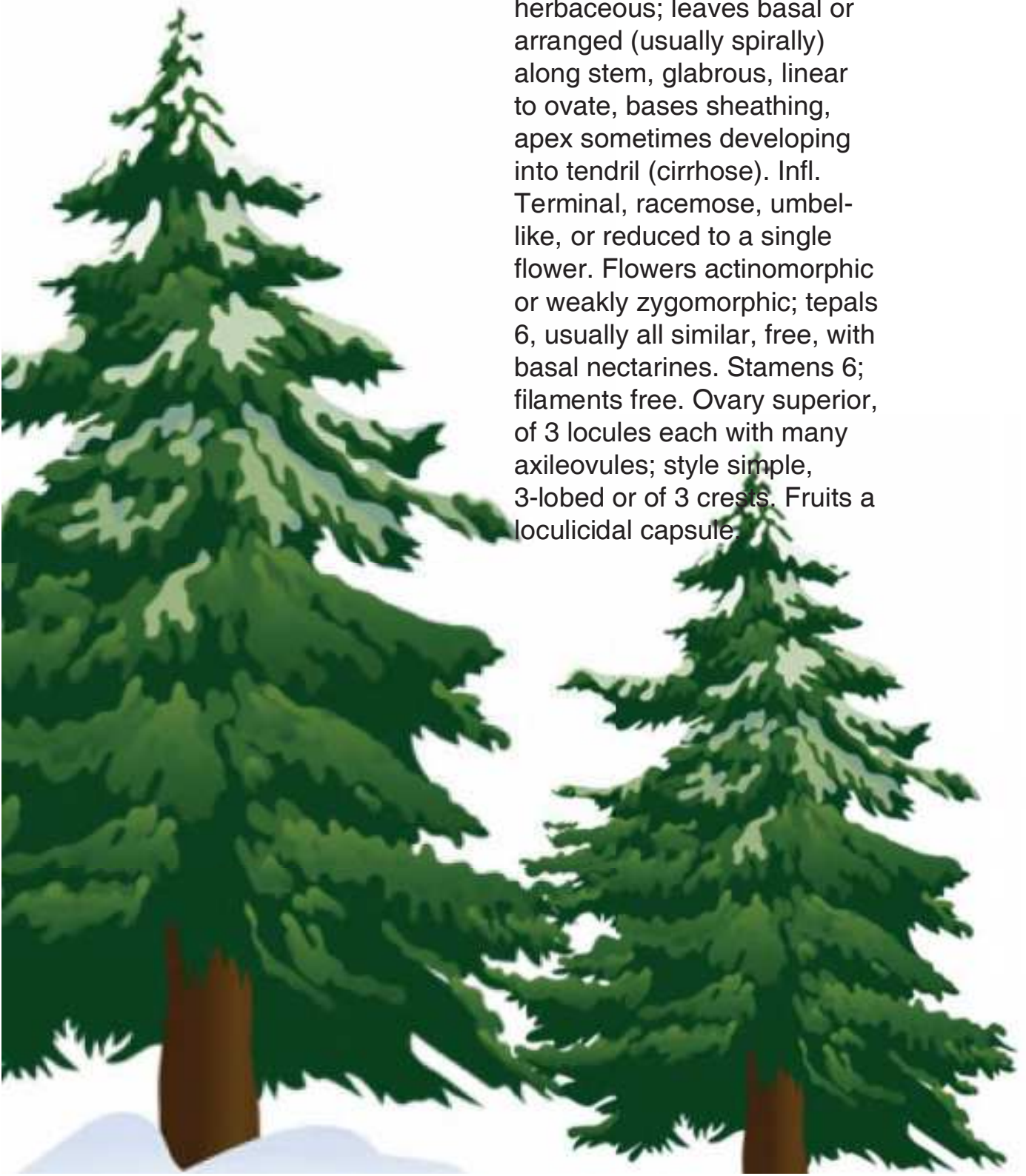
Bead Lily (Eng). **Habit:** Rhizomatous perennial herb, **Status:** LC, **Habitat:** Banks and streamsides in Tsuga, Rhododendron and Abies forest & **Flowering:** April - June.



LILIACEAE

(Lily family)

Perennial, bulbous herbs, bulbs composed of 1-many fleshy scales, enclosed by a membranous tunic or not. Stems erect, herbaceous; leaves basal or arranged (usually spirally) along stem, glabrous, linear to ovate, bases sheathing, apex sometimes developing into tendril (cirrhose). Infl. Terminal, racemose, umbel-like, or reduced to a single flower. Flowers actinomorphic or weakly zygomorphic; tepals 6, usually all similar, free, with basal nectarines. Stamens 6; filaments free. Ovary superior, of 3 locules each with many axile ovules; style simple, 3-lobed or of 3 crests. Fruits a loculicidal capsule.



1. *Cardiocrinum* (Endlicher) Lindley

Cardiocrinum giganteum (Wall.) Makino, Synm: *Lilium giganteum* Wall.

Loo-dhung (Sha), Umdare (Trongsa). **Habit:** Perennial bulbous herb, **Status:** LC, **Habitat:** Moist forest including Tsuga & **Flowering:** June - August.



2. *Notholirion* Wall. ex Boissier

Notholirion macrophyllum (D.Don.) Boissier

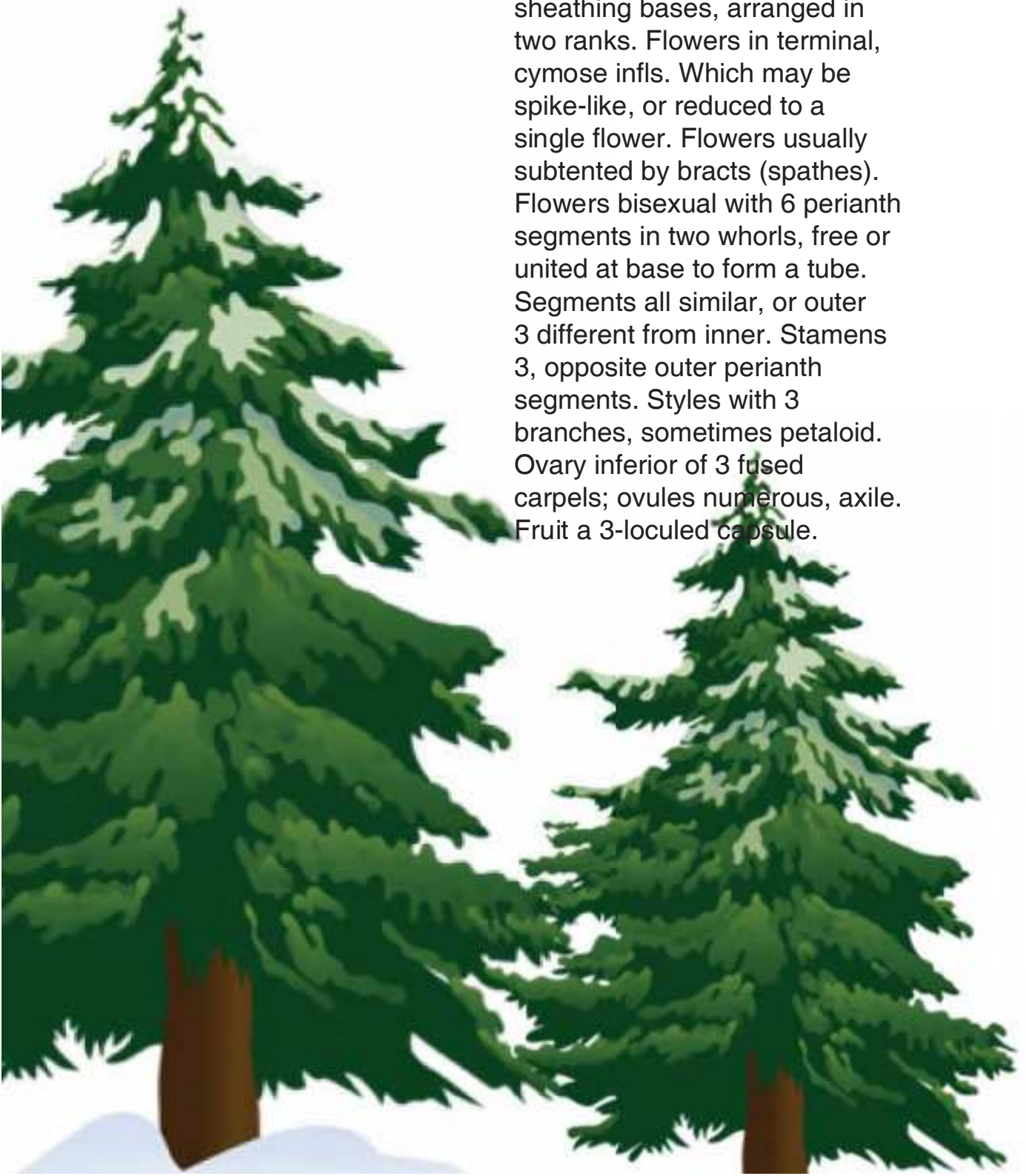
Habit: Perennial bulbous herb, **Status:** LC, **Habitat:** Open hillsides among grass and bushes; clearings in Fir and Spruce forest & **Flowering:** July - September.



