

## An annotated checklist of the orchids of Nepal

Maan Bahadur Rokaya, Bhakta Bahadur Raskoti, Binu Timsina and Zuzana Münzbergová

*M. B. Rokaya (rokayamaan@gmail.com) and Z. Münzbergová, Inst. of Botany, Academy of Sciences of the Czech Republic, Zamek 1, CZ-252 43 Průhonice, Czech Republic. ZM also at: Dept of Botany, Faculty of Science, Charles Univ., Benatska 2, CZ-128 01 Prague, Czech Republic. – B. B. Raskoti, Pokharathok 9, Arghakhanchi, Nepal. – B. Timsina, Inst. for Environmental Studies, Faculty of Science, Charles Univ., Benatska 2, CZ-128 01 Prague, Czech Republic. BT also at: Dept of Biodiversity Research, Global Change Research Centre AS CR, Na Sádkách 7, CZ-37005 České Budějovice, Czech Republic.*

An annotated checklist comprised of 458 taxa of orchids known from Nepal is provided, including 104 genera, 437 species, 16 varieties, 3 subspecies and 2 forma and 18 endemic species. In Nepal, orchid species are distributed from 60–5200 m a.s.l. In the checklist, notes on altitudinal ranges, habit, habitat, global distribution, phenology, etc. are presented.

Nepal, a small Himalayan country, lies between 26°12' to 30°27'N and 80°04'E to 88°12'E covering an area of 147 181 km<sup>2</sup>. The diverse physiography, climate, edaphic factors, etc. within an altitude range of 60 – 8848 m a.s.l. has favored vegetation within six bioclimatic zones from tropical luxuriant forests in the south to the alpine scrub or barren high mountain in the north (Chaudhary 1998).

The tropical zone is dominated by sal (*Shorea robusta*), tropical deciduous riverine and tropical evergreen forests. The sal forest is associated with *Adina cardifolia*, *Albizia procera*, *Butea monosperma*, *Acacia catechu*, *Bombax ceiba*, *Dalbergia sisoo*, *Syzygium cumini*, *Terminalia bellirica*, *T. chebula*, *Zizyphus mauritiana*, etc. In the subtropical zone, *Schima–Castanopsis*, pine and alder forest types are dominant. The temperate zone is represented by lower temperate mixed broad-leaved, temperate mixed evergreen and upper temperate mixed broad-leaved forests. The subalpine zone is characterized by silver fir (*Abies spectabilis*) and birch–*Rhododendron* forest. This zone also includes a pure forest belt of *Betula utilis*, in association with several species of *Rhododendron*, *Juniperus*, etc. In this region, tree trunks and branches are festooned with parasitic orchids, filaments of mosses and various lichens. The alpine zone covers areas above 4100 m a.s.l. and is associated with *Juniperus*, *Rhododendron*, *Caragana–Lonicera* and alpine meadows. In the nival zone, above 5000 m a.s.l., some mosses and lichens are found up to 7400 m a.s.l. (Baniya et al. 2010) and they are known as the 'Arctic or cold deserts.'

Nepal occupies the central part of the whole Himalayan range and it not only differs in vegetation in north–south direction but also in east–west direction. Based on plant type(s) and their distributional range(s), Nepal is divided into three different phytogeographic regions (Stainton 1972, Hara et al. 1978, 1982, Hara and Williams 1979, Press et al. 2000).

The different regions are the a) western region (from the Kumaon frontier to 83°E in Nepal, corresponding to Karnali section), b) central region (83°E to 86°30'E, corresponding to Gandaki section) and c) eastern region (86°30'E to the Sikkim frontier, corresponding to Koshi section) (Benerji 1963, Stainton 1972).

Botanical exploration in Nepal began in 1802–1803 when Francis Buchanan-Hamilton first collected plants from Nepal. The mission was followed by Nathalien Wallich (1820–1821) who collected plants from Kathmandu, its surroundings and even from the alpine region of the famous sacred Lake Gosainkunda. He received hundreds of new and interesting specimens that were never recorded before, and later information on Nepalese plants from these collections as well as from earlier collections of Buchanan-Hamilton were published by D. Don in 'Prodromus Florae Nepalensis' (1825) and N. Wallich's 'Tentamen Florae Nepalensis' (1824–1826). After the down fall of the xenophobic ruling family of Ranas in 1951, Nepal became a centre of attraction for botanists, and many other researchers as well as mountain climbers often helped in plant collections in the country. Based on the collections by British, Swiss, Japanese and German expeditions (details in Rajbhandari 2001), Press et al. (2000) enumerated 6076 taxa of flowering plants belonging to 216 families, 1534 genera, 5345 species, 163 subspecies, 517 varieties and 51 forma.

Orchidaceae, the largest family of the angiosperms, comprises various attractive flowers, not only important for their beauty but also for their use in medicine and trade (Acharya and Rokaya 2010). There are 458 taxa of orchids belonging to 104 genera, 437 species, 2 forma, 3 subspecies and 16 varieties in Nepal (7.1% of total Nepali angiosperms). They are distributed between 60 and 5200 m a.s.l. growing in various types of habitats. 251 species are

epiphytic, 63 are lithophytic (51 as epiphytic or lithophytic), 211 are terrestrial (14 species as terrestrial and lithophytic) and 21 are saprophytic (10 as terrestrial or saprophytic). There are 115 species endemic to the Himalayan region and 18 species endemic to Nepal (Table 1). The genus with the highest number of species is *Bulbophyllum* (38 species) followed by *Dendrobium* (31 species), *Habenaria* (20 species), *Oberonia* and *Peristylus* (19 species each). It is likely that many pristine areas are yet to be explored and the prospect of finding new species is high. It is also important to visit different herbaria that house collections from Nepal and check them thoroughly for completing an authentic orchid flora of Nepal.

In Nepal, temperature rise with the end of winter in February and most rainfall occur during the monsoon between June and August. The phenology of Nepali orchids is well synchronized with the seasons. The records of flowering time of 400 species of orchids show that the peak flowering season is between June and August with the highest number of species flowering during July, a mid-summer month (Table 2).

Most of the wild orchids in Nepal are under threat, and some are at the verge of extinction (Shakya 1999, Bajracharya 2004, Raskoti 2009). Multiple factors are responsible for the threats to the orchids in Nepal. Overexploitation of orchids for ornamental purpose, medicinal use, illegal trade, deforestation, random construction of roads, overgrazing, forest fire and climate changes are all major threats. Conservation measures such as active enforcement of existing laws, and creating awareness in local communities are issues to address for the conservation of orchids. Apart from CITES provisions, it is suggested that the nation should develop a strong and effective conservation strategy and a 'sui-generis' system to safeguard the orchid diversity of Nepal.

Table 1. Endemic orchids of Nepal.

Plant species	Elevation (m)
<i>Bhutanthera fimbriata</i> Raskoti	3800
<i>Eria annapurnensis</i> L. R. Shakya & M. R. Shrestha	2000
<i>Eria baniae</i> Bajrach., L. R. Shakya and M. K. Chettri	1600
<i>Eria nepalensis</i> Bajrach. & K. K. Shrestha	200
<i>Eria pokharensis</i> Bajrach., Subedi & Shrestha	1000
<i>Gastrochilus calceolaris</i> (Buch.-Ham. ex Sm.) var. <i>biflora</i> L. R. Shakya & M. R. Shrestha	2000
<i>Herminium hongdeyuanii</i> B. B. Raskoti	2200
<i>Liparis olivacea</i> Lindl.	1000
<i>Malaxis dolpensis</i> M. R. Shrestha, L. R. Shakya et S. K. Ghimire	4200
<i>Malaxis monophyllos</i> var. <i>obtusata</i> H. Tsukaya & H. Ohba	3350
<i>Malaxis tamurensis</i> Tuyama	1200
<i>Neottia chandrae</i> B. B. Raskoti, J. J. Wood & Rita Ale	3800
<i>Neottia nepalensis</i> (N. P. Balakr.) Szlach. = <i>Listera</i> <i>nepalensis</i> N. P. Balakr.	2900–3800
<i>Oberonia nepalensis</i> L. R. Shakya & R. P. Chaudhary	750–1600
<i>Oreorchis porphyranthes</i> Tuyama	3000–3700
<i>Panisea panchaseensis</i> Subedi	–
<i>Pleione coronaria</i> P. J. Cribb & C. Z. Tang	2500–3500
<i>Stelis biflora</i> Sm.	100–500
<i>Sunipia nepalensis</i> B. B. Raskoti & R. Ale	2400

Table 2. Flowering and fruiting time of orchid species of Nepal based on available information. Single species can be flowering or fruiting in several months and can thus be reported in multiple categories.

Months	No. of flowering plants	No. of fruiting plants
January	25	3
February	28	2
March	60	7
April	115	10
May	142	15
June	156	10
July	167	10
August	158	14
September	107	17
October	84	21
November	59	11
December	35	8

## Data collection

There has always been discrepancy over the exact number of species and the nomenclature of Nepali orchids (Supplementary material Appendix 1, Table A1). So, the checklist presented below is expected to solve nomenclatural problems and ambiguity existing for various species, and update the list of orchids published till present. At several instances, distributions are ambiguously written and they were cross-checked with actual herbarium specimens and field visits for proper authentication.

We collected information from various published books, theses and web pages (Don 1825, Benerji and Thapa 1976, Malla et al. 1976, Benerji 1978, Hara et al. 1978, Benerji and Pradhan 1984, Polunin and Stainton 1984, Stainton 1988, Shakya 1999, Press et al. 2000, 2010, Rajbhandari et al. 2000, White and Sharma 2000, Anonymous 2001, Rajbhandari and Bhattarai 2001, Pearce and Cribb 2002, Bajracharya 2004, de Milleville and Shrestha 2004, Rajbhandari 2004, Rajbhandari and Dahal 2004, Ghimire 2009, Wu and Hong 2009, Maity et al. 2009, Raskoti 2009, Rajbhandari and Baral 2010, Web 1 and 2) and research papers that reported new species from Nepal (Panigrahi and Wood 1974, Tuyama 1975, Bajracharya et al. 1993, Shakya and Bania 1998, Shakya and Chaudhary 1999, Shakya 2000, Tsukaya and Ohba 2000, Bajracharya 2001, Bajracharya et al. 2002, 2003, Shakya et al. 2002, Bajracharya and Shrestha 2003, Rajbhandari 2003, Bajracharya and Shrestha 2004, 2006, Panthi and Chaudhary 2005, Rai et al. 2007, Shakya and Shrestha 2007, Shrestha et al. 2007, Margonska and Kowalkowska 2008, Raskoti et al. 2008, 2012, Raskoti 2009, 2013, Raskoti and Ale 2009a, 2009b, 2010, 2011, 2012, Raskoti and Shakya 2009, Acharya et al. 2010, Subedi et al. 2011, Web 1 and 2). Moreover, different collection trips were carried out in various parts of Nepal between 2001 and 2010. Many reported species were cross-checked with herbarium specimens that were available in the National Herbarium (KATH), and the Godawari and Tribhuvan Univ. Central Herbarium (TUCH) in Nepal. Information on herbarium specimens kept outside Nepal was obtained from experts visiting different herbaria around the world (Paul Ormerod, Australia, pers. comm.) or from online

Table 3. Orchid species that are possibly present in Nepal. Kew Checklist is compiled by R Govert (<http://apps.kew.org/wcsp/home.do>).

Orchid species	Reference
<i>Bulbophyllum leopardinum</i> var. <i>leopardinum</i>	Kew Checklist
<i>Bulbophyllum odoratissimum</i> var. <i>odoratissimum</i>	Kew Checklist
<i>Bulbophyllum umbellatum</i> var. <i>umbellatum</i>	Kew Checklist
<i>Calanthe plantaginea</i> var. <i>plantaginea</i>	Wu and Hong (2009)
<i>Cheirostylis orbanchoides</i> (F. Muell.) D. L. Jones & M. A. Clem.	Press et al. (2000)
<i>Chiloschista viridiflava</i> Seidenf.	Kew Checklist
<i>Cleisostoma appendiculatum</i> (Lindl.) Benth. and Hook.f. ex B. D. Jacks.	Kew Checklist
<i>Coelogyne barbata</i> Lindl. ex Griff.	Wu and Hong (2009), Kew Checklist
<i>Coelogyne hitendrae</i> S. Das and S. K. Jain	Kew Checklist
<i>Coelogyne punctulata</i> forma <i>punctulata</i>	Kew Checklist
<i>Coelogyne raizadae</i> S. K. Jain and S. Das	Kew Checklist
<i>Coelogyne schultesii</i> S. K. Jain and S. Das	Wu and Hong (2009)
<i>Cremastra appendiculata</i> var. <i>appendiculata</i>	Wu and Hong (2009)
<i>Cymbidium cyperifolium</i> var. <i>cyperifolium</i>	Wu and Hong (2009)
<i>Cymbidium eburneum</i> var. <i>eburneum</i>	Wu and Hong (2009)
<i>Cymbidium erythraeum</i> var. <i>erythraeum</i>	Wu and Hong (2009)
<i>Dendrobium capillipes</i> H. G. Reich.	Wu and Hong (2009)
<i>Epipactis helleborine</i> (L.) Crantz subsp. <i>helleborine</i>	Wu and Hong (2009)
<i>Galeola falconeri</i> Hook. f.	Kew Checklist
<i>Gastrodia elata</i> Blume	Wu and Hong (2009), Kew Checklist
<i>Oreorchis foliosa</i> var. <i>indica</i>	Pearce and Cribb (2002), Kew Checklist
<i>Phalaenopsis deliciosa</i> subsp. <i>deliciosa</i>	Kew Checklist
<i>Trichotosia pulvinata</i> (Lindl.) Kraenzl.	Wu and Hong (2009), Kew Checklist

information on herbaria (<http://plants.jstor.org> and [www.theplantlist.org](http://www.theplantlist.org)). 23 species mentioned in Kew checklist (<http://apps.kew.org/wcsp/home.do>) or in 'Flora of China' (Wu et al. 2009) are placed separately in Table 3 as there were no herbarium details collected from Nepal, except mention of their possible presence in Nepal.

## Checklist

The present checklist comprises of following data:

1. Accepted taxon name in bold with author(s) followed by the most frequently and respective author(s) (where applicable). We followed the nomenclature from The Plant List webpage ([www.theplantlist.org](http://www.theplantlist.org)). Species with their latest accepted names are sometimes followed by the most frequently used heterotypic synonym(s) and respective authors.
2. Distribution in Nepal with altitudinal ranges in parenthesis. In the checklist, E stands for eastern Nepal, C for central Nepal and W for west Nepal. This information is prominently obtained from field visits and various relevant documents related to Nepal (Hara et al. 1978,

Press et al. 2000 and updated online version [www.efloras.org](http://www.efloras.org), Anonymous 2001, Rajbhandari and Dahal 2004) and also from floras of adjoining regions (Preace and Cribbs 2002, Wu and Hong 2009). Global distribution is also mentioned for each species based on information obtained from the above-mentioned references. The distribution in neighbouring regions (India and China) are given in detail.

3. Habit is followed by habitat in Nepal (if known). For epiphytic orchids data were taken from our field visits and from Ghimire (2009) and Raskoti (2009).
4. Flowering months followed by fruiting months in Nepal (if known). The data were obtained from field visits and from published sources (Rajbhandari and Dahal 2004, Ghimire 2009, Raskoti 2009, Wu and Hong 2009).
5. All the reported chromosome numbers were taken from Wu and Hong (2009) and sometimes from Vij and Shekhar (1987).
6. Herbarium details of each species (location, collection-date, number and herbaria code) housed in herbaria in Nepal (KATH, TUCH-personal visit), and abroad (BM, E, G, K, LINN, P information obtained from <http://plants.jstor.org> and [www.theplantlist.org](http://www.theplantlist.org), if available) are given. Photographs included in Raskoti (2009) and his own collections were also consulted and are marked as 'Ph-R' in the present checklist.
7. In cases where herbarium specimens are lacking, the most reliable references (Hara et al. 1978, Press et al. 2000, Pearce and Cribb 2002, Rajbhandari and Dahal 2004) that are based on previous collections in Nepal by different people are given to authenticate species present in Nepal.

### **Acampe praemorsa** (Roxb.) Blatt. & McCann

*Acampe papillosa* (Lindl.) Lindl., *Acampe carinata* (Griff.) Panigr.

CE Nepal (200–1200 m; Bangladesh, Bhutan, NE India (Assam), Indo-China (Hainan, SW Yunnan, Taiwan), Laos, Myanmar, Thailand, Sri Lanka, Vietnam.

Epiphytic on tree trunks often in *Shorea robusta* and *Terminalia chebula*. Fl. Sep–Nov, Fr. Dec–Jan. 2n = 36, 38, 72.

Torikhet, Dolakha, 1977.7.12. K R. Rajbhandari and B. Roy 1233 (KATH); Subedi, Chaudhary and Shakya 787 (TUCH).

### **Acampe rigida** (Buch.-Ham. ex Sm.) P. F. Hunt

*Acampe multiflora* (Lindl.) Lindl.

EC Nepal (200–1500 m), Africa, Bhutan, Cambodia, China (S Guangdong, SW Guangxi, S Guizhou, Hainan, Taiwan, E, SE, and SW Yunnan), Laos, Malaysia, Myanmar, NE India (Assam, Sikkim), Sri Lanka, Thailand, Vietnam.

Epiphytic on tree trunks mainly *Semicarpus anacardium*, *Schima wallichii*. Fl. Aug–Sep, Fr. Oct–Nov. 2n = 38.

Raja Rani, Morang, 1979.9.6, R. B. Thapa, S. Magar and S. Tamang 921 (KATH); Subedi, Chaudhary and Shakya 865 (TUCH).

(*A. rigida* and *A. multiflora* are written as two separate species in Hara et al. (1978) and Press et al. (2000)).

**Acanthephippium striatum** Lindl.

E Nepal (400–1500 m), China (S Fujian, SW Guangxi, Taiwan, S and SE Yunnan), Indonesia (Java), Malaysia, NE India, Thailand, Vietnam.

Terrestrial in shaded and humid dense forests, banks of streams, along valleys. Fl. Apr–Jul.

Chulachuli, Ilam, 140 m (Ph-R).

**Aerides multiflora** Roxb.

*Aerides affine* Lindl.

CE Nepal (200–1100 m), Bangladesh, Cambodia, India (Andaman Islands, Garhwal to Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunk or major branches of plants (*Schima wallichii*, *Madhuca latifolia*, *Ficus religiosa* or *Eugenia formosa*, *Albizzia* sp., *Cleistocalyx operculata* or *Lagerstroemias* sp., *Ficus bengalensis*, *Mangifera indica*, *Alnus* sp.). Fl. May–Jun.

Wallich N., s.n. P00318089 (P); Sundi Kholā, Bajhang, 960 m, 1984.8.5, PR Shakya, MK Adhikari, MN Subedi 8313; Babai, Bardiya, 350 m, 1979.6.27, KR Bhattarai and B Roy 2623; Rangapani, Illam, 1978.6.11, P. Pradhan and R. Niraula 516 (KATH); Subedi, Chaudhary and Shakya 784 (TUCH).

**Aerides odorata** Lour.

EC Nepal (200–1200 m), Bhutan, China S. (Guangdong, W Yunnan), India (Assam, Sikkim), Indonesia (Borneo, Sumatra, Java, Sulawesi), Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam.

Epiphytic on tree trunks usually exposed light and air current (*Stanopsis indica*, *Shorea robusta*, *Mitragyna parviflora* or *Schima wallichii*, *Sapium insigne*, *Albizzia* sp.). Fl. Apr–Jul.  $2n = 36, 38, 40$ .

Harre, Bardiya, 199.6.28, KR Rajbhandari and B Roy 2640; Arughat, Gorkha, 500 m, 1979.6.29, MK. Adhikari and MN Subedi 7811; Raja Rani, Morang, 570, 1978.6.14, P Pradhan and R Niraula 540 (KATH); Subedi, Chaudhary and Shakya 783 (TUCH).

(*A. odorata* Lour. is also spelled as *A. odoratum* Lour.).

**Agrostophyllum callosum** Rchb.f.

EC Nepal (2100–2200 m), Bhutan, NE India (Assam), Malaysia, Myanmar, Thailand, Vietnam. Fl. May–Aug, Fr. Jul–Aug.  $2n = 38, 40$ .

Epiphytic on trees trunks often *Quercus glauca*, *Lyonia ovalifolia*, *Schima wallichii* in dense forests.

Phulchoki, Lalitpur 8000 ft, 1977.7.29, P Pradhan and Party 9583; Tamphodin, 7000 ft, 1969.6.25, TB Shrestha and LHJ. Williams 15902 (KATH).

**Agrostophyllum planicaule** (Wall. ex Lindl.) Rchb.f.

E Nepal (500–800 m), Bhutan, Cambodia, India NE (Assam, Sikkim, Andaman Islands), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks and their main branches or rarely lithophytic on rocks (*Terminalia* sp.). Fl. Jul–Dec.

Rangapani, Illam, 2000 ft, 1977.10.10, P Pradhan, KR Rajbhandari and R Niraula 359 (KATH).

**Androcorys josephi** (Rchb.f.) Agrawala & H.J. Chowdhery  
*Herminium josephi* Rchb.f.

CW Nepal (2700–4100 m), Bhutan, China (W Sichuan, S and SE Xizang, NE and NW Yunnan), India (Arunchal Pradesh, Sikkim).

Terrestrial on open grassland slopes. Fl. Jul–Aug.  $2n = 38$ .

Chheti-Mechchra, Darechula, 3400 m, 1984.7.22, PR Shakya, MK Adhikari and MN Subedi 8014, Godepani-Pun Hill, Kaski, 3100 m, 1983.7.13, KR Rajbhandari 7677; Kalinchok Danda, Dolakha, 11800 ft, 1975.7.1, PR Shakya, KR Rajbhandari and HK Saiju 2247; Dig Kharka, Solukhumbu, 4400 m, 1997.8.18, KR Rajbhandari 9740399 (KATH).

