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Trees and Shrubs of Afghanistan

A Dendrological Guide

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CAPRIFOLIACEAE

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, stigmas capitate or lobed, ovule few or many.

Fruit drupe or berry.

Generally distributed throughout the world.

Lonicera L

Shrubs, erect or scandent, usually with peeling bark.

Leaves opposite, petioled, sessile or connate, entire or in heterophylla sinuately lobed.

Flowers (in Indian species) in peduncled pairs, often connate by their ovaries, bracteate and usually 2-bracteolate, peduncles axillary, solitary, or in subterminal panicles heads or cluster subtended by floral leaves. Calyx tube ovoid, limb short, 5-toothed, deciduous or persistent. Corolla tubular, funnel shaped or campanulate, tube short or long, gibbous or equal at the base, limbs usually 5-lobed, or two lipped (the Turkish varieties, DAVIS (1965-2000)), lobes short or long. Stamens 5, inserted on the corolla tube. Ovary 2-3 celled, style slender, stigma capitate, ovules several in each cell in double rows on axil placentas.

Fruit a simple or compound berry, 2-3 celled or sub-1-celled.

Seeds few in each cell, ovoid or oblong, albumen fleshy, embryo terete.

Distribution: in temperate and subalpine regions of Northern Hemisphere.

Lonicera asperifolia (Decne.) Hook. f. & Thomson (fig. 118)

L. semenovii var. *nuristanica* Kitamura, *Xylosteum asperifolium* Decne. in Jaquem.

Low, strongly and densely ramified shrub, usually not higher than 1 m, branches bristly.

Leaves alternate (1.2-) 2-3 cm long, ovate or oblong ovate, base rotundate to subcordate, both sides with bristles, petiole very short

Bracts foliaceous. Ovary free glabrous. Corolla 12-18 mm long, pale yellow, hairy.

Berry free orange-reddish.

According to Browicz (1983-1997), this is a high elevation plant from the Himalayas.

Lonicera asperifolia occurs in eastern Afghanistan (particularly in Nuristan and Wakhan), in south-western Tadjekistan (Pamir) and northern Pakistan and Kashmir and in North-western India. Besides it also reported from south-western China. Except for Pamir, where *L. asperifolia* is rare, it usually grows fairly frequently in the valleys of mountain rivers, on stony slopes, on moraines and in rock fissures, either singly or in clumps. It occurs at considerable altitudes, usually over 3000 m or more, and only occasionally at lower ones down to 2800 m (Afghanistan). The highest stands are known from Pakistan up to 4000 m, in Afghanistan up to 4150 m, in Pamir 4200-4300, in Kashmir to 4500 m.

Afghanistan: Nuristan Upper Netshingel, Pashki 3000 m, Panjsher Darrah-e-Rastgal 3100 m (RECHINGER 1963-2005).

Lonicera griffithii

Hook. f. & Thomson
(fig. 119)

Vernacular name: olinoj.

Shrub, scandent, but without support, prostrate with hollow twigs up to 4 m long.

Leaves are glabrous on both sides, sub-orbicular or ovate-elliptic, usually entire, but sometimes irregularly lobed, few together on the node.

Cymes apical heads.

Flowers are relatively large, the biggest in this genera in the part of southwestern Asia, 2-3 cm long, pink-purple.

Fruits edible (October, November).

According to BROWICZ (1983-1997), it is a mountain and rare species, known only from few localities, limited

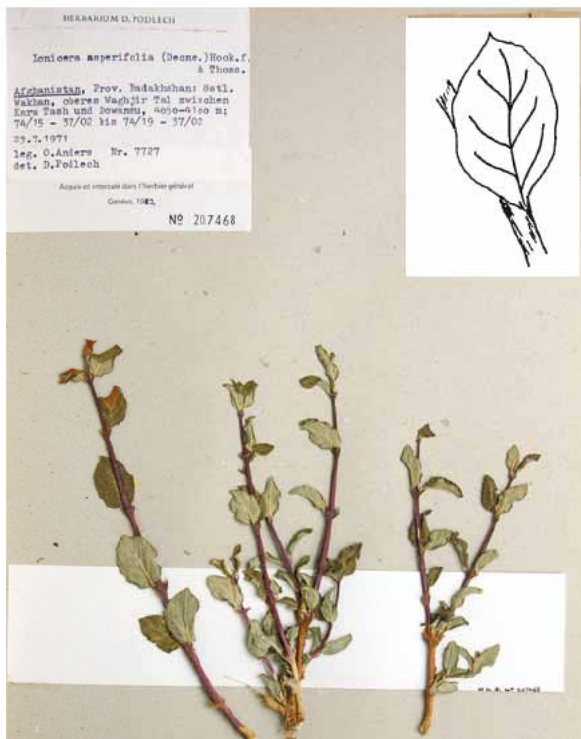
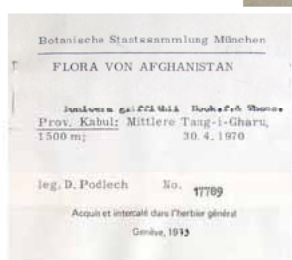