IRIDACEAE

(Iris family)

Perennial herbs with underground storage organs (rhizomes, bulbs, corms, etc). Leaves usually narrow, with parallel veins and sheathing bases, arranged in two ranks. Flowers in terminal, cymose infls. Which may be spike-like, or reduced to a single flower. Flowers usually subtended by bracts (spathes). Flowers bisexual with 6 perianth segments in two whorls, free or united at base to form a tube. Segments all similar, or outer 3 different from inner. Stamens 3, opposite outer perianth segments. Styles with 3 branches, sometimes petaloid. Ovary inferior of 3 fused carpels; ovules numerous, axile. Fruit a 3-loculed capsule.



1. *Iris* L.

Iris decora Wall

Kumaon Iris (Eng), Phuga Joenshing (Sha), Drema (Med)

Habit: Rhizomatous herb, **Status:** LC, **Habitat:** Open grassy slopes often south facing & **Flowering:** May.



Iris clarkei Hook.f.

Clark's Iris (Eng), སྡེ་མེན/ Drema (Dzo)

Habit: Slender rhizomatous herb, **Status:** LC, **Habitat:** Marshy meadows, swamps in clearings in conifer forests & **Flowering:** June - August.



2. *Belamcanda* Adanson

Belamcanda chinensis (L.) DC., Synm: *Iris domestica* L.

Black berry Lily/ Leopard Flower/ Leopard Lily (Eng)

Habit: Rhizomatous herb, **Status:** LC, **Habitat:** Cultivated in gardens and occasionally naturalised & **Flowering:** June - August.



ORCHIDACEAE CYPRIPEIDIOIDEAE (ORCHID FAMILY)

1. *Cypripedium* L.

Cypripedium cordigerum D. Don

Heart-shaped Slipper Orchid (Eng)

Habit: Ground orchid, **Status:** LC, **Habitat:** In wet and shady woods, open coniferous forest, on outskirts of forests or in open glades, in dwarf bamboo scrub & **Flowering:** May - August.



1. *Anthogonium*

Anthogonium gracile Lindl.

Slender Anthogonium (Eng)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Roadsides in warm broad-leaved forest & **Flowering:** August - September



Arundinaria graminifolia (D.Don) Hochr.

Bamboo Orchid (Eng)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Among bushes in Chirpine forest & **Flowering:** November - January.



Calanthe alismifolia Lindl.

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Along with ferns and bushes in warm broad-leaved forest & **Flowering:** May - July.



Calanthe plantaginea Lindl.

Plantain Calnthe (Eng)

Habit: Terrestrial orchid,
Status: LC, **Habitat:** Moist
and wet forest & **Flowering:**
March - April.



Calanthe tricarinata Lindl.

Habit: Terrestrial orchid,
Status: LC, **Habitat:**
Coniferous forest floor &
Flowering: April - June.



Calanthe triplicata (Willmet) Ames

Fragrant Calanthe (Eng)

Habit: Ground orchid, **Status:** LC, **Habitat:** Under shades in warm broad-leaved forest & **Flowering:** April - June.



Calanthe Sylvatica (Thouars) Lindl.

Habit: Terrestrial orchid, **Status:** Unknown, **Habitat:** Under shades in warm broad-leaved forest & **Flowering:** June - August.



Cephalanthera longifolia (L.) Fritsch

Sword Leaved Helleborine (Eng)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Forest ground floor in coniferous forest & **Flowering:** April - June.



Chusua pauciflora (Lindl.) P.F. Hunt

Chusua Orchis (Eng)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Meadows with dwarf bamboo and marshy areas & **Flowering:** June - July.



Cymbidium erythraceum Lindl.

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Moist Oak forest & **Flowering:** October - December.



Cymbidium longifolium D. Don

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Moist broad-leaved forest & **Flowering:** September - December.



Dactylorhiza hatagirea (D.Don) Soo

Himalayan Marsh Orchid (Eng), Wanglag (Med), Wangpolagpa (Ura)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Alpine meadows and among shrubs (Berberies) & **Flowering:** June - July.



Dendrobium chrysanthum Wall. ex Lindl.

Golden Flowered Dendrobium (Eng)

Habit: Epiphytic or lithophytic orchid, **Status:** LC, **Habitat:** Moist warm and cool broad-leaved forest & **Flowering:** July - October.



Dendrobium falconeri Hook

Falconer's Dendrobium (Eng)

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Cool broad-leaved forest (Oak and Rhododendron) & **Flowering:** May - June.



Dendrobium hookerianum Lindl.

Habit: Lithophytic or epiphytic orchid, **Status:** LC, **Habitat:** Moist warm and cool broad-leaved forest & **Flowering:** July - October.



Dendrobium longicornu Lindl., Synm: *D.hirsutum* Griff.

Long-horned Dendrobium (Eng)

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Forest ground floor in coniferous forest & **Flowering:** April - June.



Dendrobium densiflorum Lindl.

Pineapple Orchid (Eng)

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** March - July.



Dendrobium nobile Lindl.

Nobile Dendrobium (Eng)

Habit: Epiphytic or Lithophytic orchid, **Status:** Unknown,

Habitat: Moist cool broad-leaved forest & **Flowering:** May - June.



Dendrobium fimbriatum Hook

Habit: Epiphytic orchid, **Status:** Unknown, **Habitat:** Moist coll broad-leaved forest & **Flowering:** April - May.



Dendrobium jenkinsii Wall. ex Lindl.

Habit: Lithophytic orchid, **Status:** LC, **Habitat:** Rocky areas in Warm broad-leaved forest & **Flowering:** April - May.



Gastrodia elata Bl.

Habit: Saprophytic forest orchid without green leaves, **Status:** LC, **Habitat:** Ground floor in Coniferous forest & **Flowering:** July - August.



Goodyera biflora (Lindl.)

Hook.f.

Habit: Terrestrial orchid, **Status:** LC, **Habitat:** Forest ground floor in cool broad-leaved forest & **Flowering:** July.



Goodyera sp.

Habit: Terrestrial orchid, **Status:** Unidentified, **Habitat:** Stony ground floor in mixed broad-leaved forest.



Otochilus lancilabious Seidenfaden

Habit: Epiphytic orchid, **Status:** Unknown, **Habitat:** Warm broad-leaved forest & **Flowering:** January.



Otochilus fuscus Lindl.

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** July – August.



Eria spicata (D.Don)

Handle-Mazzetti

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Warm broad-leaved forest & **Flowering:** July – August.



Pleione hookeriana (Lindl.) Kuntze

Hooker's Pleione (Eng)

Habit: Epiphytic, lithophytic or ground orchid, **Status:** LC, **Habitat:** Moist and marshy areas in wet broad-leaved forest & **Flowering:** April - June.



Pleione praecox (J.E. Smith) D. Don

Habit: Epiphytic, lithophytic or ground orchid, **Status:** LC, **Habitat:** Moist and marshy areas in wet broad-leaved forest & **Flowering:** September – December.



Satyrium nepalense D. Don

Nepal Satyrium (Eng)

Habit: Ground orchid, **Status:** LC, **Habitat:** Open slopes, and meadows & **Flowering:** July – November.



Spathoglottis ixiodies (D. Don) Lindl.

Habit: Lithophytic or ground orchid, **Status:** LC, **Habitat:** Moist and marshy areas broad-leaved forest & **Flowering:** July – August.



Spiranthes sinensis (Persoon) Ames

Chinese Lady's Tresses
(Eng)

Habit: Ground orchid,

Status: LC, **Habitat:**

Roadsides, grassy
areas and open forest

& **Flowering:** March –
October.



Cologyne corymbosa Lindl.

Clustered Coelogyne (Eng)

Habit: Epiphytic orchid, **Status:** LC, **Habitat:** Cool broad-
leaved and Rhododendron forest & **Flowering:** June - August.



***Platanthera* sp.**

Habit: Terrestrial orchid, **Status:** LC,

Habitat: Open slopes with Cotoneaster

& **Flowering:** June - August.



Ascocentrum himalaicum (Deb, Sengupta & Mallick)
E.A.Chirstenson

Habit: Epiphytic orchid, **Status:** Unknown, **Habitat:** Under shades in warm broad-leaved forest.