(species name *josephi* is sometimes spelled as *Josephii*).

**Androcorys pugioniformis** (Lindl. ex Hook. f.) K. Y. Lang.

*Herminium pugioniforme* Lindl. ex Hook. f.

ECW Nepal (2700–5200 m), Bhutan, China (E and S Qinghai, NW Sichuan, Xizang, NW Yunnan), India (Kumaon, Kashmir, Sikkim, Uttarakhand).

Terrestrial on alpine thickets and meadows usually in the *Abies* forest. Fl. Aug–Sep, Fr. Sep.

West Nepal, PSW 239; Central Nepal, SSW 6185; East Nepal, McCosh 355 (Hara et al. 1978, Press et al. 2000).

**Anoectochilus brevilabris** Lindl.

C Nepal (900–1500 m), Assam India, eastern Himalaya.

Terrestrial on evergreen broad-leaved forests and damp valleys. Fl. Aug–Sep.

Makwanpur Gadhi, Makwanpur (Ph-R).

**Anoectochilus setaceus** Blume

*Anoectochilus roxburghii* (Wall.) Lindl.

C Nepal (300–1500 m), Bangladesh, Bhutan, China (Yunnan), India (Assam), Myanmar, Sri Lanka, Thailand, Vietnam, Indonesia (Sumatra, Java).

Terrestrial on evergreen broad-leaved forests and damp valleys. Fl. Dec.

Wallich s.n. (syntype) (BM) (Hara et al. 1978).

**Anthogonium gracile** Wall. ex Lindl.

EC Nepal (1500–2000 m), Bangladesh, Bhutan, Cambodia, China (W Guangxi, SW Guizhou, SE Xizang, W to SE Yunnan), India (Assam, Bengal, Sikkim), Laos, Myanmar, Thailand, Vietnam.

Terrestrial on grassy slopes or thickets. Fl. Aug–Nov.  $2n = 38, 40, 42, 54$ .

Deorali Data, Kulekhani, Makwanpur, 5000 ft, 1975.10.8, KR Rajbhandari, PM Amatya and NK Bhusal 75/926; Shwapuri summit, Kathmandu, 1900 m, 1988.9.13, M Suzuki, MN Subedi, M Minaki, S Noshiro and H Ikeda 11569; Hanspokari, Ilam, 5200 ft, P Pradhan, KR Rajbhandari and R Niroula 176 (KATH); Subedi, Chaudhary and Shakya 1026 (TUCH).

**Aphyllorchis alpina** King and Prantl.

EC Nepal (2100–2600 m), Bhutan, China (SE Xizang), India.

Terrestrial in forests and river banks. Fl. Jul, Fr. Sep.

Pantling 462, India (K). Pearce and Cribb (2002).

**Apostasia wallichii** R. Br.

C Nepal (600–800 m), Australia, Bangladesh, Cambodia, China (Hainan, SW Yunnan, Yingjiang), India E (Assam, Sikkim), Indonesia (Sumatra, Java, Borneo, Sulawesi),

Moluccas), Japan S, Laos, Malaysia, Myanmar, New Guinea, Philippines, Sri Lanka, Thailand, Vietnam.  
Terrestrial in *Shorea robusta* forests, crevices and along streams. Fl. Aug.  
Central Nepal, 1950.5, N Wallich no. 4448 (G, P); Pame Kaule Kaski, Gandaki, 1250 m, Subedi A (TUCH).

**Arundina graminifolia** (D. Don) Hochr.

EC Nepal (400–2300 m), Bhutan, China (N Fujian, Guangdong, Guangxi, Guizhou, Hainan, S Hunan, Jiangxi, S Sichuan, SE Xizang, Taiwan), India, Indonesia, Laos, Malaysia, Myanmar, Sri Lanka, Thailand, Vietnam. It has colonized new habitats in Guadeloupe, Hawaii, Jamaica and Puerto Rico.

Terrestrial on grassy slopes, steams banks, thickets and forests. Fl. and Fr. Jun–Nov, sometimes Jan–Apr.  $2n = 32, 38, 40, 42$  (Wu and Hong 2009).

Nepal, 1802.07.15, F Buchanan-Hamilton, s.n. (BM); Below Helambu, Sindhupalchok, 1300 m, 1966.09.28, DH Nicolson 2674; Dolalghat, Kavrepalanchok, 870 m, 1985.9.13, H Obha, M Wakabayashi, M Suzuki, N Kurosaki, KR Rajbhandari, SK Wu 62306; Yamdwar, Ilam, 200 m, 1974.7.12, P Pradhan, M Amatya and Rajani 320/74 (KATH); Kaskikot, Kaski, 1500 m, Subedi Chaudhary and Shakya 1032 (TUCH).

**Ascocentrum ampullaceum** (Roxb.) Schltr.

C Nepal (150–1500 m), Bhutan, China (S and SE Yunnan), India (Andaman Islands, NW and NE, Assam, Sikkim, Bengal), Laos, Myanmar, Thailand.

Epiphytic on tree trunks in broad-leaved evergreen forests (e.g. *Shorea robusta*). Fl. Mar–May.  $2n = 38$ .

Jaspal, 290 m, 1969.4.20, H Kanai and MS Bista 12214; Garuwa, Ilam, 200 m, 1979.4.18, P Pradhan, R. Niraula and M Gorkhali 768 (KATH).

**Bhutanthera albomarginata** (King and Prantl.) Renz

*Habenaria albomarginata* King and Prantl.

EC Nepal (3400–4300 m), Bhutan, India (Sikkim).

Terrestrial in alpine open meadows. Fl. Jul–Sep.

Above Rupche Bhanjyang, Ganesh Himal, 3600 m, 1992.7.2, WJ Walker, TA Burkitt, JT Miller and R Shrestha 9 (KATH).

**Bhutanthera alpina** (Hand-Mazz.) Renz

*Habenaria alpina* Hand.-Mazz.; *Peristylus alpinus* (Hand.-Mazz.) K. Y. Lang.

C Nepal (4200–4300 m), Bhuta, China (SE Xizang), India (Sikkim).

Terrestrial in damp alpine meadows; Fl. Jul–Aug.

(This species was collected from Bagmati zone, Rasuwa District, Tulo Bhera Khark to Jaisuli Kund, 4200 m, 30 Jul 1994, F. Miyamoto et al. 9410108 (A). The herbarium is deposited at Harvard Univ. Herbaria and is confirmed by Paul Ormerod, Australia, pers. comm.)

**Bhutanthera fimbriata** Raskoti

C Nepal (3800 m).

Terrestrial in alpine region.

Langtang National Park, 2008.7.14, Raskoti 234 (holotype KATH).

**Brachycorythis obcordata** (Lindl.) Summerh.

CW Nepal (1000–2600 m), Bangladesh, Bhutan, India (Himanchal Pradesh), Myanmar.

Terrestrial in moist slopes, along foot hills. Fl. Jun–Aug.

Lipna, Dadelhura, 900 m, 1980.8.11, KR Rajbhandari, PM Regmi and KJ Mallaa 5184; Jimali, Salyan, 950 m, 1979.8.17, KR Rajbhandari and B Roy 4787; Nagi, Shivapuri, Kathmandu, 6000 ft, 1966.8.2, SB Malla 4962; Nagdaha to Thotneri, Dolakha, 1300 m, 1977.8.3 KR Rajbhandari and B Roy 2034; Lekh Kharka, Solukhumbu, 8000 ft, 2023.4.23, ML Benarji and PR Shakya (TUCH).

**Bulbophyllum affine** Lindl.

EC Nepal (600–1800 m), Bhutan, Cambodia, China (S Guangdong, S Guangxi, Hainan, S Taiwan, S Yunnan), India (Assam, Sikkim, WE Himalaya), Laos, Myanmar, Ryukyu Archipelago, Vietnam.

Epiphytic on tree trunks (*Sapium insigne*, *Rhododendron arboreum*, *Schima wallichii*, *Castanopsis indica*) in the forest or along valleys. Fl. May–Aug.  $2n = 36$ .

Chyanthapu, Kheband, 4500 ft, 1969.6.12, TB Shrestha 15606; Karkineta, Parbat, 1979.6.17, HK Saiju and SR Tuladhar 1/79; Arun valley, Sankhuwasabha, 1200 m, 1998.12.7, DB Karkee 780 (KATH).

**Bulbophyllum ambrosia** (Hance) Schltr.

Nepal (600–1500 m), China S (Fujian, S Guangdong, W Guangxi, Hainan, Yunnan), Vietnam.

Epiphytic or lithophytic in evergreen and semi-deciduous forests, thickets, on various bedrock types including limestone and mossy rocks.

Langtang khola, near Sharpubes east of Trisuli river, towards Tibetan frontier, ML Williams 39, Nepal, 1981.03 (K).

**Bulbophyllum ambrosia** (Hance) Schltr. subsp. **nepalensis**

J. J. Wood

C Nepal (1200–1500 m), ? India (Assam-Khasia Hills).

Epiphytic in forests, associated with *Coelogyne cristata*. Fl. Nov–Dec.

Langtang khola, near Sharpubes east of Trisuli river, towards Tibetan frontier, ML Williams 39, Nepal, 1981.03 (holotype: K).

**Bulbophyllum bisetum** Lindl.

C Nepal (1500–2000 m), India (east Nepal), Thailand.

Epiphytic on medium sized tree or lithophytic on moist rocks. Fl. Jul–Oct.

Bhadure-Deurali to Panchase, Kaski, 1900 m, Subedi, Chaudhary and Shakya 804 (TUCH).

**Bulbophyllum careyanum** (Hook.) Spreng.

EC Nepal (600–1200 m), Bhutan, India NE (Assam, Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks (*Quercus glauca*, *Q. lanata*, *Schima wallichii*) in dense primary humid evergreen forest, also lithophytic in small cliff near a stream. Fl. Sep–Dec.

Godavari, Lalitpur, 5500 ft, 1967.12.13, Manandhar and Party 8319; Sanguri Bhanjyang, Sunsari, 1300 m, 1978.11.12, P Pradhan, NP Manandhar and N Amatya 662; Seti dobhan, Syanga, 700 m, 1979.9.5, R Niraula and N Pradhan 1/1979 (KATH).

**Bulbophyllum cariniflorum** Rchb.

C Nepal (1300–1800 m), Bhutan, China (S. Xizang), India E., Thailand, Vietnam.

Epiphytic or lithophytic in mixed forests. Fl. Jul–Aug.  $2n = 38$  (Wu et al. 2009).

Nepal, Kathmandu, K Adrington (spirit); S Coll, s.n., Nepal (spirit) (K).

**Bulbophyllum cauliflorum** Hook. f.

*Bulbophyllum cauliflorum* Hook. f. var. *sikkimense* N. Pearce & P. J. Cribb

E Nepal (800–1800 m), China (Xizang), India NE (Assam, Sikkim).

Epiphytic on tree trunks or lithophytic on open rocks in broad-leaved forest. Fl. Jun–Jul.  $2n = 42$ .

Chongtang, JD Hooker 36B (holotype: K-LINDL, isotype: K); Press et al. (2000).

**Bulbophyllum cylindraceum** Lindl.

E Nepal (1600–2400 m), Bhutan, China (W to SE Yunnan), India (Asma, Sikkim, W Himalaya), Myanmar, Thailand.

Epiphytic on tree trunks or lithophytic on moist rocks in forests. Fl. Nov.  $2n = 38, 40, 42$ .

Chitray, 7400 ft, 1977.9.11, P Pradhan and N Shrestha 98 (KATH); S Coll, s.n. (spirit) (K).

**Bulbophyllum elatum** (Hook. f.) J. J. Sm.

C Nepal (900–1500 m), India (Assam, Sikkim).

Epiphytic on *Schima wallichii*. Fl. May–Jun.

Tinpanibhanjyang, Lalitpur, 7000 ft, 1977.5.11, R Bahadur 429 (KATH); S Coll, s.n. (spirit) (K).

**Bulbophyllum emarginatum** (Finet) J. J. Sm.

Nepal (800–2200 m), Bhutan, China (SE Xizang, SE to NW Yunnan), India NE, Myanmar, Vietnam.

Epiphytic on tree trunks in primary forests. Fl. Oct.

Spirit (10964.000) (K); Wu and Hong (2009).

**Bulbophyllum eublepharum** Rchb. f.

East Nepal (2000–2500 m), Bhutan, China (SE Xizang, NW and SE Yunnan), India (estern Himalaya), Myanmar.

Epiphytic on tree trunks. Fl. Jul–Nov, Fr. Aug.  $2n = 38$ .

Spirit (55317.000) and India. Spirit (14946.000) (K); Although it is mentioned in Rajbhandari and Dahal (2004), herbarium specimen is not found.

**Bulbophyllum gamblei** (Hook. f. f.) Hook. f.

E Nepal (1800–2800 m), Bhutan, India (Assam, Sikkim).

Epiphytic or lithophytic in broad-leaved riverine forests. Fl. Jun–Jul.

Although it is mentioned in Pearce and Cribb (2002) and Rajbhandari and Dahal (2004), herbarium specimen is not found.

**Bulbophyllum guttulatatum** (Hook. f.) N. P. Balakr.

C Nepal (700–2300 m), Bhutan, China (SE Xizang), India (Kumaon, Assam, Sikkim), Myanmar, Vietnam.

Epiphytic on tree trunks in broad-leaved forests usually in the *Schima wallichii*. Fl. Jul–Sep.

Shivapuri, Chitray, Kathmandu, 7400 ft, 1974.9.8.4, S Dahal and N Dawadi 125; Godak, Ilam, 3500 ft, 1977.10.3, P Pradhan, KR Rajbhandari and R Niraula 651 (KATH); spirit (K).

**Bulbophyllum helenae** (Kuntze) J. J. Sm.

E Nepal (900–1200 m), China (S and SW Yunnan), India (Khasia, Assam, Kumaon, Sikkim), Laos, N. Myanmar, Thailand.

Epiphytic in primary forests. Fl. May–Aug.

East, Nepal, 1969, fide Banerji and Thapa, l.c. 293 (BM) (Hara et al. 1978, Press et al. 2000).

**Bulbophyllum hirtum** (Sm.) Lindl. ex Wall.

*Stelis hirta* Sm.

C Nepal (1000–1600 m), India NE (Assam, Sikkim), Laos, Myanmar, Thailand.

Epiphytic on medium sized tree trunk (*Schima wallichii*, *Quercus lanuginosa*). Fl. Jan–Jul.

Nepal, F Buchanan-Hamilton, 1803.1.30 (holotype: LINN); Nepal, 1821, N Wallich no. 1989 (G); Thailand, 1910.12.11, AFG Kerr 67 (K); Central, Godavari, 6000 ft, 1978.2.16. R Bahadur 394 (KATH).

**Bulbophyllum leopardinum** (Wall.) Lindl. ex Wall.

EC Nepal (1500–3200 m), China (S Xizang, S Yunnan), India (Assam, Sikkim, Uttarakhanda), Laos, Thailand, N Vietnam.

Epiphytic in tree trunk and lithophytic in exposed rocks. Fl. Apr–Aug, Oct.

Nagarkot Dada, Bhaktapur, 2100 m, 1975.3.11, DP Joshi and KR Rajbhandari 75/454 (KATH).

**Bulbophyllum moniliforme** E. C. Parish & Rchb. f.

C Nepal (1450 m), Burma, Cambodia, India NE, Laos, Thailand, Vietnam.

Epiphytic in deciduous forest. Fl. Oct.

Banpalie forest, Kaski, 1450 m, Subedi 1753 (TUCH).

**Bulbophyllum muscicola** Rchb. f.

*Bulbophyllum hookeri* (Duthie) J. J. Sm.

C Nepal (2100–2400 m), Bhutan, India (Assam, Garwal).

Epiphytic on *Rhododendron* forest. Fl. Feb–Sep.

Daman, Makwanpur, 1989.3.12. KJ White 3 (KATH).

**Bulbophyllum odoratissimum** (Sm.) Lindl. ex Hook. f.

C Nepal (1000–2000 m), Bhutan, China (Fujian, Guangdong, Guangxi, S Sichuan, SE Xizang, W to SE Yunnan), India (Assam, eastern Himalaya, Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks in mixed forests (*Quercus semicarpifolia*, *Schima wallichii*), on rocks in damp places. Fl. Apr–Aug.  $2n = 38$  (Wu and Hong 2009).

Nepal, 1821, N Wallich no. 1987 (G); N Wallich (LINN); Naudada Kaski, 1300 m, 1975.6.14. DP Joshi and TK Bajracharya 75/2666; Phulchoki, Lalitpur, 8000 ft, 1977.7.29, R Bahadur 9582 (KATH).

**Bulbophyllum polyrrhizum** Lindl.

C Nepal (900–2100 m), Burma, India (Sikkim), Laos, Thailand.

Epiphytic on tree trunks in humid evergreen forest. Fl. Apr. Mahaveer, Makwanpur, 1800 m, 1992.2.22, KJ White 12 (KATH).

**Bulbophyllum reptans** (Lindl.) Lindl. ex Wall.

*Sunipia racemosa* (Sm.) Tang & F. T. Wang

ECW Nepal (1000–2200 m), Bhutan, China (Guangxi, SW Guizhou, Hainan, S and SE Xizang, W to SE Yunnan), India NE (Assam, Bengal), Laos, Myanmar, Thailand, Vietnam. Epiphytic on tree trunks (like *Engelhardtia spicata*) or lithophytic on rocks in evergreen broad-leaved forests. Fl. Nov–Jan, Fr. Apr–Jun.  $2n = 38 + 0 - 2B, 42$ . Doko Bhanjyang, Kathmandu Valley, 2400 m, 1975.3.16, DP Joshi and KR Rajbhandari 75/644; Hanspokhari, Illam, 1978.11.21 P Pradhan et al 43; above Num, Sankhuwasava, 1700 m, 2009.2.9, GD Bhatt and SP Bhattarai 4 (KATH).

***Bulbophyllum retusiusculum*** Rchb. f.

C Nepal (2100–3000 m), Bhutan, China (S Gansu, Guizhou, Hainan, Hubei, S Hunan, Sichuan, Taiwan, S and SE Xizang, W to SE Yunnan), India NE, Laos, Malaysia, Myanmar, Thailand, Vietnam. Epiphytic on tree trunks or main branches (*Rhododendron arboreum*, *Quercus semicarpifolia*, *Lyonia ovalifolia*). Fl. Sep–Dec/Apr–Aug.  $2n = 38$ . Chhintapu, Illam, 2600 m, 1971.9.29, JF Dobremez 1256; Bagdwar, Kathmandu, 8200 ft, 1979.9.9, P Pradhan and N Shrestha 20; Gufa, Taplejung, 2500 m, 1983.9.22, HK Saiju, L Joshi, N Pradhan and MN Subedi 46; Bhandar-Shivalaya, 2600 m, 1985.9.11, H Obha et al. 62283 (KATH).

***Bulbophyllum rigidum*** King and Prantl.

C Nepal (1000–1500 m), India NE (Assam, Sikkim). Epiphytic in evergreen temperate forests mainly on *Quercus semicarpifolia*. Fl. Oct–Nov/Aug. Daman-Hetauda, Makwanpur, 2000 m, 1966.11.16, KR Rajbhandari and S Bhattra 85A (KATH).

***Bulbophyllum rolfei*** (Kuntze) Seidenf.

*Bulbophyllum dyerianum* (King and Prantl.) Seidenf. EC Nepal (1800–2500 m), Bhutan, China (W Yunnan-Fugong), India (Naga hills-Assam). Epiphytic on tree trunks or main branches. Fl. Jun–Sep. Near Sukepokhari, Panchthar, 2600 m, 1978.11.18, NP Manandhar and N Amatya 807 (KATH).

***Bulbophyllum roxburghii*** (Lindl.) Rchb. f.

E Nepal (300–500 m), India NE (Assam, Sikkim). Epiphytic on medium to large sized tree trunks. Fl. May–Jun. India, Spirit (45742.000 and 55750.000) (K); Rajbhandari and Dahal (2004).

***Bulbophyllum sarcophyllum*** J. J. Sm.

E Nepal (1000–1200 m), Bhutan, India (Assam, Sikkim), Myanmar. Epiphytic on tree trunks. Fl. May–Jun. Rajbhandari and Dahal (2004).

***Bulbophyllum scabratum*** Rchb. f.

E Nepal (2000–2200 m), India NE (Assam-Khasia, Bengal, Sikkim). Epiphytic on tree trunks and main branches. Fl. Mar–May. East, Nepal, 2000 m, Stainton 771 (Hara et al. 1978, Press et al. 2000).

***Bulbophyllum secundum*** Hook. f.

C Nepal (2000–2200 m), China (Yunnan) India (Assam, Sikkim), Myanmar, Thailand, Vietnam. Epiphytic in montane temperate (e.g. *Quercus glauca*) or tropical evergreen (shrub) forests, also reported from depleted evergreen forests. Fl. Jan–Feb, May–Jul, 1200–2500 m. Tinpanibhanjyang, 7000 ft, 1978.7.6, R Bahadur 569 (KATH).

***Bulbophyllum sterile*** (Lam.) Suresh

*Bulbophyllum caudatum* Lindl. EC Nepal (500–1000 m), China (SE Xizang), India (Assam, Bengal, Sikkim), Myanmar. Epiphytic on trees (*Engelhardtia spicata*, *Schima wallichii*, *Mangifera indica*). Fl. Jun–Jul.  $2n = 38$ . Sundarijal, Kathmandu, 5300 ft, P Pradhan and N Shrestha 827; Torikhet, Dolakha, 950 m, 1977.7.12, KR Rajbhandari and B Roy 1234; Godak, Ilam, 3500 ft, 1977.10.3 P Pradhan et al 1234 (KATH).