Fig. 118. *Lonicera asperifolia* (Decne.) Hook. f. & Thomson

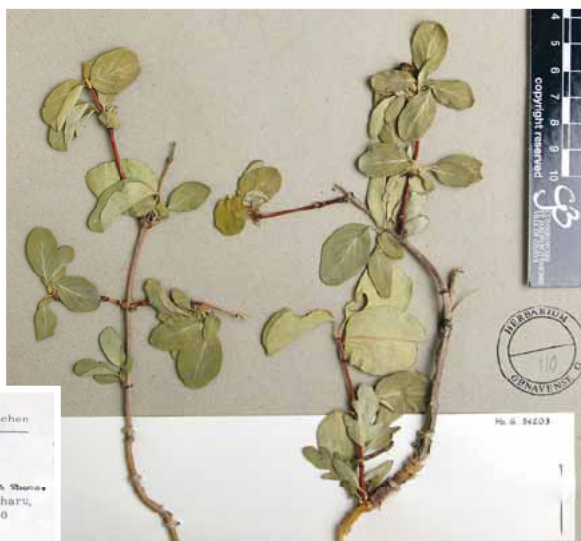


Fig. 119. *Lonicera griffithii* Hook. f. & Thomson

Description of species: II. Angiosperms

in its range to eastern Afghanistan (provinces of Kapisa, Laghman, Kunar, Kabul, and Paktia) and Chitral.

There is no precise data on the ecological requirements of *L. griffithii*, however, it is known that it most commonly grows in river valleys, in *Quercus baloot* communities, between 1500 and 3000 m above sea level.



Lonicera korolkovii

Stapf. (fig. 120)

Vernacular name: not found.

Shrub, about 4 m high.

Leaves 1-4 cm long, thinly elliptic-ovate or elliptic to broad ovate, obtuse to acute rarely acuminate, base cuneate to rotundate, both sides more or less pubescent to glabrous and ciliate. Petiole 1-2 mm long.

Peduncles 8-25 mm long, pubescent. Bracts linear ovate. Ovary free glabrous. Calyx 5-lobed, ciliated. Corolla about 15 mm long, white to rose.

Berry free, red.

Afghanistan: Eshpushta 1500 m, Bamyan 2650 m, Doab 1650 m (RECHINGER 1963-2005).

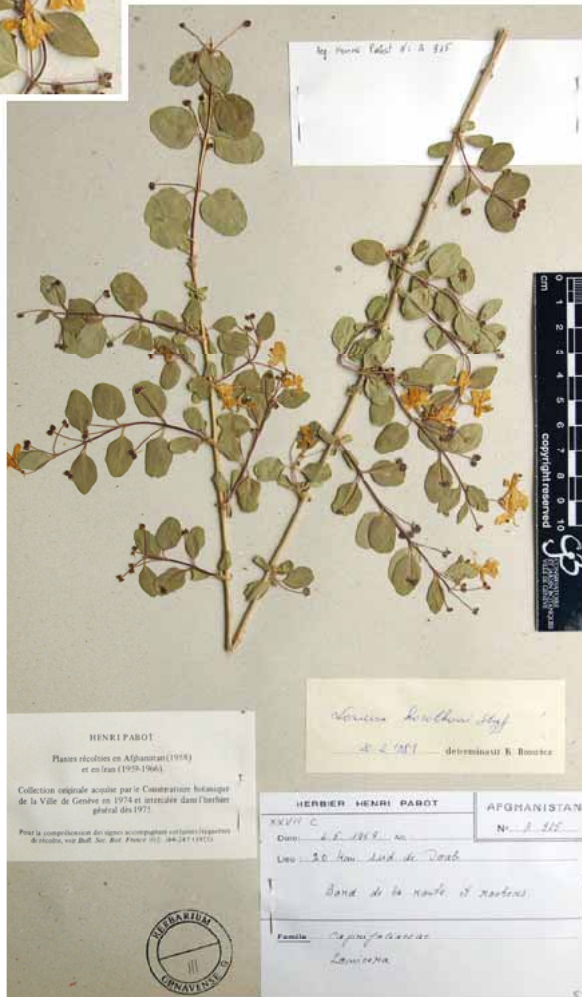


Fig. 120. *Lonicera korolkovii* Stapf.