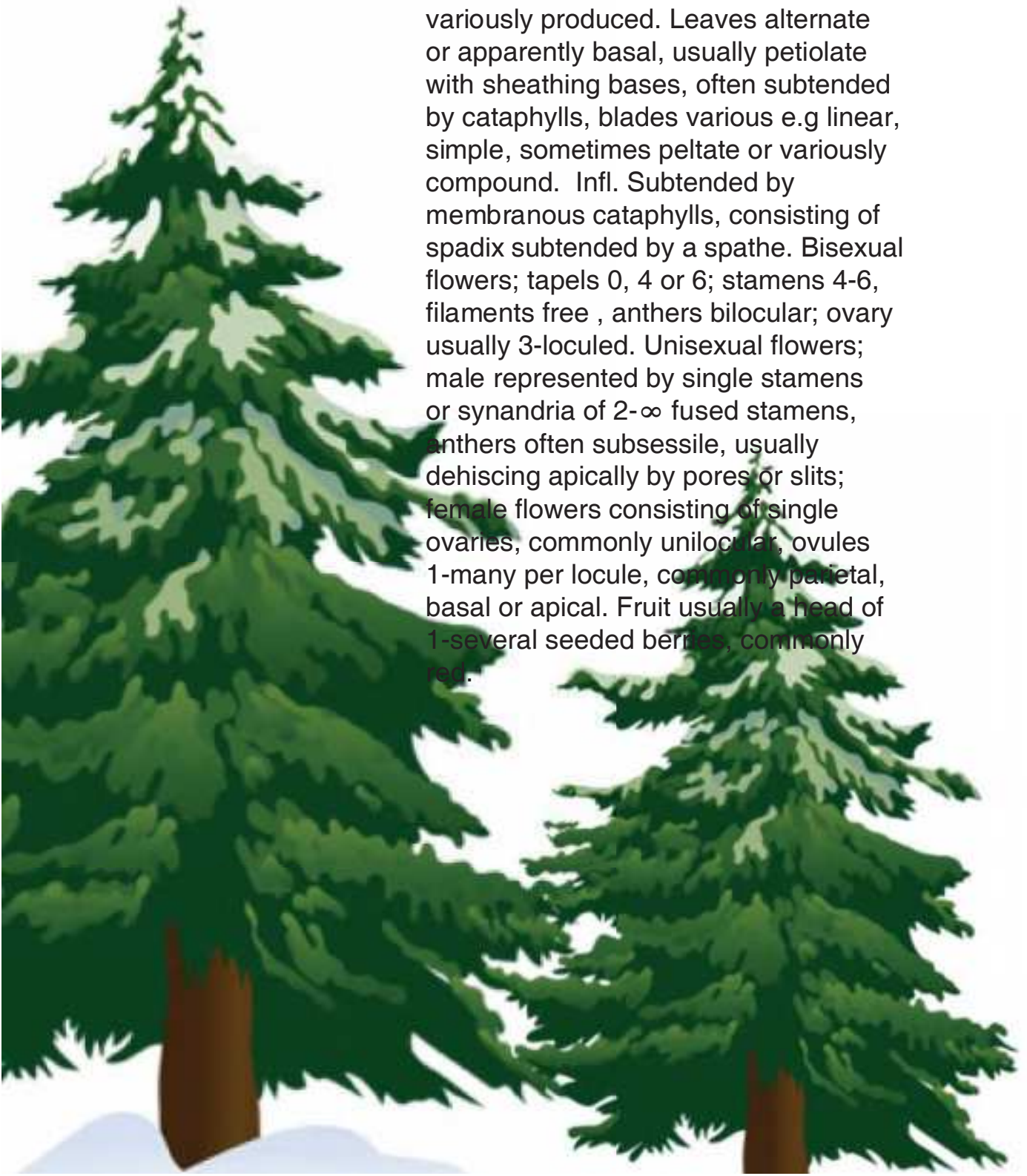
Phalaenopsis taenialis (Lindl.) E.A. Christenson & Pradhan
Habit: Epiphytic orchid, **Status:** Unknown, **Habitat:** Oak (*Quercus griffithii*) forest & **Flowering:** May.



ARACEAE

(Arum family)

Perennial herbs of diverse habit incl. climbers, floating aquatic, pachycaul shrubs and geophytes. Underground stems absent, rhizomatous or tuberous, aerial stems variously produced. Leaves alternate or apparently basal, usually petiolate with sheathing bases, often subtended by cataphylls, blades various e.g linear, simple, sometimes peltate or variously compound. Infl. Subtended by membranous cataphylls, consisting of spadix subtended by a spathe. Bisexual flowers; tepals 0, 4 or 6; stamens 4-6, filaments free, anthers bilocular; ovary usually 3-loculed. Unisexual flowers; male represented by single stamens or synandria of 2-∞ fused stamens, anthers often sessile, usually dehiscent apically by pores or slits; female flowers consisting of single ovaries, commonly unilocular, ovules 1-many per locule, commonly parietal, basal or apical. Fruit usually a head of 1-several seeded berries, commonly red.



1. *Rhaphidophora* Hasskarl

Rhaphidophora calophylla Schott

Tokim (Dzo), Brengla (Sha), Kanchirna Tula (Nep)

Habit: Epiphytic scrambling climbers, **Status:** LC, **Habitat:** Sub-tropical and mixed broad-leaved including Oak and Castanopsis forests & **Flowering:** May - February.



Rhaphidophora grandis Schott, Synm: *R. eximia* Schott

Creeping Philodendron (Eng), Kanchirna (Nep)

Habit: Climber, **Status:** LC, **Habitat:** Sub-tropical and warm broad-leaved forests & **Flowering:** May - November.



2. *Typhonium* Schott

Typhonium diversifolium Wall. ex Schott var. *diversifolium*
Himalayan Typhonium (Eng)

Habit: Perennial herb from a cormose tuber, **Status:** LC,
Habitat: Open grassy hillsides, meadows, damp open ground &
Flowering: June - July.



3. *Arisaema* Martius

Arisaema nepenthoides (Wall.) Martius ex Schott.

Cobra Lily (Eng), Gurbu (Nep)

Habit: Herb; dioecious, **Status:** LC, **Habitat:** Edges of banks in forest (wet broad-leaved, Hemlock/ Rhododendron, Oak/ Pine), sometimes besides streams & **Flowering:** February - May.



Arisaema jacquemontii Blume, Synm: *A. exile* Schott

Jacquemont's Cobra Lily (Eng), Tou (Haa)

Habit: Herb; dioecious, **Status:** LC, **Habitat:** Open grassy places (sometimes among Rhododendrons and Juniper), edges and clearings in Spruce forests & **Flowering:** June - August.



Arisaema tortuosum (Wall.) Schott

Whipcord Corbra Lily (Eng), Jag (Trongsa)

Habit: Herb; monoecious, **Status:** LC, **Habitat:** Broad-leaved and sub-tropical forest, especially at edges or disturbed areas eg. Pathsides & streamsides & **Flowering:** May - June.



Arisaema consanguineum Schott

Habit: Herb; dioecious, **Status:** LC, **Habitat:** Open or disturbed Blue Pine/ *Quercus lanata* and *Castanopsis* forests, meadows, under scrub & river banks & **Flowering:** May - July.



Arisaema speciosum (Wall.) Martius var. *speciosum*

Habit: Herb; dioecious, **Status:** LC, **Habitat:** Margins of broad-leaved (Oak and sub-tropical) forest & **Flowering:** March - June.



Arisaema griffithii Schott, Synm: *A.verrucosum* Schott, *A.pradhanii* C.E.C. Fischer

Griffith's Cobra Lily (Eng).

Habit: Herb; dioecious,

Status: LC, **Habitat:**

Coniferous/ Broad-leaved (with

Rhododendron and bamboo)

forest, often among rocks, open

blue pine forest, occasionally

in open & **Flowering:** April -

May.



Arisaema sp.

Habit: Herb, **Status:** Unknown, **Habitat:** Open abandoned lands in broad-leaved forest & **Fruiting:** July.



Arisaema sp.

Habit: Herb, **Status:** Unknown, **Habitat:** Along pathsides in broad-leaved (Oak) forest.



Arisaema sp.

Habit: Rhizomatous herb, **Status:** Unknown, **Habitat:** Open grassy areas (base of tree stumps) in Fir forest area (Geyzamchu) & **Fruiting:** August.