***Bulbophyllum striatum*** (Griff.) Rchb. f.

C Nepal (500–1000 m), Bhutan, China (SE Yunnan), India (Assam, Bangel), Thailand, N Vietnam. Epiphytic in forest or on rocks in thickets on limestone slopes (lithophytic). Fl. Jan–Feb, Fl. Oct–Dec. Deurali village to Panchase Danda, Kaski, 200 m, Subedi, Chaudhary and Shakya 1035 (TUCH).

***Bulbophyllum triste*** Rchb. f.

E Nepal (800–1400 m), China (S Yunnan), India (Uttanchal, Assam), Myanmar, Thailand. Epiphytic on *Engelhardtia spicata*. Fl. Jan–Jul.  $2n = 38$ . Nepal, C Bailes 935A (spirit) (K); Tinpanibhanjyang, Lalitpur, 7000 ft, 1978.5.4, R Bahadur 806 (KATH).

***Bulbophyllum umbellatum*** Lindl.

C Nepal (300–2200 m), Bhutan, China (SW Guizhou, SW Sichuan, Taiwan, SE Xizang, S and W Yunnan), NE India (Panjab, Assam), Myanmar, Thailand, Vietnam. Epiphytic mainly on *Quercus glauca*, *Castanopsis indica*. Fl. Mar–Jun.  $2n = 38$ . Godavari, Lalitpur, 6000 ft, 1978.4.11, P Pradhan 401 (KATH).

***Bulbophyllum umbellatum* var. *fuscescens*** (Hook. f.) P. K. Sarkar

*Cirrhopetalum maculosum* var. *frutescens* Hook. f. Nepal (1000–2000), India (Sikkim). Epiphytic on large-sized tree trunks. Nepal in spirit (12727.000) (K).

***Bulbophyllum viridiflorum*** (Hook. f.) Schltr.

EC Nepal (1500–2200 m), India (Assam-Khasia, W Himalaya, Sikkim). Epiphytic on *Castanopsis indica*, *Schima wallichii*. Fl. Jun–Aug. Dhorpatan-Bustibang, Balung, 2600, 1979.6.26, HK Saiju and SR Tuladhar 68/79; B. B. Raskoti 109, Panchase (KATH).

***Bulbophyllum wallichii*** Rchb. f.

C Nepal (1000–2500 m), Bhutan, China (S and W Yunnan), NE (Assam) and NW India, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks of *Schima wallichii*. Fl. Mar–May.  $2n = 38$ .

Sanguribhanjyang, 4000 ft, 1970.4.8, TB Shrestha and TK Bhattacharya 10410 (KATH).

**Bulbophyllum xylophyllum** Parish and Rchb. f.

E Nepal (410–910 m), Bhutan, China (Guizhou), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. Sep–Oct.

Although it is mentioned in Press et al. (2000) and Rajbhandari and Dahal (2004), herbarium specimen is not found.

**Bulbophyllum yoksunense** J. J. Sm.

C Nepal (2000–2600 m), NE India, Myanmar, ? Malaysia.

Epiphytic on *Quercus* species. Fl. Sep–Oct.

B. B. Raskoti 299 (KATH), Beer L. W. 25579 Ishwa Khola, Arun region (BM).

**Bulbophyllum yunnanense** Rolfe

*Bulbophyllum otoglossum* Tuyama

E Nepal (1400–2800 m), Bhutan, China (NW and SE Yunnan).

Epiphyte on tree trunks or lithophytic on moist rocks. Fl. Apr–Jun, Aug.

East Nepal, TI 6307376 (Hara et al. 1978, Press et al. 2000).

**Calanthe alpina** Hook. f. ex Lindl.

ECW Nepal (2800–3500 m), Bhutan, China (S Gansu, Shaanxi, Sichuan, Taiwan, S and SE Xizang, W Yunnan), India (Grawal, NE), Japan.

Terrestrial in forests margins, grassy slopes. Fl. Nov.  $2n = 40, 42$ . Above Thongnada, 2700 m, 1981.7.8, PR Shakya, LR Sharma and KR Amatya 6344; Ghodepani, Parbat, 2750 m, 1975.6.23, DP Joshi and TK Bhattaraya 75/2928; Ankhu Khola, Ganesh Himal, 2800 m, 1992.7.14, WJ Baker, TA Burkitt, JT Milller and R Shrestha 12; Ramite, 2700 m, 1972.7.3, PR Shakya 1948; Chichila, Sankhuwasabha, 1900 m, 1998.12.13, DB Karkee 821 (KATH).

**Calanthe biloba** Lindl.

E Nepal (1000–2800 m), Bhutan, China (SW and W Yunnan), NE India, Myanmar, Thailand.

Terrestrial in thickets or near streamsides. Fl. Oct.  $2n = 38, 48, 80$ .

East Nepal, Hooker f. s.n. (K) (Hara et al. 1978, Press et al. 2000).

**Calanthe brevicornu** Lindl.

EC Nepal (1500–3100 m), Bhutan, China (N Guangxi, Hubei, Sichuan, SE Xizang, SE and W Yunnan), India (Sikkim), Myanmar.

Terrestrial in dense forest. Fl. May–Jun.  $2n = 38, 40, 48$ .

Below Namche Kharka, Sankhuwasabha, 2180 m, 1994.6.11, PR Shakya and KK Dangol 100060; Sanguri Bhanjyang, Sunsari, 2500 m, PR Shakya and P Shrestha 9777 (KATH).

**Calanthe chloroleuca** Lindl.

E Nepal (1500–2400 m), Bhutan, India.

Terrestrial on humus rich slopes.

Shepawa to Hogganun, 8000 ft, 1965.5.16, ML Banerji, AV Upadhyay and BB Bakola 3501; Mai Pkhari, Ilam, 2100 m, 1977.4.13, PR Shakya 4033 (KATH).

**Calanthe davidii** Franch.

*Calanthe pachystalix* Rchb. f. ex Hook. f.

C Nepal (500–3300 m), China (S Gansu, Guizhou, Hubei, NW Hunan, S Shaanxi, Sichuan, Taiwan, SE Xizang, SE and W Yunnan) N India, Japan, Vietnam.

Terrestrial or lithophytic on forest or shaded places. Fl. Jun–Jul, Fr. Sep–Oct.  $2n = 40, 44$ .

Central Nepal, C Bailes s.n. (Hara et al. 1978, Press et al. 2000).

**Calanthe densiflora** Lindl.

*Alismorkis densiflora* (Lindl.) Kuntze; *Calanthe kazuoi* Yamamoto.

C Nepal (1000–3000 m), Bhutan, China (Guangdong, Guangxi, Hainan, Sichuan, Taiwan, S and SE Xizang, NW and SE Yunnan) NE India (Darjeeling, sikkim), Japan (Iriomote Island), Myanmar, Vietnam.

Terrestrial. Fl. Aug–Sep, fr. Oct.  $2n = 40$ .

South of Bajrabarahi, Kathmandu, 1400 m, 1999.11.20, KR Rajbhandari 99/51 (KATH).

**Calanthe griffithii** Lindl.

E Nepal (2000–2300 m), Bhutan, China (SE Xizang), NE India, Myanmar.

Terrestrial in evergreen broad leaved forest. Fl. May.

Maipokhari, Ilam, 2200 m, 1996.3.31, KR Rajbhandari, S Bhattra and R Joshi 32 (KATH).

**Calanthe mannii** Hook. f.

EC Nepal (1500–2500 m), Bhutan, China (E Guangdong, NE Guangxi, SW Guizhou, SW Hubei, N Jiangxi, Sichuan, S and SE Xizang, NE Yunnan), India (Assam, Kumaon, NE), Myanmar, Vietnam.

Terrestrial in forests usually in the north facing slopes. Fl. May.  $2n = 40$ .

Siringdham, 7500 ft, 1969.6.15, TB Shrestha 15642; Kiocma-Chumsur, Sankhuwasabha, 2020 m, 1999.10.10, DB Karkee 937 (KATH).

**Calanthe plantaginea** Lindl.

C Nepal (1500–2200 m), Bhutan, China (S and SE Xizang, SW and W Yunnan), India (Kashmir).

Terrestrial in evergreen broad-leaved forests. Fl. Mar–Apr.  $2n = 40$ .

Near Dyolekh, Bajhang, 1950 m, 1984.4.15, P Pradhan, RK Uprety, N Pradhan and N Dabadi 1317; Sundarijal, Kathmandu, 1700 m, 1975.3.18, DP Joshi and KR rajbhandari 75/704; Jysyn Ban, Bhaktapur, 1900 m, 1975.3.12, DP Joshi and KR rajbhandari 75/520 (KATH); Bhadure to Panchase, 1900 m, Subedi 790 (TUCH).

**Calanthe puberula** Lindl.

C Nepal (1800–2500 m), Bhutan, China (SE Xizang, SE and W Yunnan), India (Assam, Simla), Japan, N Vietnam.

Terrestrial in evergreen broad-leaved forests. Fl. Jun–Aug.  $2n = 40, 40 + 1B, 42$ .



Tarebhir, Bhanjyang, Shivapuri, Kathmandu, 7000 ft, 1966.8.3, SB Malla 4968; Ramche-Dhunche, Rasuwa, 2000 m, 1971.7.18, PR Shakya and SR Adhikari 588; Manebhanjyang-Chichila, Sankhuwasabha, 1930 m, 1990.7.28, M Minaki et al. 9010054 (KATH); Dhara pani, Kaski, 2000 m, Subedi, Chaudhary and Shakya 980 (TUCH).

**Calanthe sylvatica** (Thouars) Lindl.

*Calanthe masuca* (D. Don) Lindl.

EWC Nepal (1500–2800 m), Angola, Bhutan, Burundi, Cameroon, Comoros Islands, Equatorial Guinea, Gabon, Guinea, China (Guangdong, N and SE Guangxi, Hunan, Taiwan, SE Xizang, S and SE Yunnan), India, Indonesia (Java, Sumatra, Borneo), Japan, Kenya, Madagascar and the Mascarenes, Malawi, Malaysia, Myanmar, Rwanda, Sao Tome e Principe, Sierra Leone, South Africa, Sri Lanka, Swaziland, Tanzania, Thailand, Uganda, Vietnam, Zaire, Zambia, Zimbabwe.

Terrestrial in forests, damp places on riversides, along valleys; 800–2000 m. Fl. Apr–Sep. 2n = 20, 40, 42, 52.

Harain Letty?, Nepal, 1803.02.21, F Buchanan, no. s.n. (BM).

**Calanthe tricarinata** Lindl.

ECW Nepal (1500–3200 m), Bhutan, W China (S Gansu, Guizhou, Hubei, S Shaanxi, Sichuan, Taiwan, SE Xizang, Yunnan), India (Kashmir, NE), Japan.

Terrestrial on humus rich grassy slopes and forests. Fl. May–Jul. 2n = 40, 42, 60.

Rara lake, Mugu, 9700 ft, 1968.3.4, SB Malla 10784; Bhorlang, Chipu Danda, 7600 ft, 1969.8.21, SB Malla 16028; Ulleri, Parbat, 2400 m, 1974.7.21, DP Joshi and TK Bhattachaya 1800/74; Ghurchi Lekh, 2300 m, 1980.5.29, PR Shakya and B Roy 5437 (KATH).

**Calanthe trulliformis** King & Pantl.

E Nepal (2300–2600 m), NE India (Sikkim), Myanmar.

Terrestrial in humus rich forest. Fl. Jul.

Ghasa, Mustang, 2500 m, 1976.7.25, DP Joshi and SK Dhungana 76/3938; Shivalaya, Ramechap, 5900 ft, 1978.7.31, PR Shakya et al. 617 (KATH).

**Cephalanthera longifolia** (L.) Fritsch.

CW Nepal (1200–3200 m).

Afghanistan, Bhutan, China (S Gansu, W Henan, W Hubei, S Shaanxi, S Shanxi, W Sichuan, S and SE Xizang, NW Yunnan, Europe, India (Kashmir), Europe, Myanmar, N. Africa, Pakistan; SW Asia, W. Siberia.

Terrestrial in forest, thickets, along streams, open grassland. Fl. May–Jun, Fr. Sep–Oct. 2n = 16, 32, 34, 34 + 2B, 42 (Wu and Hong 2009).

Dunche Camp-Singuma, 2900 m, 1969.6.4, H Kani 673161; Surmasarowar, Bajahang, 2800 m, 1973.5.5, JF Dobremez 2070; Dori Lekh, 3200 m, 1980.5.27, PR Shakya and B Roy 5360; Syo-Lee, Gorkha, 2850 m, 1983.6.4, PR Shakya, MK Adhikari and MN Subedi 7754 (KATH).

**Ceratostylis himalaica** Hook. f.

East Nepal (600–1900 m), Bhutan, China (SE Xizang, S Yunnan), India (Assam-Khasia), Laos, Malaysia, Myanmar, Nepal, Vietnam.

Epiphytic on trees (e.g. *Quercus griffithii*) or lithophytic on rocks in forests. Fl. and Fr. Apr–Jun.

East Nepal, Hook. f. s.n. (K) (Hara et al. 1978, Press et al. 2000).

**Cheirostylis griffithii** Lindl.

C Nepal (1500–2200 m), Bangladesh, Bhutan, China (C Yunnan), India (Assam-Khasia), Myanmar, Thailand.

Epiphytic or terrestrial in damp places in forests; Fl. Sep. 2n = 26.

Flatt H.17 (BM).

**Chiloschista lunifera** (Rchb. f.) J. J. Sm.

E Nepal (150–600 m), India NE (Assam), Laos, Myanmar, Thailand.

Epiphytic in tree trunks at lowlands forest. Fr. Apr.

East Nepal, 1964, fide Banerji, l.c. 218 (Hara et al. 2000, Press et al. 2000).

**Chiloschista parishii** Seidenf.

E Nepal (1000–1800 m), Bhutan, India NE, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks like *Pyrus pashia*. Fl. Mar–Jun.

Sundarijal, Kathamandu, 1961.3.23, SB Malla and SB Rajbhandari 125; Garuwa, Ilam, 200 m, 1979.4.18, P Pradhan, R Niraula and M Gorkhali 766 (KATH).

**Chiloschista usneoides** (D. Don) Lindl.

C Nepal (1500–1700 m), Bhutan, India (Sikkim).

Epiphytic on *Quercus glauca*. Fl. Feb–Jun.

Dumre, Tanahu, 900 m, Subedi, Chaudhary and Shakya 885 (TUCH).

**Chrysoglossum ornatum** Blume

C Nepal (700–1700 m), Bhutan, Cambodia, China (Guangxi, Hainan, Taiwan, S and SW Yunnan), Fiji, India, Indonesia (Sumatra, Java, Sulawesi, New Guinea), Laos, Malaysia, New Caledonia Philippines, Samoa, Sri Lanka, Thailand, Vietnam.

Epiphytic on shaded and humid places in the dense forests. Fl. Apr–Jun. 2n = 36.

Bajrabarahi, Lalitpur, 1250 m, 2001.7.14, M Ghimire 114 (KATH).

**Cleisostoma aspersum** (Rchb. f.) Garay

ECW Nepal (600–1900 m), Bhutan, India NE (Assam, Sikkim), Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks in humid forest. Fl. Apr–Aug, Fr. Aug.

Num-Arun river, Sankhuwasabha, 900 m, 1998.12.7, DB Karkee 781 (KATH).

**Cleisostoma fliforme** (Lindl.) Garay

CE Nepal (150–1300 m), Bhutan, Cambodia, India NE (Assam, Sikkim), Myanmar, Thailand, Vietnam.

Epiphytic on *Schima wallichii* and *Ficus* sp. Fl. Aug–Sep.

Begnas Tal, Kaski District, 900 m, 1986.7.7, NP Manandhar and L Kattel 11327; Busti, 3000 ft, 1978.8.5, PR Shakya et al. 625 (KATH); Subedi, Chaudhary and Shakya 793 (TUCH).

**Cleisostoma racemiferum** (Lindl.) Garay

E Nepal (1400–2000 m), Bhutan, China (S and W Yunnan), India NE (Assam), Laos, Myanmar, Thailand, Vietnam. Epiphytic on tree trunks in sun exposed open forests. Fl. Jul–Aug.  $2n = 38$ . Saundu, Kaski, 1130 m, NP Manandhar and L Kattel 11168; Hanspokhari, Ilam, 5200 ft, 1979.9.28, RB Thapa et al. 907 (KATH).

**Cleisostoma simondii** (Gagnep.) Seidenf.

C Nepal (500–600 m), China (Fujian, S Guangdong, Hainan, S Yunnan), NE India, Laos, Thailand, Vietnam. Epiphytic on median sized tree trunks. Fl. Sep, Nov–Mar. Chure near Hetauda, Makwanpur, 1996.11.18, KR Rajbhandari and S Bhattarai 95; Bumlingtar, Sankhu-washabha, 460 m, 1999.10.1, DB Karkee 878 (KATH)

**Coelogyne corymbosa** Lindl.

EC Nepal (2200–2900 m), Bhutan, China (S and SE Xizang, S and W Yunnan), India NE (Assam-Khasaia), Myanmar. Epiphytic on *Quercus semicarpifolia*, *Lyonia ovalifolia*, *Rhododendron* species or lithophytic on humid rocks. Fl. May–Jul, Fr. next Jul–Nov.  $2n = 38, 40$ . Barati-Tale Bisauna, Kalinchok range, east of Barabise, Dolakha, 2500 m, 1970.4.16, H Kanai 670575; Citre-Chakela Kharka, 2500 m, 1994.6.10, PR Shakya and KK Dangol 10042 (KATH); Subedi, Chaudhary and Shakya 890 (TUCH).

**Coelogyne cristata** Lindl.

CW Nepal (1000–2400 m), Bhutan, China (S Xizang), India NE (Assam-Khasia, Kumaon, Sikkim). Epiphytic on *Castanopsis indica*, *Schima wallichii*, *Quercus glauca*. occasional lithophytic on rocks in damp places. Fl. Feb–May.  $2n = 40$ . Chaubas to Risingo, 7000–6300 ft, 1958.3.30, RS Rao 13554; Aulabari, Ilam, 1750 m, 1767.4.12, DH Nicolson 3246; Sattewati-Chilune Kharka, 1700 m, 1973.11.31, DP Joshi and MM Amartya 73/1098; Papahre Dada, Sundarijal, Kathmandu, 1780, 1975.3.20, DP Joshi and KR Rajbhandari 75/739; Chir, Bajhang, 1650 m, 1984.6.10, P Pradhan et al. 1301; Bhumeshow VDC-3, Kholsi, Baitadi, 1250 m, 2010.2.16, GD Bhatta and BD Bhatta 808 (KATH); Subedi, Chaudhary and Shakya 892 (TUCH).

**Coelogyne fimbriata** Lindl.

C Nepal (500–2300 m), Bhutan, Cambodia, China (N Fujian, Guangdong, Guangxi, Hainan, S Jiangxi, SE Xizang, Yunnan), India NE, Indonesia, Laos, Malaysia NE, Myanmar, Thailand, Vietnam. Epiphytic on tree trunks like *Schima wallichii* or lithophytic on rocks along streamsides, in forests, or at forest margins. Fl. Aug–Oct, fr. next Apr–Aug.  $2n = 40, 40 + 2f$ . Phulchoki, Lalitpur, 7000 ft, 1977.9.21, R Bahadur 10505; Sundarijal, Kathnadu, 5300 ft, 1977.9.13, P Pradhan and N Shrestha 102 (KATH).

**Coelogyne flaccida** Lindl.

C Nepal (900–1100 m), Bhutan, China (NW Guangxi, S Guizhou, S and W Yunnan), Bhutan, India NE (Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on *Shorea robusta* and *Schima wallichii*. Fl. Apr–Jun.  $2n = 40$ . Central Nepal, N Wallich no. s.n. (K), N Wallich no. 1961 (BM).

**Coelogyne fuscescens** Lindl.

*Coelogyne fuscescens* var. *fuscescens*.  
*Coelogyne fuscescens* var. *integrilabia* Pfitzer.  
*Coelogyne fuscescens* var. *viridiflorum* Pradhan.  
C Nepal (1200–1800 m), Bhutan, China (S Yunnan), NE India, Laos, Myanmar, Nepal, Thailand, Vietnam. Epiphytic on *Castanopsis tribuloides*, *Schima wallichii*, *Rhododendron* sp. or on moist rocks. Fl. Oct–Dec.  $2n = 40$ . Phapre Dada, Sundarijal, Kathmandu, 1780 m, 1975.3.20, DP Joshi and KR Rajbhandari 75/749; above Num, Sankhu-wasabha, 1890 m, 1990.12.12, PR Shakya 9454 (KATH); Subedi, Chaudhary and Shakya 1045 (TUCH).

**Coelogyne longipes** Lindl.

E Nepal (1500–2300 m), Bhutan, China (SE Xizang, W to SE Yunnan), India NE, Laos, Myanmar, Thailand. Epiphytic on *Quercus* sp. Fl. May–Jun, Fr. next Mar.  $2n = 40$ . Deurali-Mude, Sankhuwasabha, 2000 m, 1998.12.6, DB Karkee 766 (KATH).