Lonicera microphylla Willd. ex Roemer & Schult.

Vernacular name: not found.

A strong shrub. 1.5-2.5 m tall.

Branched densely.

Leaves 1-1.5 (-3) cm long. Narrowly elliptic to obvate, bilaterally or sometimes almost glabrous.

Flowers pale yellow, 10-15 mm long with a short tube strongly gibbous at the base.

Berries connate, about 5 mm long, yellow at the beginning, red when ripe.

According to BROWICZ (1983-1997), it is a Central-Asiatic species with range extending from northern mountain massif of eastern Tian Shan. To the south *L. microphylla* is distributed in Hindukush (eastern Afghanistan, northern Pakistan), in the western Himalayas, and in northwestern India up to Kashmir.

It grows on high mountain steppes and deserts, on stony slopes and rivers valleys, and along forests edges among woody junipers, usually alone or in small groups.

Afghanistan: Munjan, Sanglich (RECHINGER 1963-2005).

Lonicera nummulariifolia

Jaub. & Spach (fig. 121)

L. persica Jaub. & Spach,
L. arborea var. *persica* (Jaub. & Spach) Rehder, *L. turcomanica* Fisch & C.A. Mey.,
L. nummularia Jaub & Spach in Krüssmann.

Vernacular name: chanbali, kulfa.

An erect shrub, 4-5 m tall, more rarely a small tree up to 6-8 (-10) m tall, with a short trunk, in old specimens up to 60 cm in diameter at base.

Leaves are ovate to suborbicular, up to 5 cm long, dark green, puberulent or pubescent above, lighter and densely pubescent beneath.



Fig. 121. *Lonicera nummulariifolia* Jaub. & Spach

Flowers are white up to 2.5 cm long.

The berries are also white having a diameter of 5 mm.

It is a species closely related to the western *Lonicera arborea* Boiss. occurring in Spain and northwestern Africa.

According to BROWICZ (1983-1997), it is an Irano-Turanian montane species penetrating in the western limit of its range to the Mediterranean region. The range is composed of two basic parts, a southern and a northern one. The former extends from southern Greece, through southern Anatolia and northeastern Iraq to southwestern and southern Iran. The second northern part of the range covers northern Iran and central Afghanistan. In Afghanistan the ranges ends in Nuristan.

Afghanistan: Herat Gulran, Ghorat Kotal Nayak 2660 m, Kabul Hauz-i Mahiha 2500 m, Bamyan Nuristan Pashki 2300 m, Jabal Seraj 1760 m, Deh Kundi Siah Dara 2700 m, Badakhshan Dariam, etc. (RECHINGER 1963-2005).

Lonicera obovata Royle ex Hook. f. & Thoms.
(fig. 122)

Vernacular name: not found.
Prostrate shrub to about 2 m high.

Leaves 7-12 mm long, obovate to about elliptic, obtuse, petioles briefly slender, glabrous to subglabrous.

Peduncles 2-6 mm long. Ovary connate. Calyx slightly wavy. Corolla 8-12 mm long, tubular campanulate, subregular, limbs slightly erect, base gibbous, yellow.

Berry connate dark blue.

Found along with *Betula utilis*, *Rhododendron campanulatum* and *Salix*.

Afghanistan: Kabul, Nijrao, Sarobi 3310 m, Nuristan, Kamdish, 2800 m. (RECHINGER 1963-2005).



Lonicera obovata Royle
Detected in Betula utilis,
Rhododendron campanulatum
along with Salix
Kandahar, ca. 3200 m
29. 6. 79 Karlam
- No. 2401



Fig. 122. *Lonicera obovata* Royle ex Hook. f. & Thoms.

Lonicera semenovii Regel (fig. 123)*L. glauca* (non Hill.) Hook. f. & Thomson

Vernacular name: not found.

Dwarf, prostrate shrub, 10-20 cm tall, forming pulvinate form.

Branches with bristles.