ZINGIBERACEAE

(Ginger family)

Rhizomatous herbs with aromatic oil cells. Leafy shoots few- to many bladed, leaves distichously arranged, sheaths usually open. Infl. Terminal on leafy shoot or borne directly or rhizome at base of leafy shoot or remote from it. Flowers solitary in axils of bracts or in cincinni, with or without secondary bracts(bracteoles). Calyx tubular, often unilaterally split. Corolla tubular with 3 petals, dorsal usually larger than laterals; lips adnate at base to corolla tube, generally the most conspicuous features of the flower. Lateral staminode petal-like or reduced to small subulate points. Fertile stamin single, anther \pm sessile or with distinct filaments; thecae parallel or divergent, connective sometimes prolonged into a crest. Style linear, held between thecae; stigma usually expanded. Ovary inferior, unilocular with parietal placentation or trilocular with axile placentation. Epigynous gland forming outgrowths on top of ovary. Fruit a dry capsule or fleshy berry.



1. *Curcuma* L.

Curcuma armatica Salisbury, Synm: *C.zedoaria* (Christmann) Roscoe

Wild Turmeric (Eng), ཏུམ/རྫོསམ/ Dum/Doem (Dzo), Doima metog (Sha)

Habit: Yellowish Rhizomatic and aromatic herb,

Status: LC, **Habitat:** Open slopes in hot dry valleys; secondary scrub at margins of sub-tropical forests; shady forest floor & **Flowering:** March - July.



2. *Cautleya* (Bentham) Hook.f.

Cautleya spicata (Smith) Baker, Synm: *Roscoea spicata* Smith Pahihilo sana (Nep)

Spiked Shade Ginger/ Chinese Butterfly Ginger (Eng), Pahihilo sana (Nep). **Habit:** Rhizomatous herb with leaves to 1m and densely flowered inflorescence, **Status:** LC, **Habitat:** Shady gullies and cliffs in mixed broad-leaved including Oak and Rhododendron grande forest & **Flowering:** June - September.



Cautleya gracilis (Smith) Dandy

Habit: Rhizomatous herb, **Status:** Unknown, **Habitat:** Roadsides on cliffs in moist broad-leaved forest (Namling) & **Fruiting:** June.



3. *Roscoea* Smith

Roscoea alpine Royle, Synm: *R.intermedia* Gagnepain **Mountain Roscoe Lily** (Eng)

Doma (Ura). **Habit:** Rhizomatous herb with leafy shoots 10-20cm, **Status:** LC, **Habitat:** Meadows and dry peaty soil & **Flowering:** June - August.



4. *Hedychium* J. Konig

Hedychium densiflorum Wall.

Hardy Ginger Lily (Eng), རྩམ་ལྷོ་ལྷོ་
Dhoem (Dzo)

Habit: Rhizomatous herb with leafy shoots 1m, **Status:** LC, **Habitat:** Mixed broad-leaved including Oak forest, wet grassy clearings & **Flowering:** July - August.



***Hedychium spicatum* Smith**

Spiked Ginger Lily (Eng), རྫོས་མེ/ Dhoem (Dzo), Dhoema laga (Sha), Ga-cha (Med), Ruksana (Nep)

Habit: Rhizomatous herb with leafy shoots 0.5-2m, **Status:** LC, **Habitat:** Broad-leaved including *Quercus griffithii* forest, sometimes epiphytic & **Flowering:** July - October.



***Hedychium gardnerianum* Ker Gawler**

Himalayan Ginger (Eng), Dhoem Laga (Sha), Sarro (Nep) Kongkoor (Lepcha)

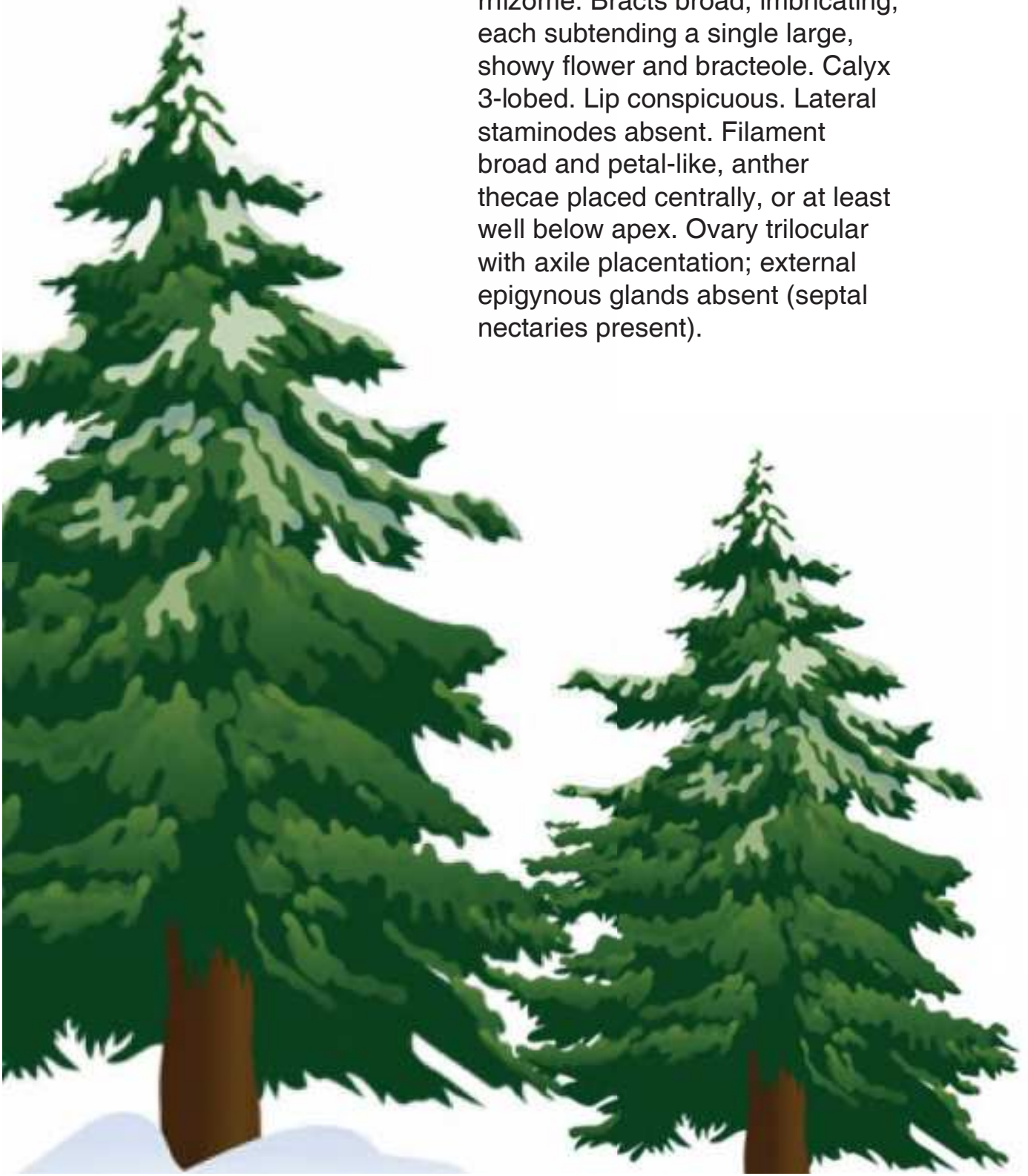
Habit: Rhizomatous herb with leafy shoots 1-2m, **Status:** LC, **Habitat:** Broad-leaved including Oak forest, & **Flowering:** July - September.



COSTACEAE

(Spiral Ginger family)

Plants lacking aromatic oil cells. Leaves arranged spirally; sheaths tubular. Inflorescence dense, terminal on leafy stem or borne directly on rhizome. Bracts broad, imbricating, each subtending a single large, showy flower and bracteole. Calyx 3-lobed. Lip conspicuous. Lateral staminodes absent. Filament broad and petal-like, anther thecae placed centrally, or at least well below apex. Ovary trilobular with axile placentation; external epigynous glands absent (septal nectaries present).



1. *Capsule* dehiscent.