**Coelogyne nitida** (Wall ex. D. Don) Lindl.

*Coelogyne ochracea* Lindl.  
ECW Nepal (1300–2400 m), Bhutan, China (NW, S, and W Yunnan), India NE (Assam), Laos, Myanmar, Nepal, Thailand, Vietnam. India (NE), Nepal, Bhutan, Burma, Thailand, China (Yunnan), Vietnam. Laos. Epiphytic on *Schima wallichii*, *Lyonia ovalifolia*, *Rhododendron* sp. or lithophytic on mossy rocks. Fl. Apr–Jun.  $2n = 40$ . Above Govane, 2000 m, 1973.5.18, PR Shakya and TK Bhat-tacharya 2130; Kakani, 2000 m, 1976.5.12, VL Gurung, R Kayastha and PM Regmi 139; Hanspokari, Ilam, 5200 ft, 1978.6.6, P Pradhan and R Niraula 449 (KATH); Subedi, Chaudhary and Shakya 883 (TUCH).

**Coelogyne ovalis** Lindl.

CW Nepal (1300–1700 m), Bhutan, China (SE Xizang, W Yunnan), NE India, Myanmar, Nepal, Vietnam. Epiphytic on *Schima wallichii*, *Sapium insigne*, *Quercus* sp., *Rhododendron* sp., *Castanopsis indica*, *Ficus* sp., *Engelhardtia spicata* or lithophytic on rocks along rivers or valleys; Fl. Aug–Nov, fr. next Sep.  $2n = 40, 80$ . Central Nepal, N Wallich, Wall Cat no. 1957 (K); Subedi, Chaudhary and Shakya 818 (TUCH).

**Coelogyne prolifera** Lindl.

*Coelogyne flavida* Hook. f. ex Lindl.  
CE Nepal (1000–2300 m), Bhutan (S, SE, and W Yunnan), India NE (Assam), Myanmar, Thailand, Vietnam. Epiphytic on *Shorea robusta*, *Schima wallichii*, *Sapium insigne*, *Quercus* sp., *Rhododendron* sp., *Castanopsis indica*, *Ficus* sp., *Engelhardtia spicata*. Fl. Apr–Jun. Nepal, 1831, N Wallich, no. 1956 (P); Ramche-Gram, Rasuwa, 1800–1900 m, 1969.6.6, H Kanai 11884;

Lama-uwa-Besinda, Sankhuwasabha, 1300 m, 1994.6.8, PR Shakya and KK Dangol 10019; Godak, Illam, 3600 ft, 1977.10.3, P Pradhan et al., 574; Bajra Barahi, Kathmandu, 1240 m, 2001.7.21, M Ghimire 117 (KATH); Subedi, Chaudhary and Shakya 922 (TUCH).

**Coelogyne punctulata** Lindl.

E Nepal (1300–2900 m), Bhutan, China (S and SE Xizang, W Yunnan) India NE, Myanmar.

Epiphytic on main branches of tree or lithophytic on mossy rocks. Fl. Nov, Fr. Apr.  $2n = 38$ .

Nepal, 1966, fide PF Hunt, l.c. (Hara et al. 1978, Press et al. 2000).

**Coelogyne stricta** (D. Don) Schltr.

CE Nepal (1400–2000 m), Bhutan, China (SE Xizang, Yunnan, India NE, Laos, Myanmar, Vietnam).

Epiphytic mostly on *Schima wallichii*. Fl. Apr–Jun.  $2n = 40, 44$ .

Central Nepal, N Wallich, no. Wall. s.n. (K, P); Godavari, Lalitpur, 6000 ft, 1978.4.19, P Pradhan 404 (KATH).

**Conchidium extinctorium** (Lindl.) Y. P. Ng & P. J. Cribb

*Eria extinctoria* (Lindl.) Oliv.

C Nepal (500–600 m), Myanmar.

Epiphytic on *Dalbergia sissoo*, *Shorea robusta*. Fl. Mar–Apr. Churia Khola, 10 km south of Hetauda, Makwanpur, 500 m, 1983.3.12, KJ White 1 (KATH).

**Conchidium muscicola** (Lindl.) Rauschert

*Eria muscicola* (Lindl.) Lindl.; *Dendrobium parviflorum* D. Don.

CE Nepal (330–3000 m), Bhutan, China (Yunnan), NE India (Assam, Sikkim), Sri Lanka, Burma, Thailand Laos, Myanmar, Vietnam.

Epiphytic on tree trunks or lithophytic in moist mossy rocks. Fl. Jul–Aug.

Near Phidim, Panchtar, 1460 m, 1978.11.18, N Pradhan, NP Manandhar and N Amatya 888 (KATH).

**Corallorrhiza trifida** Chatel.

CW Nepal (3800–3900 m), India (Kashmir), Europe, Siberia, N. America, Greenland.

Saprophytic on humus rich slopes.

West Nepal, Stainton 4307; central Nepal, SSW 3143 (Hara et al. 1978, Press et al. 2000).

**Cremastra appendiculata** (D. Don) Makino

CNepal (1800–2300 m), Bhutan, China (Anhui, Chongqing, S Gansu, N Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, S Shanxi, Sichuan, Taiwan, Xizang, SE Yunnan, Zhejiang), India NE (Assam), Japan, Korea, Thailand, Vietnam).

Terrestrial in wet places in forests, along valleys; 400–2900 m. Fl. May–Jun, Fr. Sep–Dec.  $2n = 24, 42, 48, 52$ .

Central Nepal, N Wallich, s.n., central Nepal, N Wallich 7349 (Hara et al. 1978, Press et al. 2000).

**Crepidium acuminatum** (D. Don) Szlach.

*Malaxis acuminata* D. Don, *Malaxis acuminata forma biloba* (Lindl.) Tuyama, *Microstylis wallichii* Lindl.

CE Nepal (450–3050 m), Australia, Bhutan, China (Guangdong, SW Guizhou, ?Taiwan, SE Xizang, S Yunnan), Cambodia, India, Indonesia, Laos, Myanmar, Philippines, Thailand, Vietnam.

Terrestrial on sandy soil. Fl. and Fr. May–Jul.  $2n = 30, 36, 42$ .

Nepal, N Wallich, no. 1938A (E); Nepaul (Nepal), 1832, N Wallich, no. s.n. (P); Gyangshar to Shhusa, Dolakha, 2900 m, 1977.7.20, KR Rajbhandari and B Roy 1642; Telia Lekh, 1800 m, 1981.6.27, PR Shakya, LR Sharma and KR Amatya 6196; Bhotebas-Chichila, Sankhuwasabha, 180–1800 m, 1988.7.8, M Suzuki et al. 8820255; Ekle Ghar-Sardu Khola, Gorkha, 2150 m, 1994.7.25, Suzuki et al. 9470175; Pasela-Banjh, Bajhang, 2372 m, 2009.7.16. CA Pendry et al. 20915147 (KATH); Subedi 765 Kaskikot 1600 m (TUCH).

**Crepidium biauratum** (Lindl.) Szlach.

*Malaxis biaurita* (Lindl.) Kuntze

Nepal (900 m), India, Laos, Myanmar, Thailand.

Terrestrial in humus riched sandy shady places.

Lamidanda, Malwanpur district, 1400 m, BB Raskoti 204 (KATH).

**Crepidium calophyllum** (Rchb. f.) Szlach.

*Malaxis calophylla* (Rchb. f.) Kuntze.

E Nepal (500–600 m), Bhutan, Cambodia, China (Hainan, S Yunnan), India (Sikkim), Indonesia, Laos Malaysia, Myanmar, Thailand, Vietnam).

Terrestrial or lithophytic.

Chunia village, 1200 m (Ph-R).

**Crepidium josephianum** (Rchb. f.) Marg.

*Malaxis josephiana* (Rchb. f.) Kuntze

E Nepal (500–830 m), NE India.

Terrestrial in moist and humus riched slopes. Fl. May.

Phulchoki, Lalitpur, 1700 m (Ph-R).

**Crepidium khasianum** (Hook. f.) Szlach.

*Malaxis khasiana* (Hook. f.) Kuntze.

E Nepal (1000–3000 m), China (S and W Yunnan), NE India, Thailand.

Terrestrial or lithophytic. Fl. Jul.  $2n = 42$ .

Pokharathok, Arghakhanchi, 1200 m (Ph-R) B. B. Raskoti III (KATH).

**Crepidium mackinnonii** (Duthie) Szlach.

*Malaxis mackinnonii* (Duthie) Ames.

C Nepal (800–1500 m), India, Thailand.

Terrestrial on road side slopes.

Rapti Dun forest, 400 m, Chunia village Makwanpur District, 1000 m (Ph-R).

**Cryptochilus luteus** Lindl.

*Cryptochilus lutea* Lindl.

E Nepal (1200–2300 m), Bhutan, China (W to SE Yunnan), India NE (Assam, Manipur, Naga hills, N Vietnam).

Epiphytic on median sized trees (e.g. *Lyonia ovalifolia*) or lithophytic on rocks in humid forest. Fl. Jun–Jul, Fr. Sep–Oct.

Bhorlong, 7800 ft, 1977.9.12, P Pradhan and N Shrestha; Channa to Bhabasen, Dailekh, 2300 m, 1979.7.5, KR Rajbhandari and B Roy 2866; Chitre-Ramite,

Sankhuwashbha, 2160, 1994.6.19, PR Shakya and KK Dangol (KATH).

**Cryptochilus sanguineus** Wall.

CE Nepal (1600–2400 m), Bhutan, China (SE Xizang, NW Yunnan), India NE (Assam, Khasia, Naga Hills, Sikkim), Myanmar.

Epiphytic on *Rhododendron* and *Castanopsis* sp. or other trees in forests. Fl. Jun–Aug.  $2n = 38$ .

Godavari, Lalitpur, 5500 ft, 1967.7.15, R Bahadur 565 (KATH).

**Cymbidium aloifolium** (L.) Sw.

*Cymbidium pendulum* (Roxb.) Sw.

CE Nepal (300–1600 m), Bangladesh, Cambodia, China (Guangdong, Guangxi, Guizhou, S and SE Yunnan), India (Sikkim), Indonesia, Laos, Malaysia, Myanmar, Sri Lanka, Thailand, Vietnam.

Epiphytic on upper canopy of the *Artocarpus* sp., *Shorea robusta*, *Mangifera indica*, *Engelhardtia spicata*. Fl. Mar–Jun, Fr. Aug.  $2n = 40$ .

Below Khandbari, Sankhuwasabha, 750 m, 1977.6.9, PR Shakya 4596; Near Godak, Ilam, 2900 ft, 1978.6.9, N Pradhan and R Niraula 489; Near Torikhet, Tamba Kosi, Dolakhan, 950; 1977.7.13, KR Rajbhandari and B Roy 1257; Ghatte Khola, Surkhet, 500 m, 1979.6.29, KR Rajbhandari and B Roy 2667; Arughat, Gorkha, 560 m, 1983.6.11, PR Shakya et al. 7809 (KATH); Subedi Chaudhary and Shakya 695 (TUCH).

**Cymbidium bicolor** Lindl.

ECW Nepal (100–1600 m), Cambodia, India (Assam, Bengal), Indonesia (Borneo, Java, Sumatra, Sulawesi), Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam.

Epiphytic on *Terminalia* sp. and *Schima wallichii*. Fl. Apr–May.

Churia Mai VDC-4, Bhaise VDC 7, Harnamadi VDC, Basmadi VDC 1, Makwanpur (Thakur et al. 2010).

**Cymbidium cyperifolium** Wall. ex Lindl.

CE Nepal (1500–2500 m), Bhutan, Cambodia, China (Guangdong, S Guangxi, Guizhou, Hainan, Sichuan, Yunnan), India, Myanmar, Philippines, Thailand, Vietnam. Terrestrial in forests margins or lithophytic on rocks, crevices in damp places.

Godavari, Lalitpur, 5500 ft, 1975.3, P Pradhan G/2 (KATH); Nepal, C Bailes 998 in spirit (49432.000).

**Cymbidium cyperifolium** var. **szechuanicum** (Y. S. Wu and S. C. Chen) S. C. Chen and Z. J. Liu

*Cymbidium faberi* var. *szechuanicum* (Y. S. Wu & S. C. Chen) Y. S. Wu & S. C. Chen.

CE Nepal (1000–2900 m), Bhutan, China (Guizhou, Sichuan, Yunnan), India (EHM, Uttaranchal).

Terrestrial on forest margins. Fl. Feb–Apr.

Nepal, N Trudel, no. 895 (spirit at K); Nepal, C Bailes, no. 1040 (spirit at K).

**Cymbidium dayanum** Rchb. f.

C Nepal, Nepal, Bhutan, China (S Fujian, Guangdong, Guangxi, Hainan, Taiwan, S Yunnan), Cambodia, India,

Indonesia, Japan, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam.

Trees in open forests, cliffs along streamsides. Fl. Aug–Dec, Fr. Feb–Apr.  $2n = 40$ .

Kalmouda, Nepal, N Wallich, no. s.n. (LINN).

**Cymbidium devonianum** Lindl. ex Paxton

E Nepal (1500–1800 m), Bhutan, China (SE Yunnan, Pingbian), India, NE Thailand, N Vietnam.

Epiphytic mostly on *Quercus* sp. Fl. Mar–May.  $2n = 40$ .

Hanspokhari, Ilam, 5200 ft, 1978.6.6, P Pradhan and R Niraula 450 (KATH).

**Cymbidium eburneum** Lindl.

E Nepal (300–1700 m), China (S and SW Guangxi, S and W Hainan, W Yunnan), India (Assam, Sikkim), Myanmar, Vietnam.

Epiphytic mostly on *Mangifera indica*. Fl. Mar–May.

Nepal, (Icon. in K) (Hara et al. 1978, Press et al. 2000); Arun Valley (Ph-R).

**Cymbidium elegans** Lindl.

Nepal (1700–2800 m), Bhutan, China (SW Sichuan, SE Xizang, Yunnan), India (Assam), N Vietnam.

Epiphytic on trees in forests, cliffs or lithophytic.

Nepal, 1970, N Sanders in spirit (34602.000); Nepal, 1992.10.21, Kew Expd. Nep. 1179 in spirit (K).

**Cymbidium elegans** var. **elegans**

*Cymbidium longifolium* D. Don

CE Nepal (1700–2800 m), Bhutan, China (SW Sichuan, SE Xizang, Yunnan), India, Myanmar.

Epiphytic on *Rhododendron* sp., *Daphniphyllum himalense* or grows on mossy rocks. Fl. Mar–Jul, Fr. Oct–Dec.  $2n = 40$ .

Gossain Than, Nepal, N Wallich, no. s.n., (BM); Subedi Chaudhary and Shakya 1030 (TUCH).

**Cymbidium erythraeum** Lindl.

CE Nepal (1500–2400 m), Bhutan, China (C and SW Guizhou, SW Sichuan, SE Xizang, NW, SE, and W Yunnan), India (Kumaon, Assam, Sikkim), Myanmar, Nepal, Vietnam.

Epiphytic mostly on *Quercus* sp. Fl. Oct–Nov, Fr. May.  $2n = 40, 42$ .

Arun Valley, ridge between Botebas and Chichila, Sankhuwasabha, 1940 m, 1991.9.20, DG Long et al 104 (KATH); Wallich (SIN, Singapore).

**Cymbidium faberi** Rolfe

E Nepal (700–3000 m), China (Anhui, N Fujian, S Gansu, Guangdong, Guangxi, Guizhou, S Henan, Hubei, Hunan, Jiangxi, S Shaanxi, Sichuan, Taiwan, E Xizang, Yunnan, Zhejiang), N India.

Epiphytic on tree trunks. Mar–May, Fr. Jul–Sep.  $2n = 40, 42, 43, 44$ .

Nepal, N Trudel, no. 895 (spirit at K); Nepal, C Bailes, no. 1040 (spirit at K).

**Cymbidium hookerianum** Rchb. f.

E Nepal (1600–2600 m), Bhutan, China (S Guangxi, SW Guizhou, SW Sichuan, SE Xizang, Yunnan), NE India, N Vietnam.

Epiphytic especially on *Schima wallichii* or lithophytic on rocks in damp places. Fl. Jan–Apr, Fr. Jun–Aug. 2n = 38, 40.

Népaul, Nepal, N Wallich, no. s.n. (P); Guranse to Basantapur, Dhankura, 2200 m, 1982.1.30, KR Rajbhandari et al. 6109 (KATH).

**Cymbidium iridioides** D. Don

CE Nepal (1500–2800 m), Bhutan, China (SW Guizhou, SW Sichuan, SE Xizang, NW to SE Yunnan), India (Assam-Khasia, Kumaon), Myanmar, N Vietnam.

Epiphytic on tree trunks or lithophytic in forests or thickets, shaded cliffs.

Nepal, 1819, E Gardner, no. s.n. (BM); Above Nundhaki, Sankhuwasabha, 2400 m, 1991.4.28, PR Shakya 9643 (KATH); Subedi Chaudhary and Shakya 1023 (TUCH).

**Cymbidium lancifolium** Hook.

C Nepal (200–2400 m), Bhutan, Cambodia, China (N Fujian, Guangdong, Guangxi, Guizhou, Hainan, S Hunan, S Sichuan, Taiwan, SE Xizang, Yunnan, S Zhejiang), India NE (Assam-Khasia, Sikkim), Indonesia, Japan, Laos, Malaysia, Myanmar, Papua New Guinea, Thailand, Vietnam.

Epiphytic in humid forests or lithophytic in humus-rich rocks. Fl. May–Aug, fr. Oct–Dec. 2n = 38, 39, 40, 42.

Nepal, Wallich s.n. (K); Phulchoki, Lalitpur, 7500 ft, 1979.7.7, P Pradhan and party 824 (KATH); Subedi Chaudhary and Shakya 940 (TUCH).

**Cymbidium macrorhizon** Lindl.

C Nepal (800–2500 m), China (Chongqing, SW Guizhou, SW Sichuan, NE Yunnan), NE India (Assam-Khasia), Japan, Laos, Myanmar, Pakistan, Thailand.

Saprophytic in the humus rich forest. Jun–Aug. 2n = 38.

Although it is mentioned in Pearce and Cribb (2002) and Rajbhandari and Dahal (2002), herbarium specimen is not found.

**Cymbidium micranthum** Z. J. Liu & S. C. Chen

Nepal, China (SE Yunnan-Maguan).

Terrestrial. Fl. Dec.

Nepal, N Wallich, no. s.n. (LINN).

**Cymbidium mannii** H. G. Reich.

*Cymbidium bicolor* subsp. *obtusum* DuPuy and P. J. Cribb (1988).

ECW Nepal (900–1500 m), Bangladesh, Bhutan, Cambodia, China (Guangdong, Guangxi, Guizhou, Hainan, SE and SW Yunnan), India, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam.

Epiphytic in forest. Fl. Mar–Apr, Fr. Jul–Aug.

Makwanpur district Lamidanda, Makwanpur, 1400 m (Ph-R).

**Cymbidium × gammieanum** King and Prantl.

CE Nepal (1800 m), India NE (Sikkim).

Epiphytic in medium sized tree trunks. Fl. Oct–Nov.

Ilam, 1800 m, 1995, SB Desai and SK Tamang 95/1 (KATH).

**Cypripedium cordigerum** D. Don

CW Nepal (2800–3800 m), Bhutan, China (S Xizang-Yadong), India (Kashmir, Nepal, N Pakistan).

Terrestrial in *Pinus* forests or in grasslands. Fl. Jun–Aug. 2n = 20.

Gopain Than, Nepal, 1818, N Wallich, no. s.n. (BM); Chuchamara Danda, Mugu, 3820 m, 1979.7.19, KR Rajbhandari and B Roy 3600 m; Napakuna danda, Sialgari-Churta, 3350 m, 1980.6.21, PR Shakya and B Roy 5857; Dhorpatan, 3200 m, HK Saiju and SR Tuladhar 43/79 (KATH).

**Cypripedium elegans** Rchb. f.

CE Nepal (3300–4200 m), Bhutan, China (S and SE Xizang, NW Yunnan), N India.

Terrestrial in humus rich forests. Fl. May–Jul.

Central Nepal, SSW 1025; East Nepal, Dhwoj 0452 (Hara et al. 1978, Press et al. 2000).

**Cypripedium himalaicum** Rolfe ex Hemsl

*Cypripedium macranthum* Swartz var. *himalaicum* (Rolfe ex Hemsl.) Kraenzl.

ECW Nepal (3000–4800 m), Bhutan, China (S and SE Xizang), N India.

Terrestrial in humus rich forests. Fl. Jun–Jul. 2n = 20.

Chaudhabise Khola, 3750 m, 1980.6.17, PR Shakya and S Poudel 10447; Langtang-Kyanjing, Rasuwa, 3550 m, 1992.7.13, MN Subedi 9237070; Machhapuchhre base camp, Kaski, 4330 m, 2001.6.28, PR Shakya and S Poudel 104777 (KATH).

**Dactylorhiza hatagirea** (D. Don) Soó

ECW Nepal (2800–3960 m), Himalaya (Kashmir to Bhutan), China (Gansu, Heilongjiang, Jilin, Nei Mongol, Ningxia, Qinghai, W Sichuan, Xinjiang, EXizang), Mongolia, W Pakistan.

Terrestrial in shrubby slopes or grasslands. Fl. Jun–Aug. 2n = 40, 80.

Chankeli Lagna, Humla, 3500 m, 1979.7.25, KR Rajbhandari and B Roy 3874; Chaudhabise Khola, Jumla, 3100 m, 1980.6.18, PR Shakya and B Roy 5827 (KATH); moist place, Kunasa, Dolpa, 3900 m, PPI99-47 (TUCH).

**Dactylorhiza viridis** (L.) R. M. Bateman, Pridgeon & M. W. Chase

*Coeloglossum viride* (L.) Hartm.

ECW Nepal (3100–3900 m), Bhutan, China (Gansu, Hebei, Heilongjiang, Henan, Hubei, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xinjiang, NE Xizang, NW Yunnan), Japan, Kashmir, Kazakhstan, Korea, Kyrgyzstan, Mongolia, Russia, Turkmenistan; SW Asia, Europe, North America.

Terrestrial in forest, thicket and in gassland. Fl. Jun–Aug. 2n = 40, 41, 42.