Leaves oblong or elliptic oblong, 5-20 mm long, and 3-6 mm broad, glabrous, or with scattered hairs and with ciliate margins (both sides with bristles).

Peduncles short. Bracts foliulous. Calyx glabrous.

Corolla 17-25 mm long, yellow.

Berry free, glabrous, orange red, 8 mm in diameter.

According to BROWICZ (1983-1997), it is a mountain alpine species. Its range extends to Middle

Asiatic Republics in the

north and to Tyan Shan

and Pamir Alai. Although

the southern part of the

range includes eastern

Afghanistan, northern

Pakistan, Kashmir and

northeastern India, where

towards the east *L. seme-**novii* does not cross 79° E.*Lonicera semenovii* occurs in

the subalpine and alpine

zone and grows on stony

slopes and stony dales

and chinks or in scree, in

the vicinity of glaciers. Its

localities are distributed

between 3 000-3 400 m,

however, it is frequently

found higher. This partic-

ular species of *Lonicera*

reaches the highest eleva-

tion compared to all other

species.

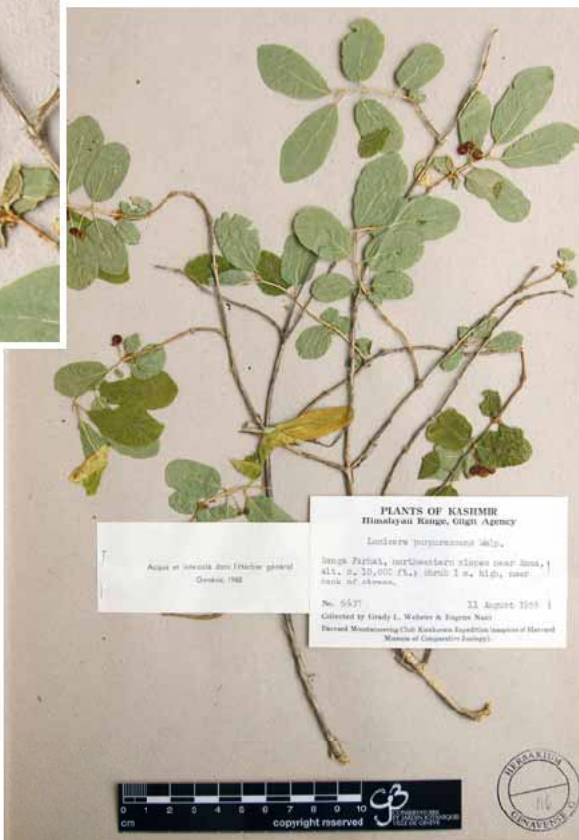
Afghanistan: Kabul Unai,

Koh-i-Qalandaran 3700 m,

Bamyan Koh-i-Baba 3600 m

(RECHINGER 1963-2005).

Fig. 123. *Lonicera semenovii* Regel



Lonicera sericea Royle
(fig. 124)

L. purpurascens Hook. f. & Thoms.

Vernacular name: not found.
Shrub about 3 m high,
branchlets pilose, ultimate-
ly glabrous.

Leaves 2.5 × 1.25 cm, obtuse,
base narrowed or obtuse,
above softly pilose or gla-
brescent, beneath villous or
hairy on the nerves only,
petiole 0.3 cm long.

Bracts 0.4-0.6 cm, linear or
lanceolate linear, bracte-
oles distinct or connate.

Corolla tube 0.8 × 0.25 cm, base gibbous, hairy within and
without, lobes short, purple. Styles sparsely pilose.

Fruit usually of two confluent drupes, globose black.

Seeds many or few.

According to HOOKER (1873-1897), Royle's specimens have the leaves and flowers more
hairy, the number of the seeds vary on the same branch.

Afghanistan: NEDIALKOV (1973).

Fig. 124. *Lonicera sericea* Royle



Lonicera spinosa (Decne.) Walp. (fig. 125)

Xylosterom spinosum Decne. in Jaquem.

Vernacular name: not found.

A low dense shrub, 1-1.2 m tall, more or less forming dense mats.

Branches often uncovered, spinescent.

Leaves up to 8-15 (-25 in strong branches) mm long, 6 mm wide, narrow elliptic oblong,
obtuse, base in petiole slightly attenuated (thinner), with incurved margins.



Peduncle 1-2 mm long. Bracts foliulous, bractlets quadrate connate. Ovary free.