Costus speciosus (J. König) Smith, Synm: *Banksia speciosa* J. König, *C. speciosus* var. *nipalense* Roscoe

Crepe Ginger/ Malay Ginger (Eng), Sakupaani (Nep)

Habit: Non-disintegrating bracts with leafy stems to 1-3m herb,

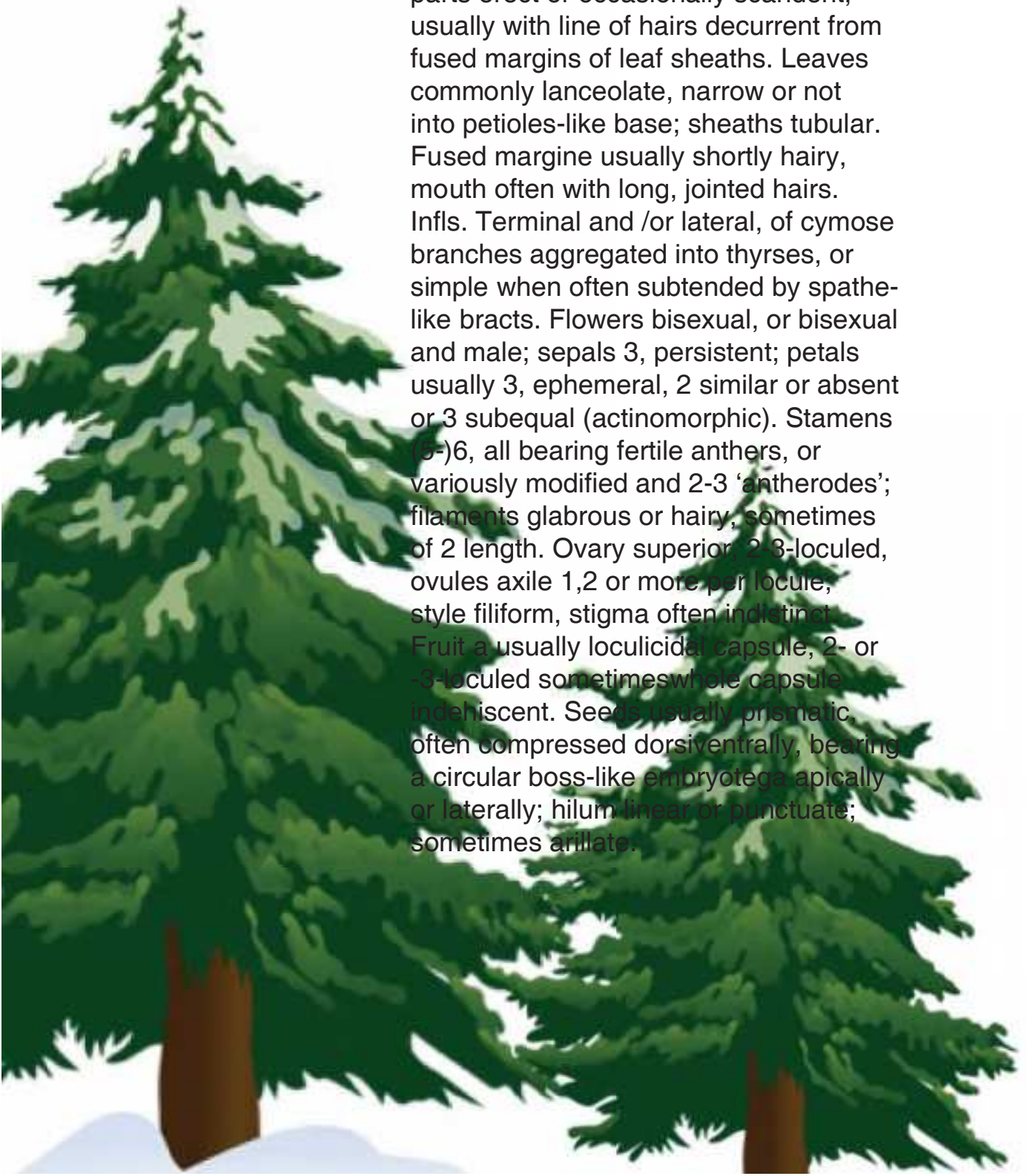
Status: LC, **Habitat:** Among shrubs and in scrub & **Flowering:** June - August.



COMMELINACEAE

(Spiderwort/ Dayflower family)

Commonly perennial, often semi-succulent herbs. Roots often fleshy, sometimes tuberous. Stems usually decumbent at base and rooting from lower nodes, upper parts erect or occasionally scandent, usually with line of hairs decurrent from fused margins of leaf sheaths. Leaves commonly lanceolate, narrow or not into petioles-like base; sheaths tubular. Fused margin usually shortly hairy, mouth often with long, jointed hairs. Infls. Terminal and /or lateral, of cymose branches aggregated into thyrses, or simple when often subtended by spathe-like bracts. Flowers bisexual, or bisexual and male; sepals 3, persistent; petals usually 3, ephemeral, 2 similar or absent or 3 subequal (actinomorphic). Stamens (5-)6, all bearing fertile anthers, or variously modified and 2-3 'antherodes'; filaments glabrous or hairy, sometimes of 2 length. Ovary superior, 2-3-loculed, ovules axile 1, 2 or more per locule, style filiform, stigma often indistinct. Fruit a usually loculicidal capsule, 2- or -3-loculed sometimes whole capsule indehiscent. Seeds usually prismatic, often compressed dorsiventrally, bearing a circular boss-like embryotega apically or laterally; hilum linear or punctuate; sometimes arillate.



1. *Cyanotis* D. Don

Cyanotis vaga (Loureiro) J.A. & J.H. Schultes, Synm: *C. barbata* D. Don

Wandering Dew-Grass (Eng). **Habit:** Bulbous perennial herbs, **Status:** LC, **Habitat:** Common on rocks, pasture fields, banks and slopes, in open or scrub or pine forest & **Flowering/ Fruiting:** June - October.



2. *Commelina* L.

Commelina sp.

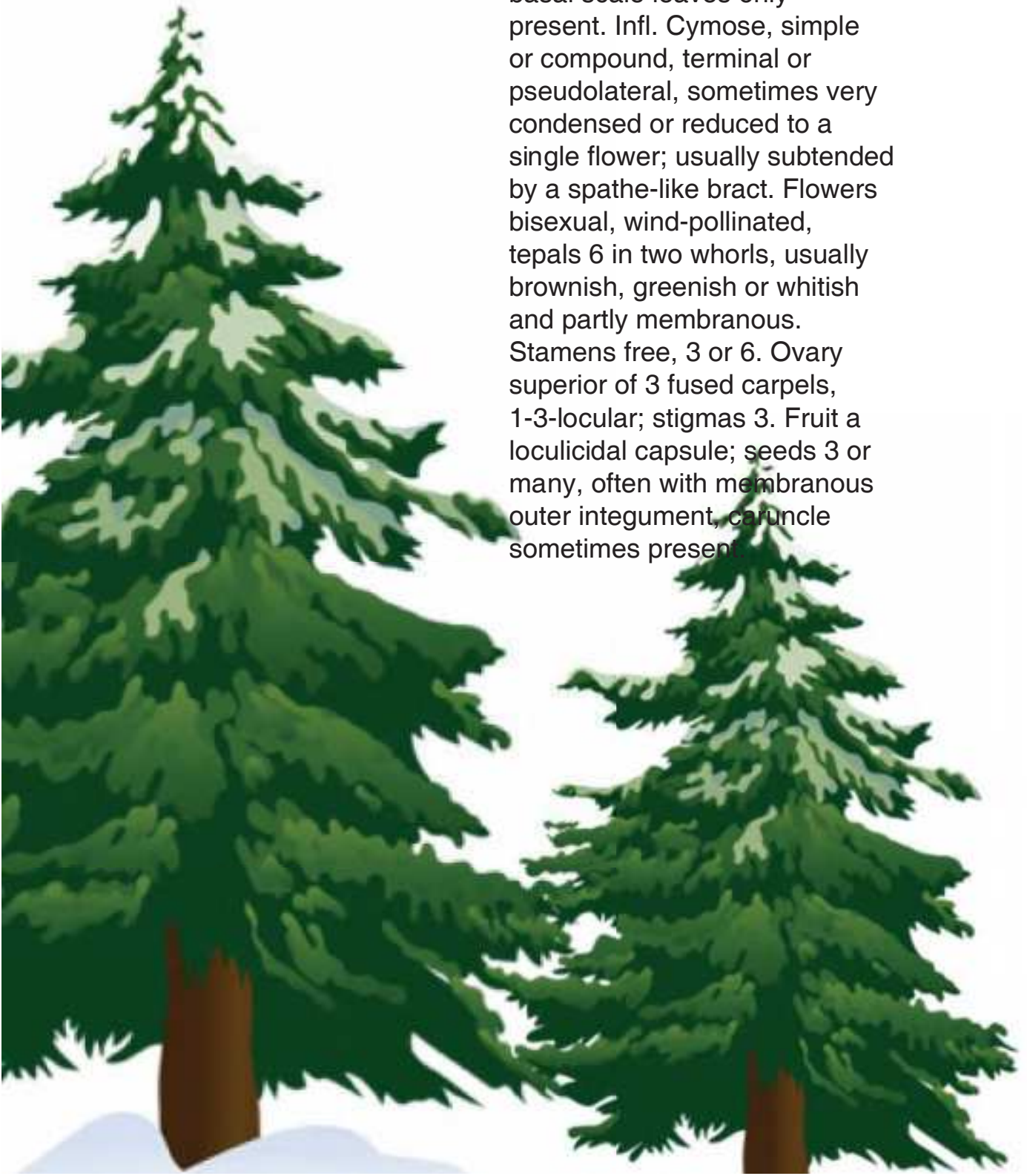
Habit: Suerect perennial herb, **Status:** Unknown, **Habitat:** Grazing camp sites in warm broad-leaved forest.