West Nepal, PSW 4701. Central Nepal, SSW 3326a (Hara et al. 1978, Press et al. 2000).

**Dendrobium amoenum** Wall. ex Lindl.

CE Nepal (1100–2900 m), Bhutan, Indian Himalaya (Garhwal, Assam-Khasia), Myanmar.

Epiphytic on exposed tree trunks. Fl. May

Above Kimtang, Nuwakot, 1700 m, 1983.6.15, PR Shakya et al. 7815; Temple Hill, Kathmandu, 5500 ft, Schilling and

Sayers 325; Hedanga, 1270, 1977.6.6, PR Shakya 4569; Hanspokhari, Ilam, 5200 ft, 1978.6.6, P Pradhan and R Niroula 448 (KATH); Subedi, Chaudhary and Shakya 949 (TUCH).

**Dendrobium anceps** Sw.

EC Nepal (1200–1400 m), India (Assam, Sikkim), Myanmar, Thailand.

Epiphytic on large sized tree trunk usually in the upper canopy of trees. Fl. Apr–May.

Raja Rani, Morang, 1979.4.19, P Pradhan, R Niroula and M Gorkhali 739 (KATH).

**Dendrobium aphyllum** (Roxb.) G. E. C. Fischer  
CE Nepal (100–1500 m), Bhutan, Bangladesh, E and W Himalayas, India (Assam), Indonesia (Borneo, Java, Lesser Sunda Islands, Sumatra, Sulawesi), Laos, Maldives Islands, Malaysia, Myanmar, Sri Lanka, Thailand, Vietnam, Queensland Australia.

Epiphytic on *Castanopsis indica*, *Schima wallichii*, *Sapium insigne*, *Alnus nepalensis*, *Acer* sp., *Dalbergia* sp. Fl. Apr–Jun.

Saraswati-Simat Khola, 280–600 m, 1969.4.19, H Kanai and MS Bista 11497; Tinpanibhanjyang, Lalitpur, 7000 ft, 1978.5.3, Pradhan and Party 415; Above Siswatar, Sankhuwasabha, 750 m, 1994.6.8, PR Shakya and KK Dangol 10016; Godak, Ilam, 550 m, P Pradhan, R Niroula and M Gorkhali 731 (KATH); Subedi 885 (TUCH).

**Dendrobium bicameratum** Lindl.

C Nepal (1400–2400 m), India (NW Himalaya, Sikkim), Myanmar.

Epiphytic on *Quercus glauca*, *Lyonia ovalifolia*. Fl. Jul–Aug. Godaveri, Lalitpur, 7000 ft, 1977.7.25, P Pradhan and party 9580; Dokha, 1700 m, 1985.7.10, N Bhattarai, M Shrestha, N Pradhan and S Shakya 13; Bhaisakot, Dailekh, 1450 m, 1985.7.27, PR Shakya, MN Subedi and R Upreti 8385 (KATH).

**Dendrobium candidum** Wall. ex Lindl.

CE Nepal (1500–2500 m), Bhutan, Indian Himalaya (Assam, Kumaon), N. Myanmar.

Epiphytic usually on *Quercus glauca*. Fl. Sep–Oct. Lele Bhanjyang, Phulchoki, Lalitpur, 1969.4.25, H Kani 11892 (KATH); Subedi, Chaudhary and Shakya 1030 (TUCH).

**Dendrobium chrysanthum** Wall. ex Lindl.

C Nepal (1300–2000 m), Bhutan, China (Guangxi, S Guizhou, SE Xizang, S Yunnan), NE India (Sikkim), Laos, Myanmar, N Thailand, Vietnam.

Epiphytic on medium to large sized tree trunks or main branches. Fl. Apr–Oct.

Hanspokhari, Ilam, 5200 ft, 1977.10.1, P Pradhan, KR Rajbhandari and R Niroula 636 (KATH).

**Dendrobium chryseum** Rolfe

C Nepal (1000–2100 m), Bhutan, China (C Sichuan-Ebian, Emei Shan, Taiwan, NW to SE Yunnan), NE India (Assam, Sikkim), Myanmar, Thailand, Vietnam.

Epiphytic on *Castanopsis* trees. Fl. May–Jun. 2n = 38.

Phulchoki, Lalitpur, 7000 ft, 1979.6.1, R Bahadur 803 (KATH).

**Dendrobium crepidatum** Lindl. and Paxton

C Nepal (600–1400 m), Bhutan, China (SW Guizhou, S Yunnan), India NE (Assam, Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks or lithophytic on rocks. Fl. Apr–May.

Nepal, 1992.03.26, K White (K); Central Nepal, Gardner 196 (Hara et al. 1978, Press et al. 2000).

**Dendrobium cumulatum** Lindl.

E Nepal (150–700 m), Bhutan NE (Assam, Sikkim), Myanmar, Thailand, Cambodia, Indonesia (Borneo), Laos, Vietnam.

Epiphytic on medium to large sized tree trunks or large branches. Fl. Jun–Sep.

Chulachulia, Ilam, 1400 m (Ph-R).

**Dendrobium darjeelingense** Pradhan

C Nepal (2000 m), India (Darjeeling).

Epiphytic on tree trunks. Fl. Oct.

Lamidada, Makwanpur, 1992.3, KJ White 25 (KATH).

**Dendrobium denneanum** Kerr

C Nepal (1200 m), China (W Guangxi, S Guizhou, Hainan-Bawangling, NW to SE Yunnan), India (Kumaon, Assam-Khasia), Laos, Myanmar, Nepal, Thailand, Vietnam.

Epiphytic. Central Nepal, SSW 609; Wallich, s.n (Hara et al. 1978, Press et al. 2000).

**Dendrobium densiflorum** Lindl.

C Nepal (900–2900 m), Bhutan, China (N Guangdong, Guangxi, Hainan, SE Xizang), NE India (Assam-Khasia), Laos, Myanmar, Nepal, N Thailand, Vietnam.

Epiphytic on *Schima wallichii*, *Machilus gambeli*. Fl. Apr–Jun.

Chhetchht to Lambagar, Dolkha, 1800 m, 1977.4.16, KR Rajbhandari and R Roy 1390; Newa Khola, 1977.5.23, PR Shakya 4396 (KATH); Subedi, Chaudhary and Shakya 788 (TUCH).

**Dendrobium denudans** D. Don

ECW Nepal (1000–2200 m), India (Garwal to Sikkim).

Epiphytic on *Schima wallichii*, *Shorea robusta*. Fl. Apr–Aug. Bajrabarahi, Lalitpur, 1400 m, 1996.10.10, S Desai 30; Below Churia, Lamidada, Makwanpur, ca 1000 m, KJ White 25 (KATH); Subedi, Chaudhary and Shakya 781 (TUCH).

**Dendrobium eriiflorum** Griff.

CE Nepal (1500–2100 m), Bhutan, India (Assam-Khasia, Sikkim), Myanmar, Malaysia, Thailand.

Epiphytic on *Quercus glauca*, *Berberis* sp., *Schima wallichii*, *Alnus nepalensis* trees. Fl. Sep–Oct.

Arun valley, Hatiar, North of Num, Sankhuwasabha, 7000 ft, 1956.8.26 JDA Stainton 1435; Wilinge-Khaptad, Doti, 1490–1880 m, 1981.9.18, I Sharma

et al. 571; Liwang, Rolpa, 1280, 1982.9.3, NP Manandhar and NK Bhattarai 8769; Dharapani, Manag, 1850 m, 1983.8.7, KR Rajbhandari 9054; Lambagar, Dolakha, 1950, 1977.7.19, KR Rajbhandari and B Roy 1557 (KATH).

**Dendrobium farmeri** Paxton

E Nepal (150–700 m), Bhutan, India NE (Assam), Laos, Myanmar, Malaysia, Thailand, Vietnam.  
Epiphytic on tree trunks. Fl. May–Apr.  
Raja Rani, Morang (Ph-R).

**Dendrobium fimbriatum** Hook.

CE Nepal (200–2100 m), Bhutan, China (NW to S Guangxi, S Guizhou, S Yunnan), India NE (Sikkim), Myanmar, Thailand, Vietnam.

Epiphytic on *Schima wallichii*, *Shorea robusta*. Fl. Mar–May.

Rangapani, Ilam, 500 m, 1979.4.16, P Pradhan, R Niraula and M Gorkhali 742; Raja Rani, Morang, 570 m, 1979.4.19, P Pradhan, R Niraula and M Gorkhali 782 (KATH).

**Dendrobium formosum** Roxb.

CE Nepal (1500–1500 m), Bhutan, Bangladesh, India (Sikkim), Myanmar, Thailand, Philippines, Sri Lanka, Vietnam.

Epiphytic on large sized tree trunk usually in the upper canopy of the tree. Fl. Jun.

Godak, Ilam, 1900 ft, 1978.6.10, P Pradhan and R Niraula 503 (KATH).

**Dendrobium gibsonii** Lindl.

E Nepal (900–2000 m), Bhutan, China (Guangxi-Lingyun, S Yunnan), NE India (Assam), Laos, Myanmar, N Thailand, Vietnam.

Epiphytic on *Shorea robusta*, *Schima wallichii*. Fl. Apr–May.  
East Nepal, Stainton 1379 (Hara et al. 1978, Press et al. 2000).

**Dendrobium heterocarpum** Wall. ex Lindl.

C Nepal (1000–1600 m), Bhutan, China (S and W Yunnan), NE India (Sikkim), Indonesia (Sumatra, Java, Borneo, Sulawesi), Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam.

Epiphytic on *Schima wallichii*, *Quercus glauca*, *Rhododendron* sp. Fl. Apr–May.

Chitre, 2200 m, 1972.8.16, JF Dobremez 1490; Sudap, Panchthar, 1800 m, 1977.5.1, PR Shakya 4185; Phulchoki, Lalitpur, 7000 ft, 1979.3.28, P Pradhan and Party 690 (KATH).

**Dendrobium hookerianum** Lindl.

E Nepal (300–2000 m), Bhutan, China (SE Xizang, W Yunnan), NE India, Myanmar.

Epiphytic mostly on *Schima wallichii*. Fl. Jun–Jul.  
Pearce and Cribb (2002), Rajbhandari and Dahal (2004).

**Dendrobium longicornu** Lindl.

CE Nepal (1300–2900 m), Bhutan, China (S Guangxi (Shangsi), SE Xizang, NW to SE Yunnan), NE India (Assam), Myanmar, N Vietnam.

Epiphytic mostly on *Quercus glauca*, *Rhododendron arboreum*. Fl. Sep–Nov.

Nepal, 1859, N Wallich, no. s.n. (isotype: P); Arun valley, Khadbari, W of Chainpur, Sankhuwasabha, 8000 ft, 1956.9.26; JDA Stantion 1768; Chitlang Danda, Makwanpur, 2300 m, 1975.1.10, DP Joshi, KR Rajbhandari and MK Ghimire 75/219; Snaomati Danda, Manichur, Kathmandu, 2500 m, 1975.3.13, DP Joshi and KR Rajbhandari 75/544 (KATH); Subedi, Chaudhary and Shakya 890 (TUCH).

**Dendrobium moniliforme** (L.) Sw.

E Nepal (600–3000 m), Bhutan, China (SW Anhui, N and SE Fujian, S Gansu, N and SW Guangdong, N Guangxi, E Guizhou, Henan, Hunan, Jiangxi, Shaanxi, S Sichuan, Taiwan, NW to SE Yunnan, N Zhejiang), NE India, Japan, Korea, Myanmar, N Vietnam.

Epiphytic on lower canopy of tree trunk and shrubs or lithophytic on moist rocks.

Nepal, C Bailes, no. 967 (spirit K).

**Dendrobium monticola** P. F. Hunt and Summerh.

*Dendrobium alpestre* Royle.

C Nepal (1700–2700 m), China (SW Guangxi-Napo, S Xizang-Gyirong, Nyalam), NW India (Garwal), Laos, N Thailand, N Vietnam.

Epiphytic on lower canopy of tree and shrubs or lithophytic on moist rocks. Fl. Jul–Aug.

Thare-Dhunche, Rasuwa, 6000 ft, 1977.8.27, HK Saiju and PM Amatya 21/77; Tade to Dhunche, Rasuwa, 1800 m, 1977.10.2, TK Rajbhandari, VL Gurung and DP Joshi 2167 (KATH).

**Dendrobium moschatum** (Buch.-Ham.) Sw.

C Nepal (200–1200 m), Bhutan, China (S and W Yunnan, NEW India (Kumaon), Laos, Myanmar, Thailand, Vietnam.

Epiphytic on top of the *Shorea robusta*, *Schima wallichii* or growing on rocks. Fl. May–Jul.

Chitwan, 200 m, 1987.6.21, R Uprety sn.; Rangapani, Ilam, 1900 ft, 1977.10.10, P Pradhan, KR Rajbhandari and R Niraula 650 (KATH).

**Dendrobium nobile** Lindl.

E Nepal (400–1500 m), Bhutan, China (NE to W Guangxi, Guizhou, Hainan-Baisha, Hong Kong, W Hubei-Yichang, S Sichuan, Taiwan, SE Xizang-Médog, Yunnan), NE India (Assam), Laos, Myanmar, N Thailand, Vietnam.

Epiphytic on *Schima wallichii*, *Ilex excelsa*. Fl. Apr–May.  
Godak, Ilam, 3600 ft, 1977.10.3, P Pradhan, KR Rajbhandari and R Niraula 409 (KATH).

**Dendrobium ochreatum** Lindl.

E Nepal (1200–1600 m), India (Assam), Myanmar, Thailand, Vietnam.

Epiphytic medium sized on tree trunk. Fl. May–Jun.  
Nepal, 1990.05, K White, s.n. (spirit K). Godak, Ilam (Ph-R).

**Dendrobium peguanum** Lindl.

CW Nepal (300–1200 m), India NE (Assam, Sikkim), Myanmar, Thailand.

Epiphytic on trunks of the *Shorea robusta*. Fl. Nov–Jan.

Nepal, Wallich s.n. (Hara et al. 1978, Press et al. 2000). Rapti river, 300 m (Ph-R). Hetauda Shahid Smark (White and Sharma 2000).

**Dendrobium porphyrochilum** Lindl.

CE Nepal (1800–2500 m), Bhutan, China (N Guangdong-Liannan, W Yunnan-Tengchong), NE India (Assam-Khasia, Sikkim), N Myanmar, N Thailand, N Vietnam.

Epiphytic on trees or lithophytic on rocks mossy rocks. Fl. May–Aug.

Chhintapu, Ilam, 8500 ft, 1969.6.8, TB Shrestha 15534 (KATH).

**Dendrobium polyanthum** Wall. ex Lindl.

*Dendrobium primulinum* Lindl.

C Nepal (400–1400 m), Andaman Islands, China (S Yunnan), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. Apr–May.

Nanipani, west Nepal, 1400 m, 1973.4, JF Dobremz 1878 (KATH); Doti, 1000–1200 m (Amatya 2005); Chitwan (Ph-R).

**Dendrobium pulchellum** Roxb. ex Lindl.

E Nepal (900–1800 m), NE India, Laos, Myanmar, Malaysia, Singapore, Thailand, Vietnam.

Epiphytic on tree trunk and main branches usually upper portion of the tree. Fl. Jul–Aug.

East Nepal, 1970, fide Banerji & Thapa, l.c. (Hara et al. 1978, Press et al. 2000).

**Dendrobium transparens** Wall. ex Lindl.

ECW Nepal (800–2000 m), Bhutan, NE and NE India (Kumaon, Assam), Laos, Myanmar.

Epiphytic on median to large sized tree often on the *Shorea robusta*. Fl. May–Jun.

Nepal, 1984, C Bailes, 928 (K); Subedi, Chaudhary and Shakya 931 (TUCH).

**Didymoplexis pallens** Griff.

E Nepal (150 m), Afghanistan, Bangladesh, China (N Fujian, C and S Taiwan), NE India, Indonesia, Japan (Ryukyu Islands), Malaysia, New Guinea, Philippines, Thailand, Vietnam, Australia, SW Pacific Islands.

Saprophytic under bamboo, on cultivated lands. Fl. and Fr. Apr–May.

Baraul VDC-3, Sunsari, East Nepal, Koshi, April, SM-40 (KATH).

**Dienia cylindrostachya** Lindl.

*Malaxis cylindrostachya* (Lindl.) Kuntze.

CE Nepal (2600–4000 m), Bhutan, China (Xizang), India (Simla to Sikkim).

Terrestrial in open grassy slopes. Fl. Jul–Aug.

**Dienia ophrydis** (J. König) Seidenf.

*Malaxis latifolia* Sm.

CE Nepal (1800–2100 m), Bhutan, Cambodia, China (S Fujian, Guangdong, Guangxi, Hainan, Taiwan, S and SW Yunnan), India (Deccan to Himalaya), Indonesia, Japan (Ryukyu Islands), Laos, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Thailand, Vietnam, Greater and lesser Sunda Islands, Australia.

Mostly terrestrial, occasionally epiphytic in humid areas. Fl. May–Aug, Fr. Aug–Dec. 2n = 26, 42.

Near Dolakha, Dolakha, 1500 m, 1977.7.12, KR Rajbhandari and B Roy 1206; Lelebhanyang, Lalitpur, 7000 ft, 1977.8.11, R Bahadur 9592 (KATH); Kaskikot, 1600 m, Subedi 766 (TUCH).

**Diplomeris hirsuta** (Lindl.) Lindl.

CE Nepal (300–1000 m), Bhutan, S China, NE India.

Terrestrial on moist sandy slopes. Fl. Jul–Aug.

Tin Labse, above Tikabhairab, Lalitpur, 6000 ft, 1977.8.9, P Pradhan and party 9586; Namdu to Busti, Dolakha, 1300 m, 1977.8.20, KR Bhattarai and B Roy 2347 (KATH).

(It has been spelled as *Diplomeris hirsute* in Panthi and Chaudhary 2005).

**Diplomeris pulchella** D. Don

*Orchis uniflora* Roxb.

EC Nepal (600–2600 m), China (SW Guizhou, SW Sichuan, SE Xizang, NW Yunnan), NE India, Myanmar, Vietnam.

Mostly terrestrial and lithophytic on shaded slopes. Fl. Jul–Sep, Fr. Oct.

Gossain Than, Nepal, Wallich, Nathaniel, no. s.n.; Nepal, Wallich, Nathaniel, no. s.n.; Narainhetty Upper Nepal, 1802.8.15, F. Buchanan-Hamilton (LINN).

**Epigeneium amplum** (Lindl.) Summerh.

CE Nepal (1300–2000 m), Bhutan, China (Guangxi, SE Xizang, SE to NW Yunnan), NE India (Assam, Sikkim), Laos, Myanmar, Nepal, Thailand, Vietnam.

Epiphytic mostly on *Schima wallichii* or lithophytic on mossy rocks. Fl. Sep–Nov.

Hanspokhari, Ilam, 5200 ft, 1977.10.1, P Pradhan, KR Rajbhandari and R Niroula 654 (KATH).

**Epigeneium fuscescens** (Griff.) Summerh.

E Nepal (600–1800 m), Bhutan, China (S Guangxi, SE Xizang, S and W Yunnan), NE India.

Epiphytic on *Quercus semicarpifolia* or on lithophytic on dampy rocks. Mar–Apr, Oct.

Maipokhari, Ilam, 1977.10.10, P Pradhan, KR Rajbhandari N Niroula 72; Deurali, Sankkhuwasabha, 2020 m, 2009.2.9, GD Bhatta and AP Bhattarai 1 (KATH).

**Epigeneium rotundatum** (Lindl.) Summerh.

E Nepal (1500–2000 m), Bhutan, China (Guangxi, SE Xizang, NW and SE Yunnan), Bhutan, NE India (Asma), Myanmar.

Epiphytic on tree trunk often *Rhododendron arboreum*. Fl. Mar–May.

East Nepal, 1970, fide Banerji and Thapa, l.c. (Hara et al. 1978, Press et al. 2000).

**Epipactis helleborine** (L.) Crantz

CW Nepal (200–3600 m), Afghanistan, Bhutan, China (Anhui, Gansu, Guizhou, Hebei, Hubei, Liaoning, Qinghai, Shaanxi, Shanxi, Sichuan, Xinjiang, Xizang, Yunnan), India (Kashmir), Kazakhstan, Kyrgyzstan, Pakistan, Russia, Tajikistan, Uzbekistan; N Africa, SW Asia, Europe; North America.



Terrestrial on litter covered moist slopes. Fl. Jun–Jul, Fr. Sep. 2n = 38, 40.

Phucha, Humla, 2600 m, 1979.7.31, KR Rajbhandari and B Roy 4222; Dori Lekh to Nyor Gad, Jumla, 2800 m, 1979.7.18, KR Rajbhandari and B Roy; Jharkot, Mustang, 3400 m, 1983.7.22, KR Rajbhandari 8118; Khangsar Khola, Manag, 3700 m, 1983.7.30, KR Rajbhandari 8625; Thaktor-Rigmo, Solukhumbu, 2600 m, 1997.7.31, KR Rajbhandari 9740026 (KATH); moist, way to Khani, Dolpa, 3200 m, Maan-261 (TUCH).

**Epipactis mairei** Schltr.

Nepal (200–3600 m), Bhutan, China (1200–3200 m. Gansu, Guizhou, Hubei, Hunan, Shaanxi, W Sichuan, Xizang, NW Yunnan), Myanmar.

Terrestrial in thickets, grasslands and riverbanks. Fl. Jun–Jul, Fr. Sep. 2n = 40.

Although it is mentioned in Pearce and Cribb (2002) and Wu and Hong (2009), herbarium specimen is not found.

**Epipactis royleana** Lindl.

ECW Nepal (1400–3500 m), Bhutan, China (S and SE Xizang), NW India (Kashmir), Kyrgyzstan, Pakistan, Tajikistan, Uzbekistan.