Flowers tubular, about 1 cm long. Calyx conspicuous, lobes 1.5-2 mm long. Corolla fragrant. Berry free, bluish black.

L. spinosa is a Himalayans, high altitude species, with a range extending from Sikkim in the east, through Nepal and northeastern India and Kashmir in the west. Much isolated from this continuous range there occur stands of *L. spinosa* in eastern (Hindukush) and central Afghanistan.

According to BROWICZ (1983-1997), it is a light demanding species, which often grows gregariously on exposed places, in subdesertic alpine steppe, on bare and gravelly slopes. It has been also found above lake shores and along river valleys. In Afghanistan it appears more or less between 2500-3200 m elevation.

It is an interesting ornamental species resistant to drought, however, it is unknown in cultivation.

Afghanistan: Bamyan Band-i Amir 2800 m, 3200 m, Hajigak 3000 m, Ghorat Lal-i-Sar Jangal 2500 m, etc. (RECHINGER 1967-2005).

***Lonicera stenantha* Pojark.**

Vernacular name: not found.

Shrubs up to 2.5 m tall.



Fig. 125. *Lonicera spinosa* (Decne.) Walp.



Description of species: II. Angiosperms

Leaves long, narrow elliptic or oblong elliptic, acute to subacute, base cuneate to slightly cordate, both sides more or less pubescent, petiole 1.5-3 cm long.

Peduncle 3-6 mm long. Bracts 3-5 mm long, linear-subulate, pilose. Calyx undulate (wavey), pilose. Corolla yellow.

Berry dark blue.

Afghanistan: Panjsher, Munjan, Bamyán, Panjao (RECHINGER 1963-2005).

Lonicera webbiana Wall. ex DC. (fig. 126)

Vernacular name: not found.

Shrub up to 3 m high.

Leaves 5-12 cm long, elliptic to ovate oblong, acuminate, base cuneate to rotundate, both sides hairy and glandulous more or less ciliate to glabrous. Petiole 2-10 mm long, glandulous, pubescent.

Peduncle 20-30 mm long, glandulous pubescent.

Bracts 4-6 mm long, bracteolate 1 mm long, free.

Ovary free, with connate base.

Calyx minute lobed. Corolla 12-15 mm long, yellow, purplish.

Berry free, paired red or orange.

Seed 2-5.

Afghanistan: Nuristan, upper Kamdesh 3000 m, Nijrao 3000-3200 m, etc. (RECHINGER 1963-2005).



Fig. 126. *Lonicera webbiana* Wall. ex DC.

This is the first book which presents in detail almost all the ligneous species of Afghanistan. The book is presented in two parts:

- Part I covers the essential dendrological features and ecological requirements of ligneous plants, which are necessary for field identification.

- Part II is a description of 559 species and subspecies belonging to 142 genera and 63 families. Of these, 452 species are treated in detail. The book contains 383 colour photos of specimens from the herbariums of Wien (W) (Austria), Geneva (G) and Lausanne (LAU), Switzerland. There are also 40 black and white drawings.

Families, genera and species are arranged alphabetically based on the scientific name of the taxon. Most of the species and subspecies are accompanied by their synonyms and for some their vernacular names have been included.

The book is completed by a glossary, a bibliography and a detailed index accompanied by synonyms.



Mohammad ALAM was born in April 1951 in the Jaghatu district of Wardak province, Afghanistan.

After finishing his primary studies at Ghazi Mohammad Jan Khan School, he entered Habibia High School for higher education (1963-1968). He continued his studies at the Faculty of Agriculture of Kabul University, where he obtained his B.S. in Plant Science (1968-1973). He received a scholarship from Bulgaria, where he continued his specialisation in forestry and achieved a Ph.D. in Agricultural Sciences from the Institute of Forestry and Wood Technology of Sofia (1978-1986). Mohammad ALAM started as a researcher at the Department of Research, Ministry of Agriculture and Irrigation, Kabul (1973-1975). He became an academic staff member of the

Department of Horticulture and Forestry of the Faculty of Agriculture in Kabul University (1975-1978, 1986-1989). While in exile in Pakistan, he worked as a technical consultant for a local NGO (ACRD) (1989-1990), then as a Liaison Officer, and later as a Programme Officer for UNOCHA, OPERATION SALAM in Peshawar (1990-1991).

In March 1991, he came to Switzerland. In March 2001, he was engaged as assistant librarian in the Botanical Museum of Lausanne (LAU), and since May 2002 he has become a scientific collaborator of this institute.

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