JUNCACEAE

(Rush family)

Usually perennial, rhizomatous herbs. Leaves linear with sheathing bases, glabrous or with ciliate hairs; sometimes basal scale leaves only present. Infl. Cymose, simple or compound, terminal or pseudolateral, sometimes very condensed or reduced to a single flower; usually subtended by a spathe-like bract. Flowers bisexual, wind-pollinated, tepals 6 in two whorls, usually brownish, greenish or whitish and partly membranous. Stamens free, 3 or 6. Ovary superior of 3 fused carpels, 1-3-locular; stigmas 3. Fruit a loculicidal capsule; seeds 3 or many, often with membranous outer integument, caruncle sometimes present.



1. *Juncus* L.

Juncus thomsonii Buchenau, Synm: *J.leucomelas* Royle ex.D.Don

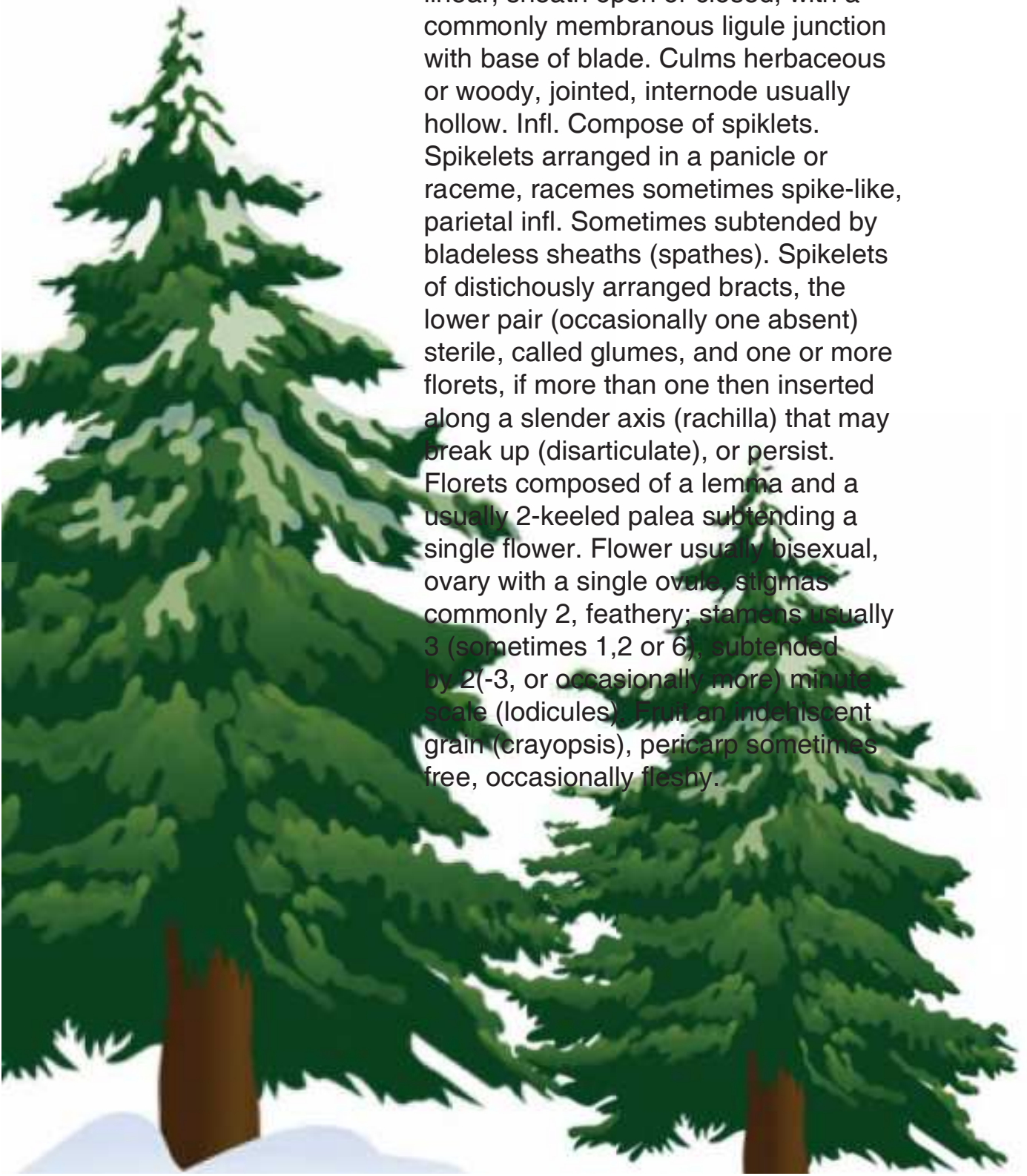
Thomson's Rush (Eng). **Habit:** Herb having short rhizomes with flower stems 4-16(-26) cm and tufted, **Status:** LC, **Habitat:** Sandy moraine, marshy meadows and streamsides & **Flowering:** May - August.



GRAMINEAE/POACEAE

(Grass family)

Annual or perennial; tufted, rhizomatous or stoloniferous. Leaves in basal vegetative shoots and inserted distichously along stems (culms); blade usually \pm linear; sheath open or closed, with a commonly membranous ligule junction with base of blade. Culms herbaceous or woody, jointed, internode usually hollow. Infl. Compose of spikelets. Spikelets arranged in a panicle or raceme, racemes sometimes spike-like, parietal infl. Sometimes subtended by bladeless sheaths (spathes). Spikelets of distichously arranged bracts, the lower pair (occasionally one absent) sterile, called glumes, and one or more florets, if more than one then inserted along a slender axis (rachilla) that may break up (disarticulate), or persist. Florets composed of a lemma and a usually 2-keeled palea subtending a single flower. Flower usually bisexual, ovary with a single ovule, stigmas commonly 2, feathery; stamens usually 3 (sometimes 1, 2 or 6), subtended by 2(-3, or occasionally more) minute scale (lodicules). Fruit an indehiscent grain (caryopsis), pericarp sometimes free, occasionally fleshy.



Tribe I *Bambuseae*

Perennial grasses. Rhizomes well developed, leptomorph (long, thin, with monopodial branching or pachymorph (thick with sympodial branching, rootless neck section sometimes elongated). Culms woody, erect to pendulous, arising singly and well separated (habit diffuse), in a single, dense clump. Internodes often with a single, wide groove above branches. Buds at culms node enclosed by a single, broad prophyll with margins free or fused, by a narrow prophyll and matching sheath, or by a narrow prophyll and sheath fused together at back and/ or front. Branches at culm nodes 1 to many, similar in size or with smaller branches around larger central ones. Sheaths subtending minor branches either all present, or some absent so that multiple initials or distinct ranks of initials are visible. Leaf sheaths with inner and outer ligules, \pm auricles and oral setae. Leaf blades broad, eventually deciduous, articulated from sheath on a pseudo-petiole, venation parallel, cross-veins sometimes prominent (tessellated). Culm leaves (culm sheaths) distinct from foliage leaves. Infls. A simple or complex branching system, with spike of sessile flowers. Flowering cylindrical, usually at intervals of 15 to 150 years. Flowering of species synchronized over distinct (gregarious), or sporadic.

1. *Borinda* Stapleton

Borinda grossa (T.P. Yi) Stapleton

Baa (Dzo), Shi (Sha), Rui (Ura), Bans (Nep)

Habit: Evergreen Bamboo growing upto 10m, **Status:** LC, **Habitat:** Cool broad-leaved and Temperate forest.



Chimonobambusa Makino Synm: *Chimonobambusa callosa*
(Munro) Nakai

Rawa (Ura)

Habit: Thorny Bamboo, 8m, **Status:** LC, **Habitat:** Cool and warm broad-leaved forest.



Dendrocalamus strictus

Suu (Kurtoed/Ura), Bans (Nep)

Habit: Bamboo, 12m, **Status:** LC, **Habitat:** Cool and warm broad-leaved forest.



Dendrocalamus sp.

Habit: Evergreen bamboo (>12m), **Status:** Unknown, **Habitat:** Subtropical and warm broad-leaved forest, Planted.



Yushania sp.

Mingma (Ura).

Habit: Bamboo, 1-1.5m, **Status:** Unknown, **Habitat:** Fir and Rhododendron forest.



Yushania maling

Habit: Bamboo, 10-12m, **Status:** LC, **Habitat:** Mixed conifer forest and cool temperate forest.



Yushania microphylla

Dwarf Bamboo (Eng), Maeg (Ura). **Habit:** Bamboo, about 1m, **Status:** LC, **Habitat:** Open grazed areas in the sub-alpine forest.