Terrestrial in seepage snady grasslands. Fl. Jul–Aug. 2n = 40, 60.

Barbung Khola, Dolpa, 10 000 ft, 1979.7.13, JDA Stainton 4419; Nepal, C Grey-Wilson, s.n. in spirit (K); Nyor Gad to Sipty, Jumla, 2700 m, 1979.7.18, KR Rajbhandari and B Roy 3463; Khangsar Khola, Manang, 3700 m, 1983.7.30, KR Rajbhandari 8650 (KATH); moist, way to Khani, Dolpa, 3800 m, Maan-261b (TUCH).

**Epipactis veratrifolia** Boiss. and Hohen.

CW Nepal (600–1300 m), Afghanistan, China (W Sichuan, Xizang, C and W Yunnan), India (Kashmir to Sikkim), Myanmar, Pakistan, Africa (Ethiopia, Somalia), SW Asia, Caucasus.

Terrestrial in forest floor. Fl. May. 2n = 20, 40, 60.

North of Chainpur, Bajhang, 6000ft, 1965.5.19, TB Shrestha 4120; Khapre Khola near Babai, 1976.3.23, KJ Malla, RJ Shah and PR sharma 891 (KATH).

**Epipogium aphyllum** Sw.

CW Nepal (2500–3400 m), Bhutan, China (S Gansu, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shanxi, NW Sichuan, Taiwan, Xinjiang, SE Xizang, NW Yunnan), NW and NE India (Kashmir to Sikkim), Japan, Kashmir, Korea, Russia, Europe.

Saprophytic in litter cover dense forest floors and damp places. Fl. Aug–Sep. 2n = 68.

West Nepal, PSW 4385; central Nepal, SSW 1216 (Hara et al. 1978, Press et al. 2000).

**Epipogium roseum** (D. Don) Lindl.

C Nepal (500–2000 m), China (Guangdong, Hainan, C and S Taiwan, SE Xizang, S Yunnan), NE India (Sikkim), Indonesia (Sumatra, Java, Borneo, Sulawesi, lesser Sunda Is., Moluccas, New Guinea), Japan, Kashmir, Laos, Malaysia, Philippines, Sri Lanka, Thailand, Vietnam, tropical Africa, Pacific Islands.

Saprophytic in moist places. Fl. and Fr. Apr–Sep. 2n = 68.

Central Nepal, 1818, N Wallich, s.n. (Hara et al. 1978, Press et al. 2000). Shrinagar, Palpa (Ph-R).

**Eria alba** Lindl.

CE Nepal (1500–2500 m), Bhutan, NW India (Kumaon). Epiphytic often on *Quercus Griffii*, *Pinus roxburghii*. Fl. Apr–Jun.

Nepal, N Wallich (K) (Hara et al. 1978, Press et al. 2000). Ghanteshower, Doti (Ph-R).

**Eria annapurnensis** L. R. Shakya and M. R. Shrestha  
C Nepal (2000 m).

Epiphytic in Schima wallichii tree, the forest margins. Chhomrong, Kaski, Gandaki Zone, 2000 m, 2005.6.10, L. Shakya, M. Shrestha and S. Shakya 74 (holotype: KATH, isotype: TUCH).

**Eria apertiflora** Summerh.

C Nepal (1600 m), Cambodia, India, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunk and main branches mostly on *Quercus semicarpifolia*, *Q. glauca*. Fl. Aug–Sep.

Tinbhanjyang, Lalitpur, 7500 ft, 1977.8.9, R Bahadur 9585; Chilaune, near Sundarijal, Kathmandu, 5000 ft, 1979.8.6, S Dahal and N Dawadi 878; Ranga gaon to Jajarkot, Jajarkot, 1500 m, 1979.8.15, KR Rajbhandari and B Roy 4670 (KATH); DM Bajracharya CN 109 (TUCH).

**Eria baniae** Bajrach., L. R. Shakya and M. K. Chettri  
C Nepal (1600 m).

Epiphytic in the forest margins. It was published as ‘baniaii’ but IPNI has recorded as ‘baniae.’ KhaniGaon, Kathmandu, 1600m, 1993.01.26, DBajracharya et al CBS 150 (isotype: KATH).

**Eria bractescens** Lindl.

CE Nepal (300–1100 m), E Himalaya (Nepal, Sikkim), Laos, Myanmar, Malaya.

Epiphytic on open tree trunks. Fl. Apr–May. Raja Rani, Morang, 570 m, 1979.4.19, P Pradhan, R Niraula and M Gorkhali 785; Makwanpur Gadi, Makwanpur, 1600 m, 1992.2.24, KJ White 13 (KATH).

**Eria carinata** Gibs. ex Lindl.

C Nepal (1300–1500 m), Bhutan, India, Thailand. Epiphytic on *Eugenia* sp. Fl. Oct–Dec. Jagat-Dharapani, Lamjung, 1430–2000 m, 1973.7.9, DP Joshi and MM Amatya 370 (KATH).

**Eria clausa** King & Pantl.

C Nepal (500–2000 m), Bhutan, India (E Himalayas, Assam), China (W Guangxi, SE Xizang, S and SE Yunnan), Myanmar, Vietnam.

Epiphytic in montane, humid, mossy, mixed and coniferous forests and primary montane forests or lithophytic on rocks in broad-leaved forests. Fl. Mar, Fr. Apr–May. Bajrachayra (2004) BB Raskoti 444 (KATH).

**Eria concolor** Parish and Rchb. f.

*Pinalia concolor* (C. S. P. Parish and Rchb. f.) Kuntze  
E Nepal (500 m), Thailand, Myanmar. Epiphytic on *Quercus glauca*, *Schima wallichii* trees. Fl. Jun.

Bhogatini, Raja Rani Village, Letang, Morang, 500 m, 2001.11.6 DM Bajracharya, LR Shakya and A Subedi 424 (TUCH).

**Eria coronaria** (Lindl.) Rchb. f.

CE Nepal (200–2300 m), Bhutan, China (Guangxi, Hainan, SE Xizang, NW and S Yunnan), India NE (Assam), Thailand, Vietnam.

Epiphytic on *Shorea robusta*, *Schima wallichii*. Fl. May–Jun.  $2n = 34, 36, 38, 44, 52$ .

Nepal, 1973, C Grey-Wilson, B Phillips, 889 in spirit (K). Devithan Danda, manichu, Kathmandu, 6500 ft, 1966.10.28, BB Basukala 5901; Phulchoki, Lalitpur, 7000 ft, 1977.11.7, R Bahadur 378; Near Terathum, 1650, 1978.11.16, P Prahan, NP Manandhar and N Amatya 663; Near Rakse, Ilam, 2050 m, 1978.11.19, P Pradhan, NP Manandhar and N Amatya 668 (KATH).

**Eria discolor** Lindl.

C Nepal (150–1600 m), NE India, Laos, Indonesia, Thailand, Vietnam.

Epiphytic on *Shorea robusta*, *Schima wallichii*. Fl. Apr–Jun. Rangapani, Ilam, 450 m, 1979.4.17, P Pradhan, R Niroula and M Gorkhali 745 (KATH).

**Eria lasiopetala** (Willd.) Ormerod

*Dendrolirium lasiopetalum* (Willd.) S. C. Chen and J. J. Wood, *Eria pubescens* (Hook.) Steud.

E Nepal (1300–1600 m), Bhutan, Cambodia, China (SE Hainan, Hong Kong), India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunk or lithophytic rocks. Fl. Jan–Apr, fr. Aug.  $2n = 38, 40$ .

Nepaul (Nepal), 1832, N Wallich, no. s.n. (P); Kusma, Parbat, 1978.3.16, PM Amatya and B Roy 403; Godak, Ilam, 550 m, 1979.3.16, P Pradhan, R Niroula and M Gorkhali 736; Rupal, Bajang, 1000 m, 1984.4.14, P Pradhan, KK Uprety, N Pradhan and N Dabadi 1300; Hurke, Surkhet, 780, 1991.2.22, NP Manandhar and N Acharya 139-91 (KATH).

**Eria nepalensis** Bajrach. and K. K. Shrestha

C Nepal (200 m).

Epiphytic on tree trunks.

Chitwan, Sauraha, Royal Chitwan National Park, 200 m, 2000.2.26, D. M. Bajracharya CN 260 (holotype: KATH, isotype: TUCH).

**Eria obesa** Lindl.

E Nepal (500 m), NE India (Assam), Myanmar, Thailand.

Epiphytic on upper canopy of tree. Fl. Aug.

Bhogatini, Raja Rani Village, Letang, Morang, 500 m, 2001.01.14, DM Bajracharya, LR Shakya and A Subedi 394 (TUCH).

**Eria paniculata** Lindl.

*Dendrobium floribundum* D. Don, *Mycaranthes floribunda* (D. Don) S. C. Chen and J. J. Wood

E. Himalaya (Nepal to Bhutan), Assam, Myanmar-Tibet frontier.

Num, Sankhuwasabha, 1000 m, 1998.12.14, DB Karkee 827; Bajrabarahi, Lalitpur, 1350 m, 2001.7.28, M Ghimire 120 (KATH).

**Eria pokharensis** Bajrach., Subedi and K. K. Shrestha  
C Nepal (900–1000 m).

Epiphytic. Open area on rock slope.

Lumle, Pokhara, Gadaki zone, 900–1000 m, 2000.04.10, Bajracharya & Subedi, no. CN 220 (holotype: KATH, isotype: TUCH).

**Eria spicata** (D. Don) Hand.-Mazz.

*Pinalia spicata* (D. Don) S. C. Chen and J. J. Wood

CE Nepal (300–2800 m), Bhutan, S China (S and SE Xizang, S Yunnan), NE India, Myanmar, Thailand, N Vietnam.

Epiphytic mostly on *Schima wallichii*, *Quercus glauca*, *Cinnamomum tamala*. Sometimes lithophytic. Fl. Jul–Oct.  $2n = 20 + 2B, 38, 40$ .

Nepal, 1859, N Wallich, no. s.n. (P); near Chhetchhet, Dolakha, 1400 m, 1977.7.15, KR Rajbhandari and B Roy 1375; Bahunthan, Jajarkot, 1400 m, 1981.7.30, NP Manandhar 6357; Sikha-Tatopani, Myagdi, 1700 m, 1983.7.15, KR Rajbhandari 7740 (KATH).

**Esmeralda cathcartii** (Lindl.) Rchb. f.

*Arachnis cathcartii* (Lindl.) J. J. Sm.

E Nepal (600–2000 m), Bhutan, NE India (Sikkim).

Pendulum epiphytic on *Rhododendron* sp., *Lyonia ovalifolia*. It may be terrestrial in humus rich soil. Fl. Mar–Jul.

Eastern Nepal, fide Hook. f., l.c. 28 (1890) (Hara et al. 1978, Press et al. 2000). Godak, Ilam (Ph-R).

**Esmeralda clarkei** Rchb. f.

E Nepal (500–2100 m), Bhutan, China (Hainan, SW Yunnan), NE India, Myanmar, Nepal, Thailand, NW Vietnam.

Epiphytic mostly on *Rhododendron* sp., *Lyonia ovalifolia* but is sometimes lithophytic on rocks in damp areas. Fl. Mar–Nov, Fr. Oct–Dec.

Hanspokari, Ilam, 5200 ft, 1977.10.1, P Pradhan, KR Rajbhandari and R Niroula 191 (KATH).

**Eulophia bicallosa** (D. Don) P. F. Hunt and Summerh.

C Nepal (200–300 m), Bangladesh, China (Hainan, Taiwan), NE India (Assam), W Himalayas, Indonesia, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Bismark Islands, Australia.

Terrestrial on damp places. Fl. Jun.

Nepal, F Buchanan, no. s.n. (BM).

**Eulophia dabia** (D. Don) Hochr.

CW Nepal (400–1300 m), Afghanistan, Bangladesh, Bhutan, China (SW Guizhou, W Hubei, Jiangsu, Sichuan, SW Yunnan), India (Kashmir), Pakistan, Tajikistan, Turkmenistan, Uzbekistan.

Terrestrial in grassy slopes. Fl. Mar–May, Fr. May–Jun.  $2n = 54$ .

Nepal, Nepal, F Buchanan, no. s.n., (BM); Chitwan, Makwanpur, 300 m, 1989.3.15, KJ White 4; Bholeni-Madi, 1000 ft, 1978.12.29, HK Saiju and B Roy 1002 (KATH).

**Eulophia densiflora** Lindl.

E Nepal (1000 m), NE India.

Terrestrial on alluvial soil.

Preace and Cribb (2002), Press et al. (2002).

**Eulophia explanata** Lindl.

C Nepal (1000 m), NW India (Khasia-Assam, Jharkhanda). Terrestrial on moist slopes. Himalay-Hinku Odar, Kaski, 2750 m, 2001.6.26, PR Shakya and S Poudel 10414 (KATH)

**Eulophia flava** (Lindl.) Hook. f.

C Nepal (60–400 m), China (SW Guangxi, Hainan, Hong Kong), India (Garwal), Laos, Myanmar, Thailand, Vietnam. Terrestrial in moist slopes. Fl. Apr–Jun. Central Nepal, fide Hook. f., l.c. (1890) (Hara et al. 1978, Press et al. 2000).

**Eulophia graminea** Lindl.

C Nepal (900–1100 m), China (Anhui, Guangdong, Guangxi, Guizhou, Hainan, Taiwan, Yunnan), NE India (Sikkim), Indonesia, Japan (Ryukyu Islands), Laos, Malaysia, Myanmar, Singapore, Sri Lanka, Thailand, Vietnam. Terrestrial in the grasslands slopes. Fl. Apr–May, Fr. May–Jun.  $2n = 42, 48, 56$ . Central Nepal, SSW 2527 (Hara et al. 1978). Sagarnath (Phuljore) east of Hetauda (White and Sharma 2000).

**Eulophia herbacea** Lindl.

C Nepal (1300–1400 m), Bangladesh, China (Guangxi, S Yunnan), India, Laos, Thailand. Terrestrial on moist grassland slopes. Fl. Jun. Sukla Phanta Wildlife Reserve, Kanchanpur, 1976.4.12, C Rice 48 (KATH).

**Eulophia mackinnonii** Duthie

C Nepal (850–1500 m), India. Terrestrial on moist slopes, damp places. Brindavan, Hetauda, 1976.7.15, PR Shakya, R Rana and TK Rajbhandari 3654 9 (KATH).

**Eulophia obtusa** (Lindl.) Hook. f.

C Nepal (800–1500 m), India. Terrestrial on moist slopes. Rajbhandari and Dahal (2004).

**Eulophia spectabilis** (Dennst.) Suresh

*Eulophia nuda* Lindl.  
CE (400–1800 m), Bhutan, Cambodia, China (S Jiangxi, SE and SW Yunnan), India, Indonesia, Laos, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Thailand, Vietnam; SW Pacific Islands. Terrestrial in grasslands or forest. Fl. Apr–Jun.  $2n = 54$ . Morung Hills, Nepal, 1810.4.19, F Buchanan-Hamilton, no. 1949, 1950 (E).

**Flickingeria fimbriata** (Blume) A. D. Hawkes

*Ephemerantha macraei* (Lindl.) P. F. Hunt and Summerh.  
E Nepal (500–2400 m), China (SW Guangxi, Hainan, SE Yunnan), India (Andaman Islands, Nicobar Islands), Indonesia, Malaysia, Philippines, Thailand, Vietnam. Epiphytic on tree trunks or on lithophytic in open rocks. Fl. Apr–Jun. East Nepal, Stainton 6903; TI 6307318 (Hara et al. 1978).

**Flickingeria fugax** (Rchb. f.) Seidenf.

C Nepal (800–1600 m), Bhutan, India, Myanmar, Thailand. Epiphytic on upper part of the *Shorea robusta*, *Duabanga grandiflora*, *Schima wallichii*, etc. Fl. May–Jul.

Rangapani, Ilam, 2000 ft, 1977.10.10, P Pradhan, KR Rajbhandari and R Niraula 561; Makal Daman, Makwanpur, 500 m, 1987.5.15, NP Manandhar and LP Kattel 11827 (KATH); Subedi, Chaudhary and Shakya 807 (TUCH).

**Galearis paxiana** (Schltr.) P. F. Hunt

*Galearis roborowskyi* (Maximowicz) S. C. Chen, P. J. Cribb; *Galearis stracheyi* (Hook. f.) P. F. Hunt. WC Nepal (3600–4800 m), Bhutan, China (Gansu, Hebei, Henan, Qinghai, W Sichuan, Xinjiang, S Xizang), India. Terrestrial, Fl. Jun–Jul, Fr. Jul–Sep. West Nepal, PSW 2210, Central Nepal, SSW 3151 (Hara et al. 1978).

**Galearis spathulata** (Lindl.) P. F. Hunt

*Aorchis spathulata* (Lindl.) Verm. ECW Nepal (3300–5000 m), Bhutan, China (SE Gansu, NE Qinghai, Shaanxi, W Sichuan, E and S Xizang, NW Yunnan), India (Garhwal, E Himalaya), Myanmar.

Terrestrial in open hill forests, on damp rocks, scrub, grazed meadows under *Rhododendron* forest, alpine meadows. Fl. Jul–Aug, Fr. Jul–Sep.

Nepal, 1818, N Wallich, no. s.n. (BM); Jangla Bhanjyang, Dolpa, 3900 m, Einarsson, Skarby and Wetterhall 939; Tiwa Gairi-Wane Danda, Sankhuwasabha, 3740, 1994.6.16. PR Shakya and KK Dangol 10145; Manane Lakh, Bajhang, 4000 m, 2009.7.13, CA Pendry, AP Bhattarai, G Bhatt, S Noshiro, M Amano, T Tanaka, YJ Wang, BI Dell, N Yamamoto 20915105 (KATH).

**Galeola lindleyana** (Hook. f. and Thomson) Rchb. f.

E Nepal (1800–2800 m), Bhutan, China (Anhui, W Guangdong, N Guangxi, Guizhou, Henan, Hunan, S Shaanxi, Sichuan, Taiwan, SE Xizang, W to SE Yunnan), India (Assam, Garwal to Sikkim), Indonesia.

Saprophytic in forests, thickets, humus-rich and moist rocky places. May–Aug, Fr. Sep–Oct.

Tashi Gaun-Bhinsi Kharka, Sankhuwasabha, 2170 m, 1990.8.3, M Minaki et al. 90110093; Chukebada-Badarigaon, Kalikot, 2340–1330 m, 1991.8, M Suzuki et al. 9160267 (KATH).

**Gastrochilus acutifolius** (Lindl.) Kuntze

C Nepal (1200–2100 m), Bhutan, India (Khasia, Sikkim). Epiphytic on medium to large sized tree trunk or main branches. Fl. Oct–Dec. Chichila-Num, Sankhuwasabha, 1750, 1998.12.14, DB Karkee 826 (KATH).

**Gastrochilus affinis** (King and Pantl.) Schltr.

E Nepal (2700–2900 m), E. Himalaya (Sikkim). Epiphytic often on *Tsuga dumosa*. Fl. Jul. Subedi, Chaudhary and Shakya 794 (TUCH).

**Gastrochilus calceolaris** (Buch.-Ham. ex Sm.) D. Don

ECW Nepal (900–2300 m), Bhutan, China (Hainan, S Xizang, S and W Yunnan), NE India (Assam), Malaysia (Peninsular), Myanmar, Thailand, Vietnam. Epiphytic mostly on *Quercus glauca* and *Ficus nenoralis*. Fl. Mar–Apr.  $2n = 38, 40, 76$ . Harain Letty, Nepal, 1803.02.15, F Buchanan, no. s.n. (BM).

**Gastrochilus calceolaris** (Buch.-Ham. ex Sm.) var. **biflora**  
L. R. Shakya and M. R. Shrestha  
C Nepal (2000 m).  
Fl. and Fr. May–Jun.  
Gandaki Zone, Kaski District, Chhomrong, 2000 m,  
2005.6.10, L. Shakya, M. Shrestha and S. Shakya 75  
(holotype: KATH, isotype: TUCH).

**Gastrochilus calceolaris** (Buch.-Ham. ex Sm.) var.  
**calceolaris**  
CE Nepal (1200–2000 m), NE India (Assam), Indonesia,  
Myanmar, Malaysia, Thailand.  
Epiphytic on medium sized tree trunks.  
Mamankhe-Yamphodin, Taplejung, 1900 m, 1967.3.22,  
DH Nicolson 3044; Tankot, SW of Kathmandu, 1800 m,  
1975.1.12, DP Joshi, KR Rajbhandari and MK Ghimire  
75/274; Ranidhunga, Sankhuwasabha, 1900 m, 2009.2.9,  
GD Bhatt and AP Bhattarai 3 (KATH).

**Gastrochilus dasypogon** (Sm.) Kuntze  
C Nepal (100–1000 m), NE India (Sikkim).  
Epiphytic mostly on *Dillenia indica*. Fl. Nov–Dec.  
Nepal, 1980.09.15, M Stych (K).  
Arungkhola, Nwalparasi (Ph-R).

**Gastrochilus distichus** (Lindl.) Kuntze  
CE Nepal (1700–2800 m), Bhutan, China (SE Xizang,  
W Yunnan), NE India (Sikkim).  
Epiphytic on often *Quercus* sp. Fl. Jan–May.  $2n = 38$ .  
Manichur, Kathmandu, 2500 m, 1975.3.13, DP Joshi and  
KR Rajbhandari 75/557; near Chichila, Sankhuwasabha,  
2010 m, 1998.8.29, S Nishiro et al 9820120 (KATH);  
Subedi, Chaudhary and Shakya 969 (TUCH).

**Gastrochilus inconspicuus** (Hook. f.) Kuntze  
*Gastrochilus inconspicuus* (Hook. f.) Seidenf., *Luisia*  
*inconspicua* (Hook. f.) King & Pantl.  
C Nepal (500–1500 m), Bhutan, NE India (Sikkim).  
Epiphytic in the forests. Fl. May–Jul.  
Farille, M., Jordan, D. and Lachard, G. 847028 (K).

**Gastrochilus obliquus** (Lindl.) Kuntze.  
C Nepal (600–800 m), Bhutan, China (SW Sichuan,  
S Yunnan) India (Andaman Islands, Sikkim), Laos, Myanmar,  
Thailand, Vietnam.  
Epiphytic mostly on *Shorea robusta*. Fl. Oct–Dec.  
Chitwan National Park (Ph-R).

**Gastrochilus obliquus** var. **obliquus**  
*Gastrochilus bigibbus* (Rchb. f. ex Hook. f.) Kuntze.  
CE Nepal, China (SW Sichuan, S Yunnan) and Indo-  
China, India (Assam), Laos, Myanmar, Thailand, Vietnam.  
Epiphytic.  
Garuwa-Sanichare, Ilam, 900 ft, 1977.10.12, P Pradhan, KR  
Rajbhandari and R Niraula 372 (KATH); Chitwan National  
Park, 250–500 m (White and Sharma 2000).

**Gastrochilus paseudodistichus** (King and Pantl.) Schltr.  
C Nepal (2100–2500 m), NE India, Malaysia, Thailand.  
Epiphytic on main branches of the large sized tree. Fl. Sep.  
Thulapakre-Nigale, 1975–2430 m, 1978.4.19, I Sharma,  
HK Saiju and A Karki (KATH); Subedi, Chaudhary and  
Shakya 995 (TUCH).

**Gastrodia falconeri** D. L. Jones and M. A. Clem.  
C Nepal (2500–3000 m), India.  
Saprophytic deep under shade under *Acer* and *Quercus*.  
Chunning Khola, Ganesh Himal, 2300 m, 1992.8.9, WJ  
Baker, TA Burkitt, JT Miller and R Shrestha 134 (KATH).

**Geodorum densiflorum** (Lam.) Schltr.  
C Nepal (150–1400 m), Cambodia, China (Guangdong,  
Guangxi, Guizhou, Hainan, SW Sichuan, Taiwan, Yunnan),  
India, Indonesia, Japan (Ryukyu Islands), Laos, Malaysia,  
Myanmar, New Guinea, Sri Lanka, Thailand, Vietnam;  
Australia.  
Terrestrial in moist places. Fl. Jun–Jul.  $2n = 36, 52, 54$ .  
Nepal, 1818, N Wallich, no. s.n. (BM); Beni-Tiptyang,  
Myangdi, 1400 m, 1979.7.1, SK Saiju and ST Tulad-  
har 78/79 (KATH); Subedi Chaudhary and Shakya 947  
(TUCH).

**Geodorum pallidum** D. Don  
C Nepal (1000 m), India (Sikkim).  
Terrestrial in moist slopes.  
Chaudhary and Shakya 947 (TUCH).

**Goodyera biflora** (Lindl.) Hook. f.  
CW Nepal (2000 m), China (Anhui, N Fujian, S Gansu,  
Guangdong, Guizhou, S Henan, Hubei, Hunan, Jiangsu,  
S Shaanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang),  
India, Japan, Korea, N Vietnam.  
Terrestrial in litter covered moist places. Fl. Feb–Jul.  $2n = 28,$   
 $29, 30, 31, 32 + 0-4B, 33$ .  
Nepal, N Wallich, no. s.n. (LINN); S Coll. 7379 (K);  
West Nepal PSW 3894, Central Nepal Wall. 7379 (type)  
(Hara et al. 1978, Press et al. 2000).

**Goodyera foliosa** (Lindl.) Benth. ex C. B. Clarke  
*Goodyera foliosa* (Lindl.) Benth. ex Hook. f.; *Goodyera*  
*secundiflora* Griff.  
E Nepal (2100–2300 m), Bhutan, China (Fujian,  
Guangdong, Guangxi, Sichuan, Taiwan, SE Xizang, SE and  
W Yunnan), NE India, Japan, Korea, Myanmar, Vietnam.  
Terrestrial in humus rich moist places. Fl. Jul–Sep.  $2n = 28,$   
 $56$ .  
Shivapuri, Kathmandu, 7200 ft, 1977.9.9, P Pradhan  
and N Shrestha 19; Trihedhunga-Gorepani, Parbat, 2370,  
1995.9.16, M Mikage et al. 9552198 (KATH).

**Goodyera foliosa** var. **commelinoioides** (Fukuy.) F. Maek.  
C Nepal (1500–1600 m), Japan.  
Terrestrial on deep shade in litter covered humus near river  
bank or damp, occurs in the subtropical evergreen forest. Fl.  
Sep.  
Sundarijal, Shivapuri National Park (Central Nepal), 200.7.9,  
Raskoti 250 (TUCH).

**Goodyera fusca** (Lindl.) Hook. f.  
ECW Nepal (1500–4700 m), Bhutan, China (S and  
SE Xizang, NW Yunnan), NE India, N Myanmar.  
Terrestrial in forests, thickets, alpine meadows. Fl. Aug–Sep.  
 $2n = 32, 32 + 2B$ .  
Lauribinayk, Rasuwa, 12 500 ft, 1965.9.10, TB  
Shrestha and PR Shakya 3794; Nangaon-Dudh Kunda,  
Dolakha, 4450 m, 1983.9.5, KR Rajbhandari 9952;

Beni Kharka-Sarkari Pati, Solukhumbu, 3970–3350 m, 1985.9.2, H Obha et al. 85811283; Num-Chichila, Sankhuwasabha, 1850, 1999.10.14, DB Karkee 945 (KATH).

**Goodyera hemsleyana** King and Pantl.

*Epipactis hemsleyana* (King and Pantl.) A. A. Eaton.  
C Nepal (2000–2200 m), E Himalaya (India, Sikkim).  
Terrestrial under *Quercus lamellosa* forest. Fl. Jul–Sep.  
Central Nepal, N Wallich, s.n. (ann. 1819) (Hara et al. 1978, Press et al. 2000).

**Goodyera hispida** Lindl.

*Epipactis hispida* (Lindl.) A. A. Eaton.  
CE Nepal (600–2000 m), Bhutan, NE India (Assam), Malaysia Thailand, Vietnam.  
Terrestrial in humus rich places. Fl. Aug.  
Godak, Ilam (Ph-R).

**Goodyera procera** (Ker Gawl.) Hook. f.

CW Nepal (900–1500 m), Bangladesh, Bhutan, Cambodia, China (Anhui, N Fujian, Guangdong, Guangxi, Guizhou, Hainan, S and W Sichuan, Taiwan, SE Xizang, Yunnan, Zhejiang), India (Garhwal to Sikkim), Indonesia, Japan, Laos, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam.  
Terrestrial in forest floors. Fl. Apr–May.  $2n = 38, 42$ .  
Nepal, C Bailes 890 A in spirit (K). Dordore, Palpa District, 700 m (Ph-R).

**Goodyera repens** (L.) R. Br.

WCE Nepal (1000–4200 m), Bhutan, China (Anhui, N Fujian, Gansu, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jilin, Liaoning, Nei Mongol, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan), India (Kashmir, Sikkim), Japan, Kashmir, Korea, Myanmar, Nepal, Russia; Europe, North America.  
Terrestrial in moist places. Fl. Jul–Aug.  $2n = 30, 32, 40$ .  
Lophagaon to Dhobigaon, Ramechap, 2300 m, 1977.8.11, KR Rajbandari and B Roy 2236; Godilekh, Bajang, 3030 m, 1976.8.13, H Tobata et al 2409; Simiagon-Gyalche Kharka, Dolakha, 2700 m, 1983.8.31, KR Rajbandari 9624; Logind-Pike Bhnajyang, Solukhumbu, 2600–3500 m, 1985.9.5, H Obha et al. 8572312; Chaukebada, Kalikot, 2020–2340 m, 1991.8.4, M Suzuki et al. 9169235 (KATH).

**Goodyera schlechtendaliana** Rchb. f.

E Nepal (1500–2200 m), Bhutan, China (Anhui, N Fujian, S Gansu, Guangdong, Guangxi, Guizhou, Hainan, S Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang), India, Indonesia (Sumatra), Japan, Korea, Nepal, Thailand, Vietnam.  
Terrestrial under forest floor. Fl. Aug–Oct.  $2n = 30 + 0-2B, 60$ .  
Shivapuri, Kathmandu, 7200 ft, 1977.9.9, P Pradhan and N Shrestha 18 (KATH).

**Goodyera viridiflora** (Blume) Blume

*Goodyera cordata* (Lindl.) Benth. & Hook. f., *Goodyera viridiflora* (Bl.) Lindl. ex Dietrich.  
CE Nepal (1500–1600 m), Bhutan, China (Fujian, Guangdong, Hainan, Jiangxi, Taiwan, Yunnan), India,

Indonesia, S Japan, Malaysia, New Guinea, Philippines, Thailand, Vietnam; Australia.

Terrestrial in damp places. Fl. Aug–Sep.  $2n = 22$ .

East Nepal, TI6305495 (Hara et al. 1978). Nagarjun forest, 1700 m (Ph-R).

**Goodyera vittata** Benth. ex Hook. f.

E Nepal (2000–2600 m), Bhutan, China (SE Xizang), India (Sikkim).

Terrestrial in moist areas. Fl. Jul–Sep.

BB Raskoti, 2008, Lampokhari, 2600 m, Taplejung district (Ph-R).

**Gymnadenia conopsea** (L.) R. Br.

CW Nepal (200–4700 m), China (SE Gansu, Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shaanxi, Shanxi, N and W Sichuan, SE Xizang, NW Yunnan), Japan, Korea, Russia; Europe.

Terrestrial in forests, grasslands and waterlogged meadows. Fl. Jul–Aug.  $2n = 30, 40, 42, 80, 100, 120$ .

It has been reported from central Nepal but is doubtful and further confirmation is needed (Hara et al. 1978); moist place, Siptyo, Dho Tarap, Dolpa, 4300 m, Maan-72, 293 (TUCH).

**Gymnadenia orchidis** Lindl.

ECW Nepal (3000–4700 m), Bhutan, China (SE Gansu, W Hubei, S Qinghai, S Shaanxi, W Sichuan, E and S Xizang, NW Yunnan), NE/NW India (Kashmir, Sikkim), Pakistan.

Terrestrial in open grasslands and waterlogged meadows. Fl. May–Aug.

Chhuminggaljo, Rolwaling, Dolakha, 3350 m, 1977.7.22, KR Rajbandari and B Roy 1728; Bhabasen-Mabu Pass, Dailekh, 2700 m, 1979.7.6, KR Rajbandari and B Roy 2927; Dori Lekh, Jumla, 3500 m, 1979.7.17, KR Rajbandari and B Roy 3372; Banthanti-Godepani, Kaski, 3100 m, 1983.7.12, KR Rajbandari 7625; Yagri Kharka-Ta Dasa, Sankhuwasabha, 3540–3900 m, 1988.7.20, M Suzuki et al. 8820719 (KATH); moist place, Rupti, Dho Tarap, 4400 m, Maan-164 (TUCH).

**Habenaria aitchisonii** Rchb. f.

*Habenaria dicerias* Schltr.

CW Nepal (2400–3900 m), Afghanistan, Bhutan, China (Guizhou, S Qinghai, W Sichuan, S and SE Xizang, C and NW Yunnan), India (Kashmir).

Terrestrial in forests, thickets and grasslands. Fl. Jul–Sep.  $2n = 42$ .

Jumla-Dori Lekh, Jumla, 3200 m, 1979.7.17, KR Rajbandari and B Roy 3378; Muktinath-Thraugse Phedi, Mustang, 3900 m, 1983, KR Rajbandari 8173; Thesiyo, west side of Thesebu khola valley, Solukhumbu, 3570 m, 2005.9.25, CA Pendry, KK Shrestha and RC Poudel DNEP 3 BX 107 (KATH).

**Habenaria arietina** Hook. f.

ECW Nepal (1400–3000 m), Bhutan, China (SE Xizang), India (Simla to Assam).

Terrestrial in grassy places. Fl. Aug.  $2n = 21, 42, 46, 48, 56$ .  
Ghasa, Mustang, 2000 m, 1976.7.24, DP Joshi and SK Dhungana 76/3921; Lamobagar to Hum, Dolakha,

2000 m, 1977.7.16, KR Rajbhandari and B Roy 1449; Had Sija to Jumla, Jumla, 2500 m, 1979.8.6, KR Rajbhandari and B Roy 4356; Kasoti, Darchula, 2430 m, 1984.7.20, PR Shakya, MK Adhikari and MN Subedi 7970; Toktok-Bengkar, Solukhumbu, 2750 m, 2005.9.11; MF Watson, N McCheyne and LN Mandar DNEP3 AY14 (KATH).

**Habenaria commelinifolia** (Roxb.) Wall. ex Lindl.  
CW Nepal (300–1200 m), China (SW Yunnan), India, Myanmar, Thailand, Vietnam.  
Terrestrial in open slopes. Fl. Aug.  $2n = 42$ .  
Central Chitwan area, 900 ft, 1967.8.27, PR Shakya 9134; Jimali, Salyan, 950 m, 1979.8.17, KR Rajbhandari and B Roy 4783; Khaptad, Doti, 2940 m, 1976.7.15, H Tabata et al. 1285 (KATH).

**Habenaria dentata** (Sw.) Schltr.  
*Habenaria dentata* f. *ecalcarata* (King & Pantl.) Tuyama.  
CE Nepal (500–1500 m), Cambodia, China (Anhui, N Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang), India, Japan, Laos, Myanmar, Thailand, Vietnam.  
Terrestrial on open slopes near roadsides. Fl. Aug–Oct.  $2n = 64$ .  
Mahabhir, makawanpur, 7500 ft, 1978.9.15, R Bahadur 643 (KATH).

**Habenaria dentata** forma **dentata** (Sw.) Schltr.  
CE Nepal (1000–1500 m), NE India (Assam, Sikkim), Myanmar, Thailand, Indo-China, China, S. Japan.  
Terrestrial on open slopes near roadsides.  
Central Nepal, SSW 8708; Polunin 1932; East Nepal TI 6307280 (Hara et al. 1978).

**Habenaria digitata** Lindl.  
C Nepal (500–1500 m), India (Kashmir), W Pakistan.  
Terrestrial on open slopes near roadsides. Fl. Jul–Aug.  
Gokarna, Kathmandu, 4400 ft, 2023.4.22 BS, P Pradhan and R Thapa 6430; Kanepokhari, Morang, 260 m, 1974.6.3, P Pradhan, MM Amatya and R Shrestha 3174 (KATH).

**Habenaria diphylla** (Nimmo) Dalzell  
CE Nepal (1000–1400 m), China (S Yunnan), N India, Thailand  
Terrestrial in damp places. Fl. Jun.  $2n = 42, 42 + 2B, 108$ .  
Near Bisankhu Nayan Than, Lalitpur, 5500 ft, 1979.8.7, P Pradhan 891; Nagarkot, Kabhre, 1900 m, 1985.7.28, HVT and IS Cotter 115; Rangapani, Ilam, 1979.9.1, R Thapa, S Magar and S Tamang 913 (KATH).

**Habenaria furcifera** Lindl.  
C Nepal (150–800 m), Bhutan, China (S Yunnan), India, Myanmar, Thailand.  
Terrestrial in damp places. Fl. Jul–Sep.  $2n = 42$ .  
Ambas, Dang, 530 m, 1982.8.27, NP Manandhar 8442 (KATH).

**Habenaria intermedia** D. Don  
CW Nepal (1800–3000 m), China (S Xizang), India (Kashmir).  
Terrestrial in moist forest. Fl. Jul.  $2n = 42$ .

Dori Lekh-sipy, Jumla, 2700 m, 1979.7.18, KR Rajbhandari and B Roy 3421; Ranimatta-Talpokhari, Dailekh, 2000 m, 1991.7.31, KR Rajbhandari 14365; Kanking-Lamalodge, Rasuwa, 2400 m, 1984.7.13, HK Saiju and B Roy 16 (KATH).

**Habenaria longifolia** Buch.-Ham. ex Lindl.  
C Nepal (100–2000 m), India (Mussourie, Kumaun).  
Terrestrial on slopes.  
Nathpur, ?, Nepal, existence is doubtful (Hara et al. 1978, Press et al. 2000).

**Habenaria malintana** (Blanco) Merrill  
*Habenaria dentata* forma *ecalcarata* (Sw.) Schltr.  
E Nepal (500–1300 m), China (S Guangxi, Hainan, SW Sichuan, W to SE Yunnan, N Zhejiang), India, Malaysia, Myanmar, Philippines, Thailand, Vietnam.  
Terrestrial in forest and grassland. Fl. Oct–Nov.  $2n = 42, 84, 168$ .  
East Nepal: TI 6307284 (Hara et al. 1978, Press et al. 2002).

**Habenaria malleifera** Hook. f.  
*Habenaria furfuracea* Hook. f.  
E Nepal (1500–1850 m), NE India (Assam), Vietnam.  
Hanspokhari, Ilam, 5200 ft, 1979.8.28, RB Thapa, S Magar and S Tamang 905 (KATH).

**Habenaria marginata** Colebr.  
CW Nepal (500–1500 m), Bhutan, China (S Yunnan), India (Kashmir, Myanmar, Nepal, Thailand).  
Terrestrial in open grasslands. Fl. Oct–Nov.  $2n = 42$ .  
Shukla Phanta, Kanchanpur, 190 m, 2038.5.26 BS, I Sharma, R Joshi, R Uprety and I Pandey 262; Hetuada-Amlekhgunj, Makawanpur, 1500 ft, 1967.8.21, PR Shakya 9344; Jimali, Salyan, 950 m, 1979.8.17, KR Rajbhandari and B Roy 4786 (KATH).

**Habenaria pantlingiana** Kraenzl.  
*Habenaria stenopetala* var. *polytricha* Hook. f.  
E Nepal (2000–2100 m), China (SW Guangxi, SE Hainan, N Taiwan), India (Sikkim), Japan (Ryukyu Islands), Vietnam.  
Terrestrial in forest floors. Fl. Aug–Oct.  $2n = 42, 42 + 2B$ .  
East Nepal, Stainton 1416 (Hara et al. 1978, Press et al. 2000).

**Habenaria pectinata** D. Don  
ECW Nepal (500–3500 m), China (S Yunnan), India (Simla to Sikkim).  
Terrestrial in open forest. Fl. Aug.  $2n = 42, 42 + 2B$ .  
Near kadampur, Kalikot, 1800 m, 1985.7.32, PR Shakya, MN Subedi and R Uprety 8465; Bhabesen-Nauli, Dailekh, 2490 m, 1985.7.29, PR Shakya, MN Subedi and R Uprety 8430; Choarmara-Kyama, Ramechhap, 2760–2600 m, 1985.8.3, H Obha et al. 8571246; Thungkocpa, Sankhu-wasabha, 2500 m, 1999.10.9, DB Karkee 932B; Pakheribas, Dhankuta, 5500 ft, 1976.7.31, NP Manandhar 75 (TUCH).

**Habenaria plantaginea** Lindl.  
ECW Nepal (450–2500 m), India (Bihar), Sri Lanka.  
Terrestrial on moist places. Fl. Aug–Oct.

Mahendrenagar-Bhumkar, Kanchanpur, 200 m, 1981.9.12, I Sharma, R Joshi, R Uprety and I Pandey 289; Sirkhauli, Doti, 1000 m, 1982.9.6, LP Kattel 1111; Tumlingtar-Baireni Bagar, Sankhuwasabha, 400 m, 1988.8.31, S Noshiro et al. 9820125; Raja Rani, Morang, 570 m, 1979.9.4, S Tamang, S Magar and RB Thapa 918 (KATH).

**Habenaria pubescens** Lindl.

C Nepal (600–1200 m), Himalaya (Garhwal).  
Terrestrial on moist humus-rich slopes.  
Central Nepal, SSW 6457 (Hara et al. 1978, Press et al. 2002).

**Habenaria reniformis** (D. Don) Hook. f.

CE Nepal (400–1200 m), Cambodia, China (Guangdong, S Hainan), India (Assam), Thailand, Vietnam.  
Terrestrial in humid forest. Fl. Oct.  
Central Nepal, Wall. s.n. (type). East Nepal, Williams and Stainton 8298 (Hara et al. 1978, Press et al. 2000).

**Habenaria stenopetala** Lindl.

CE Nepal (1500–2500 m), China (Guizhou, Taiwan, SE Xizang), India, Japan (Ryukyu Islands), Kashmir, Philippines, Thailand, Vietnam.  
Terrestrial under the forest margins. Fl. Aug–Oct.  $2n = 40, 42$ .  
Dhalaun, Bajhang, 7000 ft, 1976.7.23, H Tabata, KR Rajbhandari and K Tsuchiya 1492; Dhole Ban, Phulchoki, Lalitpur, 7000 ft, 1967.8.6, R Bahadur 7190 (TUCH).

**Habenaria stenopetala** var. **stenopetala** Lindl.

CE Nepal (1500–2500 m), Indian Himalaya (Kashmir to Sikkim).  
Terrestrial on primary forest.  
Centran Nepal, TI 6305492; East Nepal, Stainton 1593 (Hara et al. 1978, Press et al. 2000).