Bambusa sp. or *Himalayacalamus sp.*

Habit: Climbing bamboo, **Status:** Threatened, **Habitat:** Moist sloppy areas in warm and cool broad-leaved forest (Ganglapong and Banjar).



Arundinaria sp.

Phan (Ura/Kurtoed)

Habit: Bamboo, **Status:** Unknown, **Habitat:** Open clearings and rocky slope areas in cool broad-leaved forest. Used for weaving baskets.



Arundinaria sp.

War (Ura). **Habit:** Bamboo, similar to *B.grossa*, **Status:** Unknown, **Habitat:** Rhododendron and fir forest.



Tribe VI Aveneae

1. *Avena L.*

Avena fatua L. Wild
Oat

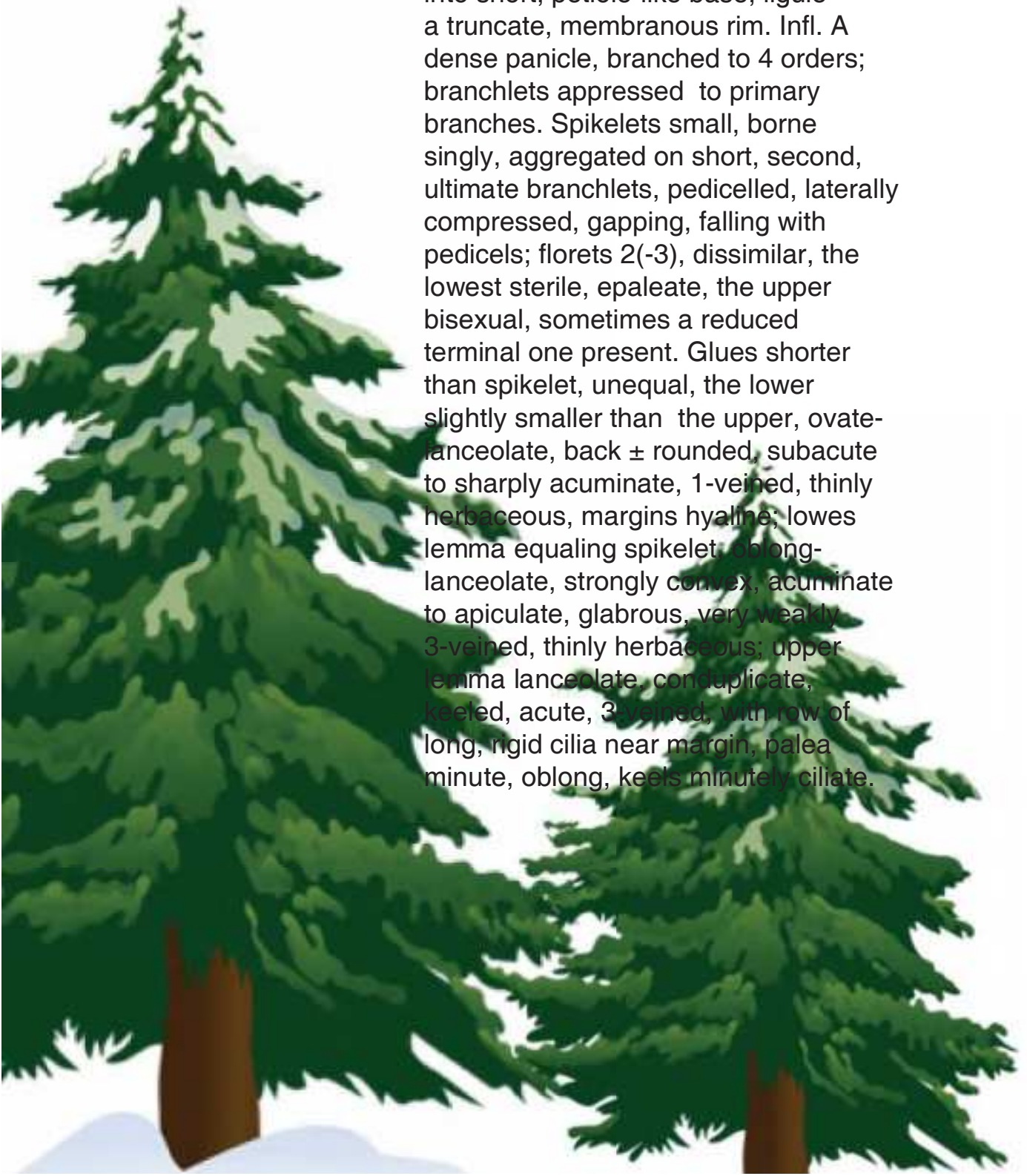
Bocchar (Sha),
Chungma (Ura),
Janghali jar (Nep)
Habit: Tufted erect
annual, glabrous, hairy
at nodes, culm leaves
usually 3, **Status:** Not
evaluated, **Habitat:**
Weed of barley, wheat
and rice fields &
Flowering: March -
October.



TRIBE XI

THYSANOLANEAE

Stout, rhizomatous perennial. Culms reed-like, pith filled, unbranched. Leaf blades flat, broadly oblong-lanceolate, acuminate, base rounded, abruptly concentrated into short, petiole-like base, ligule a truncate, membranous rim. Infl. A dense panicle, branched to 4 orders; branchlets appressed to primary branches. Spikelets small, borne singly, aggregated on short, second, ultimate branchlets, pedicelled, laterally compressed, gapping, falling with pedicels; florets 2(-3), dissimilar, the lowest sterile, epaleate, the upper bisexual, sometimes a reduced terminal one present. Glumes shorter than spikelet, unequal, the lower slightly smaller than the upper, ovate-lanceolate, back \pm rounded, subacute to sharply acuminate, 1-veined, thinly herbaceous, margins hyaline; lower lemma equaling spikelet, oblong-lanceolate, strongly convex, acuminate to apiculate, glabrous, very weakly 3-veined, thinly herbaceous; upper lemma lanceolate, conduplicate, keeled, acute, 3-veined, with row of long, rigid cilia near margin, palea minute, oblong, keels minutely ciliate.



1. *Thysanolaena* Nees

Thysanolaena latifolia (Roxb. ex Horneman) Honda, Synm: *T. maxima* (Roxb.) Kuntze, *T. agrostis* Nees

Tiger Grass/ Asian Broom Grass (Eng), མྱ་ལྷ་ཉལ་/ Tsa-kusha (Dzo/ Sha/Ura), Beyshawa (Sha), Kusha (Med), Amliso/ Phuljaru (Nep)

Habit: Stout rhizomatous perennial, culms reed like, pith filled and unbranched herb or shrub, **Status:** LC, **Habitat:** Banks in sub-tropical forest, often disturbed roadsides and cliffs, sometimes cultivated in gardens & **Flowering:** December - August.



Tribe XVIII *Andropogoneae*

1. *Coix* L.

Coix lachryma-jobi L.

Job's Tears (Eng), Bagchuma (Ura), Garday mala/ Ghanrey mala (Nep), Birgaunli (Bengali)

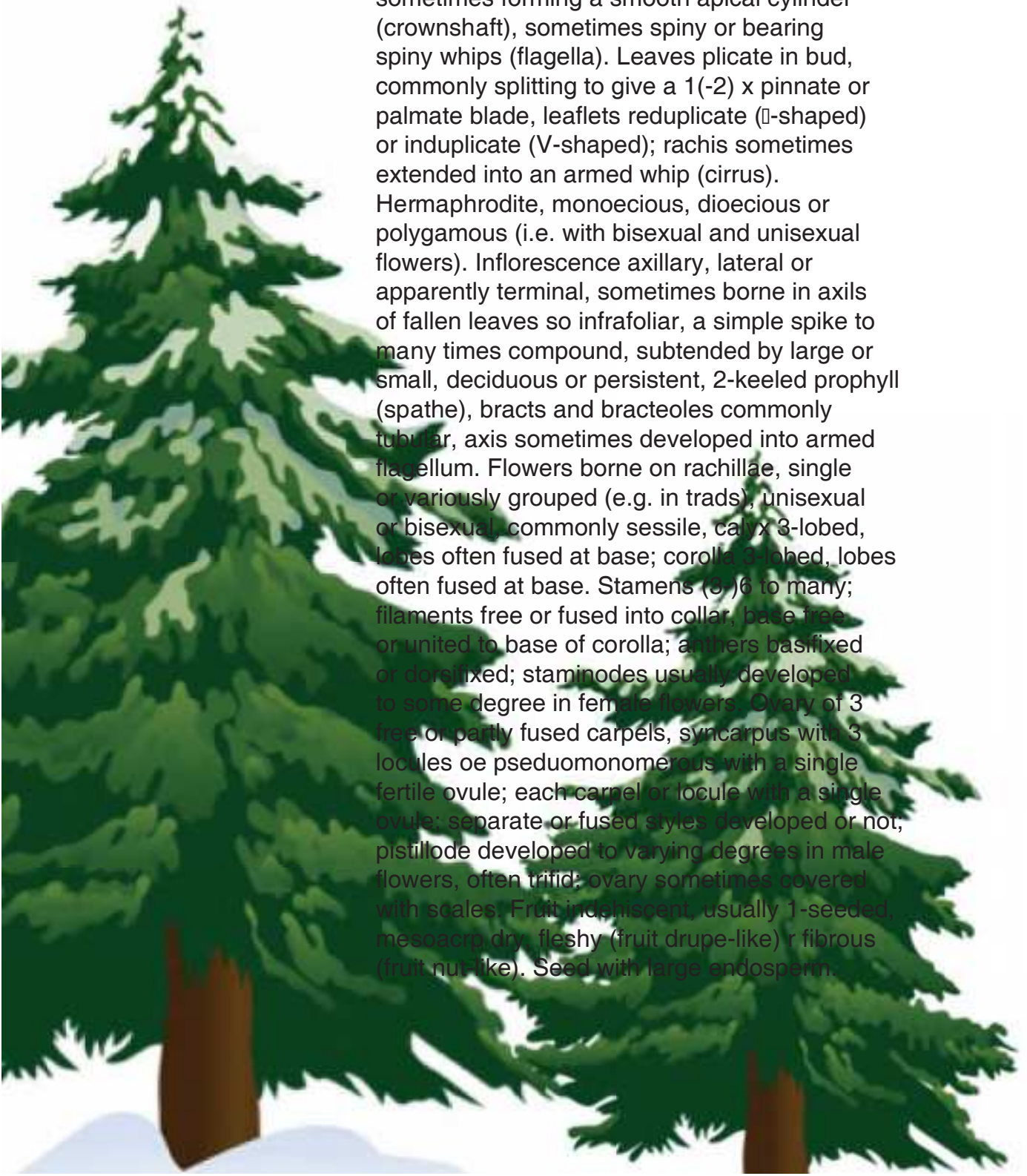
Habit: Branched culm annual or perennial herb, **Status:** LC, **Habitat:** Near streams, secondary scrub at margins of sub-tropical forest & **Flowering:** March - December.



ARECACEAE

(Palmae/ Palm family)

Armed or unarmed shrubs, dwarf to tall trees or slender climbers. Stems solitary or clustered, usually unbranched, pleonanthic (flowering in successive years) or hapaxanthic (flowering once and dying). Leaves spirally inserted, occasionally distichous, often forming a crown. Sheaths initially tubular, sometimes forming a smooth apical cylinder (crownshaft), sometimes spiny or bearing spiny whips (flagella). Leaves plicate in bud, commonly splitting to give a 1(-2) x pinnate or palmate blade, leaflets reduplicate (U-shaped) or induplicate (V-shaped); rachis sometimes extended into an armed whip (cirrus). Hermaphrodite, monoecious, dioecious or polygamous (i.e. with bisexual and unisexual flowers). Inflorescence axillary, lateral or apparently terminal, sometimes borne in axils of fallen leaves so infrafoliar, a simple spike to many times compound, subtended by large or small, deciduous or persistent, 2-keeled prophyll (spathe), bracts and bracteoles commonly tubular, axis sometimes developed into armed flagellum. Flowers borne on rachillae, single or variously grouped (e.g. in trads), unisexual or bisexual, commonly sessile, calyx 3-lobed, lobes often fused at base; corolla 3-lobed, lobes often fused at base. Stamens (♂) 6 to many; filaments free or fused into collar, base free or united to base of corolla; anthers basifixed or dorsifixed; staminodes usually developed to some degree in female flowers. Ovary of 3 free or partly fused carpels, syncarpous with 3 locules or pseudomonomerous with a single fertile ovule; each carpel or locule with a single ovule; separate or fused styles developed or not, pistillode developed to varying degrees in male flowers, often tritid; ovary sometimes covered with scales. Fruit induriscent, usually 1-seeded, mesocarp dry, fleshy (fruit drupe-like) or fibrous (fruit nut-like). Seed with large endosperm.



1. *Phoenix* L.

Phoenix rupicola T. Anderson

Tarika (Nep)

Habit: Unarmed shrub, **Status:** LC, **Habitat:** Ravines and shaded cliffs in sub-tropical forest; lower hills and steep rocky hillsides & **Flowering:** May - June.



2. *Calamus* L.

Calamus acanthospathus Griff.

ཚུམ་ལྷོ་མེད་/ Tsim (Dzo), Minji (Sha), Krath (Ura/ Kheng), Pukha Bet/ Gouri Bet (Nep)

Habit: Spiny and scandent climber, **Status:** LC, **Habitat:** Dense broad-leaved forest; upper and middle hillsides & **Flowering:** March – July (**Fruiting** – January/February).



3. *Plectocomia* Martius ex Blume

Plectocomia himalayana Griff.

ཕྱ་ཚེ། Patshar (Dzo), Zhre-thrak (Ura), Gowri bet (Nep)

Habit: Spiny or thorny and scandent climber, **Status:** LC,

Habitat: Warm broad-leaved forest; upper and lower hillsides

& **Flowering:** August – December (**Fruiting** – April).



4. *Caryota* L.

Caryota urens L.

Fishtail Palm/
Wine Palm

(Eng), Rungbong/
Rangbhang (Nep)

Habit: Hapaxanthic

tree; grey, smooth

trunk with

conspicuous annular

leaf scars, **Status:**

LC, **Habitat:** lower

hillsides in warm

broad-leaved forest

and also planted &

Flowering: February.



PANDANACEAE

(Screw-Pine family)

Small sparingly branched pachycaul trees or shrubs, often with aerial or prop roots. Leaves usually 3-ranked, ensiform, margins and midrib spiny coriaceous. Dioecious; flowers lacking perianths, \pm coalescent in dense spadices borne singly or in racemes, subtended by spathes. Male flowers with pistil consisting of a single or several fused carpels, monocarpellary pistils sometimes partly fused in groups; ovules 1-many per carpel; staminodes present or absent; stigmas sessile. Fruit an aggregate of berries or drupes; drupes 1-many seeded.



1. Pandanus L.

Pandanus unguifer Hook.f. , Synm: *P.minor* Buchanan ex Solms, *P.sikkimensis* St. John

Habit: Tree or shrub; dichotomously branched above and clump forming, **Status:** LC, **Habitat:** Near water courses in sub-tropical broad-leaved forest, in lower hills & **Flowering:** June - August.



Pteridophytes (Ferns)

Pteridaceae

Pteridium aquilinum

Tabri/Tauri (Ura)

Habit: Shrub, **Status:** LC, **Habitat:** Open areas and coniferous forest.



Unidentified

Habit: Terrestrial shrub, **Status:** Unknown, **Habitat:** Along roadsides on open grounds.



Polypodaceae

Arthromeris wallichiana

Habit: Epiphytic or terrestrial shrub, **Status:** LC, **Habitat:** Moist Oak forest.



Arthromeris sp.

Habit: Epiphytic shrub, **Status:** LC, **Habitat:** Cool broad-leaved forest.



Cyathea spinulosa

Tree Fern (English)

Habit: Terrestrial robust shrub,

Status: LC, **Habitat:** Moist broad-leaved forest.



Glycinia sp.

Habit: Terrestrial spreading shrub, **Status:** LC, **Habitat:** Along the foot trails in the moist cool broad-leaved forest.



Pepisorus contortus

Habit: Epiphytic or lithohytic shrub, **Status:** LC, **Habitat:** Warm and cool broad-leaved forest.



Plagiogyra pycnophylla

Habit: Epiphytic or terrestrial spreading shrub, **Status:** LC,
Habitat: Moist temperate forest with Bamboo growth.



Lycopodaceae

Lycopodium japonicum

Habit: Terrestrial or lithophytic or epiphytic creeping shrub,
Status: LC, **Habitat:** Moist temperate forest.



Huperzia sp

Habit: Epiphytic pendulous shrub,
Status: LC, **Habitat:** Hanging on tree
branches in cool broad-leaved forest.



Selaginellaceae

Selaginella monospora

Habit: Terrestrial spreading shrub, **Status:** LC, **Habitat:** Ground
floor of the cool broad-leaved forest.



Selaginella sp.

Habit: Terrestrial shrub, **Status:** LC, **Habitat:** Exposed ground
in the forest.



Selaginella sp.

Habit: Terrestrial creeping shrub, **Status:** LC, **Habitat:** Moist ground floor of warm broad-leaved forest.



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