**Hemipilia cordifolia** Lindl.

CW Nepal (1800–2300 m), Bhutan, China (W Sichuan, Taiwan, S Xizang, NW Yunnan), India, Myanmar.  
Terrestrial in moist places. Fl. Jun–Sep.  $2n = 42$ .  
Daman-Rikheswor, Mkwangpur, 1976.7.16, R Ranan, PR Shakya and TK Rajbhandari 3663; Dhunche, Rasuwa, 6000 ft, 1977.8.27, HK Saiju and PM Amatya 5-77Chhapre, Kalikot, 8500 ft, 1978.8.10, MB Chhetry s.n.; Chhanna-Bhanbasen, Dailekh, 2370 m, 1985.7.28, PR Shakya, MN Subedi and R Uprety 8422 (KATH).

**Herminium alaschanicum** Maxim.

C Nepal (1800–4500 m), China (Gansu, Hebei, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, W Sichuan, Xizang, NW Yunnan, ? Mongolia).  
Terrestrial. Fl. Jun–Sep.  
(This species was collected from Dhawalagiri Zone, Mustang district, Nyi La to Ghami, 3410–3780 m, 5 Aug 2001, S Noshiro et al. 2010.5.026. The herbarium is deposited at Harvard University Herbaria and is confirmed by Paul Oremond, pers. comm.).

**Herminium hongdeyuanii** B. B. Raskoti.

C Nepal (2200 m).

Terrestrial in subtropical region, Chandragiri, Bagmati zone, 2012.9. Raskoti 571 (holotype KATH!).

**Herminium jaffreyanum** King and Pantl.

E Nepal (2300–3300 m), India (Himalaya).  
Terrestrial on moist slopes. Fl. Aug.  
Although it is mentioned in Rajbhandari and Dahal (2004), herbarium specimen is not found.

**Herminium lanceum** (Thunb.) Vuijk

ECW Nepal (1100–3500 m), China (Anhui, N Fujian, SE Gansu, Guangdong, Guangxi, Guizhou, S Henan, Hubei, Hunan, Jiangxi, S Shaanxi, Sichuan, Taiwan, Yunnan, Zhejiang), India, Indonesia, Japan, Kashmir, Korea, Malaysia, Mongolia, Myanmar, Philippines, Thailand, Vietnam.  
Terrestrial in grassland slopes, damp places, seepage banks. Fl. Jun–Aug.  $2n = 38, 40, 42, 76$ .  
Ghantreswor, Dadelhura, 1900 m, 198.8.16, KR Rajbhandari, PM Regmi and KJ Malla 5431; Talkot-Aagar, Bajhang, 1660–1840 m, 1991.8.18, M Suzuki et al. 9160748; Dhanagyung-Dharapani, Manag, 2100 m, 1883.8.7, KR Rajbhandari 9027; Simigaon-Gyalche Kharka, Dolakha, 2200 m, 1983.8.31, KR Rajbhandari 9569; Semma-Gola, Sankhuwasabha, 1300 m, 1998.8.14, S Noshiro et al. 9820014 (KATH).

**Herminium mackinnonii** Duthie

CW Nepal (2100–2700 m), Indian Himalaya (Mussoorie to Sikkim).  
Under *Quercus* and *Mahonia* sp.  
Terrestrial or semi epiphytic on the oak forest. Fl. Aug.  
Chandagiri, Kathmandu, 2150 m, 1977.8.17, PR Shakya and P Pradhan 9600; Mahabhir, Makwanpur, 7500 ft, 1978.9.14, R Bahadur 649; Hille, Ilam, 8000 ft, 1977.10.6, P Pradhan, KR Rajbhandari and R Niraula 164; Descent from Bjure Dada to Tamur river 2700 m, C Grey-Wilson et al. 135 (KATH).

**Herminium macrophyllum** (D. Don) Dandy

CE Nepal (3800–4600 m), Bhutan, Indian (Kashmir), SE Tibet (S Xizang), Pakistan.  
Terrestrial open slopes. Fl. Jun–Aug.  $2n = 40$ .  
Nepal, N Wallich, no. 7068 (E); Chankheli Lekh, Mugu, 3250 m, 1985.8.13, PR Shakya, MN Subedi and R Uprety 8600 m; Jharkot-Thorong Phedi, Mustang, 4280 m, 1999.8.20, M Mikage et al. 9962979; Banthanti-Godepani, Kaski, 3100 m, 1983.7.12, KR Rajbhandari 7667; Namce Bazar, Solukhumbu, 3500 m, 2005.9.13, MF Watson, N McCheyne and LN Mandar DNEP3AY 27 (KATH).

**Herminium monophyllum** (D. Don) P. F. Hunt and Summerh.

CW Nepal (2300–4500 m), India (Garwal).  
Terrestrial on grassy clearing in *Picea/Abies*, *Betula utilis*, *Juniperus* forest, *Berberis/Potentilla* scrub, grassy slopes among. Fl. Jun–Sep. Fr. Aug.  
Nepal, 1819, N Wallich, no. s.n. (BM); Nepal, unknown collector, 7413 (K); Ganna-Nala Bagar, Baitadi, 1000 m, 1984.7.15, PR Shakya, MK Adhikari and MN Subedi 7859; Doti-Baga Lekh, 1950 m, 1981.6.30, PR Shakya, LR Sharma and KR Amatya 6223; Bhuminthan, Shivapuri,

Kathmandu 6200 ft, 1979.8.1, S Dahal and N Dawadi 834; Near Bisankhu Narayanthan, Lalpur, 5500 ft, 1979.7.23, P Pradhan and party 833 (KATH).

**Herminium monorchis** (L.) R. Br.

CW Nepal (3400–4600 m), China (Anhui, Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Xizang, N and NW Yunnan), India (Sikkim), Japan, Kashmir, Korea, Mongolia, Nepal, Pakistan, Russia; C and W Asia, Europe. Terrestrial on moist slopes. Fl. Jul–Aug.  $2n = 38, 40, 42$ . Chuchamara Dada, Mugu, 3750 m, 1979.7.19, KR Rajbhandari and B Roy 3628; Muktinath-Thorongse Phedi, Mustang, 3900 m, 1983.7.23, KR Rajbhandari 8172; Hude, Manag, 3350 m, 1983.8.4, KR Rajbhandari 8826; Makalu Base camp-Ta Dasa, Sankhuwasabha, 4000 m, 1988.7.27, M Suzuki et al 8850668 (KATH).

**Herminium quinquelobum** King and Pantl.

E Nepal (100–2900 m), Bhutan, China (NW Yunnan), India (Sikkim). Terrestrial in temperate forest. Fl. Aug–Sep.  $2n = 38$ . Near Hille, Ilam, 7900 ft, 1977.10.6, P Pradhan, KR Rajbhandari and R Niraula 263 (KATH).

**Herpysma longicaulis** Lindl.

C Nepal (900–1700 m), Bhutan, China (W Yunnan), NE India, Indonesia, Myanmar, Thailand, Vietnam. Terrestrial in litter covered dense forest. Fl. Aug–Sep. BB Raskoti (KATH).

**Liparis caespitosa** (Thou.) Lindl.

CE Nepal (1000–1400 m), China (Yunnan), NE India, Laos, Madagascar, Malawi, Mascarenes, Mauritius, Mozambique, Peninsular Malaysia, Philippines, Reunion, Solomon Islands, Vanuatu, New Caledonia, Fiji, Sri Lanka, Sumatra, Java, Borneo, Sulawesi, Moluccas, New Guinea, Tanzania, Thailand, throughout tropical continental Asia, Uganda. Epiphytic on tree trunks and lower branches of evergreen lowland forests (e.g. *Ehretia* sp.). Fl. Jul–Aug. Near Torikhet, Dolakha, 950 m, 1977.7.13, KR Rajbhandari and B Roy 1256; Raja Rani, Morang, 570 m, 1979.9.5, RB Thapa, S Magar and S Tamang 919 (KATH).

**Liparis cathcartii** Hook. f.

C Nepal (2100–2500 m), Bhutan, China (Sichuan, C and NW Yunnan), NE India (Assam). Terrestrial in moist slopes. Fl. Jun–Jul, Fr. Oct. Rara, Mugu, 3100 m, 1979.7.22, KR Rajbhandari and B. Roy 3781; Tharmare-Neurigad, Jumla, 2740 m, 1985.8.6, PR Shakya, MN Subedi and R Uprety 8527; Hetauda, Makwanpur, 400 m, 2007.6.5, BB Raskoti (KATH).

**Liparis cordifolia** Hook. f.

E Nepal (1400–2000 m), Bhutan, China (Guangxi, Taiwan, SE Xizang, SE Yunnan) NE India, Vietnam. Terrestrial in moist and humus rich slopes. Fl. Oct–Dec.  $2n = 20$ . East Nepal, TI 6305490 (fr.) (Hara et al. 1978, Press et al. 2000).

**Liparis campylostalix** Rachb. f.

*Liparis kumokiri* F. Maek. CE Nepal (1100–3700 m), China (Gansu, Guizhou, Hebei, Heilongjiang, Henan, W Hubei, Jilin, Liaoning, Nei Mongol, Shandong, S Shanxi, Sichuan, Taiwan, Xizang, Yunnan), Japan, Korea, Russia (Far East). Terrestrial in forests, thickets, grasslands. Fl. Aug–Oct. Jaljale, 3800 m (Ph-R).

**Liparis deflexa** Hook. f.

CE Nepal (1100–1400 m), NE India, Cambodia, Laos, Myanmar, Vietnam. Terrestrial on sandy slopes of humid areas. Fl. Jun–Jul. Nepal, C Bailes 912 (K). Lothar, Chitwan, 335 m, 1967.8.27, PR Shakya 9123; Dolakha-Malepu, Dolakha, 1100 m, 1983.8.27, KR Rajbhandari 9315; Baluwabenshi-Bumlingtar, Sankhuwasabha, 450 m, 1999.9.27, D Karee 879; Godak, Ilam, 1000 m, 1979.8.31, RB Thapa, S Magar and S Tamang 912 (KATH).

**Liparis ferruginea** Lindl.

Central Nepal (400 m), Cambodia, China (SE Fujian, S and W Hainan, Hong Kong), Indonesia, Malaysia, Thailand, Vietnam. Terrestrial in alluvial soil, growing in full shade on moist humus-rich slopes near river banks in *Shorea robusta* forest. Fl. Jul.  $2n = 42$ . Narayani Zone, Makawanpur District, Hetauda at 400 m, 2008.7.12, Raskoti Bhakta. B. 215 (KATH).

**Liparis glossula** Rchb. f.

C Nepal (1800–4300 m), China (S Xizang, SE Yunnan), NE India. Gregariously terrestrial in open grassland slopes. Fl. Jul.  $2n = 20$ . Doti-Samlingadi, 2850 m, 1972.8.2, MS Bista and DP Joshi 171; Kyangin area, Rasuwa, 12 000–14 000 ft, 1967.7.19, SB Malla 9057 (KATH).

**Liparis nervosa** (Thunb.) Lindl.

C Nepal (900–2800 m), China (N Fujian, Guangdong, Guangxi, Guizhou, Hubei, S Hunan, Jiangxi, S Sichuan, Taiwan, SE Xizang, Yunnan, S Zhejiang), India, Japan, Laos, Myanmar, Malaysia, Sumatra, Java, Moluccas, Pacific Islands [Guam]. New and Old World tropics and subtropics, widespread. Shade loving terrestrial under forest. Fl. Feb–Jul, Fr. Oct.  $2n = 36, 40, 42$ . Jimali, Salyan, 950 m, 1979.8.17, KR Rajbhandari and B Roy 4777; Godavari, Lalipur, 1600 m, 2005.7.5, S Dahal 2003; Baluwabensi, Bumlingtar, Sankhuwasabha, 450 m, 1999.9.27, DB Karee 862; Rangpani, Ilam, 550 m, 1979.9.1, RB Thapa, S Magar and S Tamang 914 (KATH).

**Liparis nervosa** var. **khasiana** (Hook. f.) P. K. Sarkar

C Nepal (1800 m), NE India. Terrestrial on moist road sides. Fl. Jul. Raskoti (2009). Nuwakot, 1600 m (Ph-R).

**Liparis nervosa** subsp. **nervosa**

*Liparis bituberculata* (Hook.) Lindl.



- Himalaya (Kumaun to Sikkim), Assam.  
Terrestrial.  
Central Nepal, Wall. s.n. (Hara et al. 1978, Press et al. 2000).
- Liparis odorata** Lindl.  
*Malaxis odorata* Willd.  
C Nepal (900–2000 m), China, India, Japan, Myanmar, Laos, Thailand, Vietnam, Guam.  
Terrestrial.  
Raskoti 2007, Mahabhir, 1600 m (Ph-R).
- Liparis olivacea** Lindl.  
C Nepal (1000 m).  
Terrestrial.  
Nepal, Collett 354 (K).
- Liparis perpusilla** Hook. f.  
E Nepal (2500–2900 m), Bhutan, China (SW Yunnan-Weixi), India (Sikkim).  
Erect epiphytic on small to large branches of tree. Fl. Jul.  $2n = 30$ .  
Bhorlang, 7800 ft, 1960.8.20, SB Malla 16023; Ankhukhola, Ganesh Himal 2800 m, 1992.7.18, WJ Baker et al. 79 (KATH).
- Liparis petiolata** (D. Don) P. F. Hunt and Summerh.  
*Liparis nepalensis* Lindl.  
C Nepal (1800–2800 m), Bhutan, China (N Guangxi, Hunan, W Jiangxi, SE Xizang, S Yunnan), NE India (Assam), Thailand, Vietnam.  
Terrestrial on litter covered moist and cloudy forest. Fl. May–Jun, fr. Sep–Oct.  $2n = 30, 36$ .  
Nepal, 1821.7.1, N Wallich, no. 1945 (E); Taman-Derbang, Baglung, 1300 m, HK Saiju and SR Tuladhar 73/79 (KATH).
- Liparis platyrachis** Hook. f.  
E Nepal (1400–1500 m), China (W Yunnan), India (Sikkim).  
Fl. Sep.  
East Nepal, TI 6305489 (Hara et al. 1978, Press et al. 2000).
- Liparis pygmaea** King and Panlt.  
W Nepal (3200–3500 m), W China, NE India (Sikkim).  
Terrestrial or lithophytic grassland scrub. Fl. Jul.  
West Nepal, PSW 2457; SSW 3430 (Hara et al. 1978, Press et al. 2000).
- Liparis resupinata** Ridl.  
E Nepal (1500–2600 m), Bhutan, China (SE Xizang, W to SE Yunnan) NE India (Assam, Sikkim).  
Epiphytic mostly on *Eugelhardtia spicata*, *Quercus* sp., *Viburnum* sp. Fl. and fr. Oct–Dec.  $2n = 28, 56$ .  
Burancholi, above Tikabhairab, 6000 ft, 1977.11.18, P Pradhan and party 386; Chichila-Hurhure, Sankhusabha, 1950 m, 1990.12.8, PR Shakya 9416 (KATH).
- Liparis rostrata** Rchb. f.  
W Nepal (2000–3000 m), China (S Xizang, Yunnan), India (Simla).  
Terrestrial under temperate forest. Fl. Jul.  $2n = 28, 30$ .  
West Nepal, PSW 4892 (Hara et al. 1978, Press et al. 2000).
- Luisia brachystachys** (Lindl.) Blume  
C Nepal (1300–1900 m), Bhutan, China (S Yunnan), India, Laos, Myanmar, Vietnam.  
Epiphytic on exposed tree trunks. Fl. Apr.  $2n = 40$ .  
Rapti Dun, 400 m (Ph-R).
- Luisia trichorrhiza** (Hook.) Blume  
CE Nepal (1000–1400 m), Indian Himalaya (Dehra Dun to Sikkim), Myanmar, Thailand.  
Epiphytic exposed tree trunks. Fl. Mar–Jul. Fr. May.  
Hetauda, 500 m (Ph-R).  
(Hara et al. 1978 as *L. trichorbiza*).
- Luisia tristis** (G. Forst.) Hook. f.  
*Luisia veretifolia* Gaud., *Luisia zeylanica* Lindl.  
CE Nepal (300–3050 m), India (Garhwal), Bhutan, Malaysia, New Caledonia, Sri Lanka, Thailand, Vietnam, Lesser Sunda, Mollucan Island.  
Epiphytic mostly on *Schima wallichii*, *Terminalia chebula*.  
Fl. Apr–May.  
Pangsera-Badadi, Baitadi, 770 m, 1884.7.14, PR Shakya, MK Adhikari and MN Subedi 7839; Barumthan, Jajarkot, 1400 m, 1981.7.30, NP Manandhar and DP Joshi 6368; Barati, Sindhupalchok, 850–1280 m, 1970.4.15, H Kanai 670971; Lamidanda, Makwanpur, 1400 m, 1992.2, KJ White 17, DB Karkee 719 (KATH).
- Malaxis acuminata** forma **acuminata** D. Don  
CE Nepal (450–3050 m), Bhutan, Indian Himalay (Simla to Sikkim), Myanmar, Sri Lanka.  
Terrestrial on humus riched humid slopes.  
Central Nepal, SSW 5918; TI 1064; east Nepal, Williams 253. 450–3050 m (Hara et al. 1978, Press et al. 2000).
- Malaxis dolpensis** M. R. Shrestha, L. R. Shakya et S. K. Ghimire  
W Nepal (4200 m).  
Terrestrial in open meadow.  
Karnali Zone, Dolpa District, Khorakchhang, 4200 m, Jul 2003, MR Shrestha, SK Ghimire and L Shahi 873 (holotype: KATH, isotype: TUCH).
- Malaxis monophyllos** (L.) Sw.  
CE Nepal (2600–3600 m), China (W Yunnan and Xizang).  
Gansu, Hebei, Heilongjiang, Henan, Hubei, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xizang, W Yunnan), Japan, Korea, Russia; Europe, North America.  
Terrestrial on grassland slopes. Fl. and Fr. Jul–Aug.  $2n = 28, 30, 60$ .  
Jharkot-Thorong Phedi (W side of Thorung La), Mustang, 4500 m, 1999.8.20, M Mikage et al 9962977 (KATH).
- Malaxis monophyllos** var. **obtusa** H. Tsukaya and H. Ohba  
E Nepal (3350 m).  
Terrestrial moist mossy slopes.  
Thasing Dingma to Saure Kharka through Sanu Khola, Solukhumbu, Sagarmatha, 3350 m, 1995.8.4, F. Miyamoto;

M. Amano; H. Ikeda; C. M. Joshi; K. Arai; T. Komatsu 9584106 (holotype: TI, isotype: KATH).

**Malaxis muscifera** (Lindl.) Kuntze

ECW Nepal (2000–4300 m), Bhutan, ? China (Yunnan, Szechuan), India (Sikkim), Pakistan.

Terrestrial on humus containing slopes. Fl. Jun–Aug. Fr. Sep–Oct.

Doti-Slimgado 2850 m, 1972.8.2, MS Bista and DP Joshi 172; Tharmare, Jumla, 3200 m, 1985.8.6, PR Shakya, MN Subedi and R Uprety 8500; Thorungse Phedi, Mustang, 4100 m, 1983.8.2, KR Rajbhandari 8735; Tengboche-Deboche, Solukhumbu, 3740 m, 2005.9.16, KR Rajbhandari, S Rajbhandari, S Vaidya and UR Sharma DNEP3 AX63; Khapare, Ilam, 9100 ft, 1977.10.7, P Pradhan, KR Rajbhandari and R Niraula 293 (KATH).

**Malaxis tamurensis** Tuyama

E Nepal (1200 m).

Terrestrial herb.

East Nepal, TI 6305500 (type) (Hara et al. 1978, Press et al. 2000).

**Micropera obtusa** (Lindl.) Tang and F. T. Wang

CE Nepal (150–500 m), Bhutan, NE India (Sikkim), Myanmar, Thailand.

Epiphytic on tree trunks.

Rajbhandari and Dahal (2004).

Below Raja Rani, Morang, 400 m (Ph-R).

**Monomeria barbata** Lindl.

C Nepal (1400–1400 m), NE India (Assam), Myanmar, Thailand, Malaysia, Vietnam.

Epiphytic mostly on *Schima wallichii*. Fl. Jan.

Nepal, 1984, C Bailes 951 Nepal (K); Battedanda, Tinpanibhanjyang, Lalitpur, 6000 ft, 1977.11.18, R Bahadur 358 (KATH).

**Myrmechis pumila** (Hook. f.) Tang and Wang

C Nepal (3000–3200 m), Bhutan, NE India (Assam).

Terrestrial in damp places. Fl. Jul–Aug.

Central Nepal, SSW 5973 (Hara et al. 1978, Press et al. 2000).

**Neogyna gardneriana** (Lindl.) Rchb. f.

C Nepal (1500–3000 m), Bhutan, China (SE Xizang, S Yunnan), NE India, Laos, Myanmar, Thailand, N Vietnam.

Epiphytic or lithophytic humid areas. Fl. Nov–Jan.

Cent Nepal, E Gardner, s.n. in Herb. Wall. (ann. 1817) (type) (Hara et al. 1978, Press et al. 2000).

**Neottia acuminata** Schltr.

CW Nepal (3000–4000 m), China (Gansu, Hebei, Hubei, S Jilin, Nei Mongol, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xizang, N Yunnan -Dayao), NE India (Sikkim), Japan, Korea, Nepal, Russia (Far East).

Saprophytic in litter covered moist slopes. Fl. Jun–Aug.  $2n = 36$ .

Rajbhandari and Dahal (2004).

**Neottia chandrae** B. B. Raskoti, J. J. Wood & Rita Ale

C Nepal (3800 m).

Terrestrial plant growing in partial shade on moist humus rich slopes in *Abies* forest. Fl. Jul.

Lauribinaya, Langtang National Park, Rasuwa, approx. 28°06'N, 85°22'E, 3800 m, 2008.07.20, BB Raskoti B. 280 (holotype: KATH, isotype: TUCH).

**Neottia listeroides** Lindl.

CW Nepal (2700–3200 m), Bhutan, China (C Gansu, N Shanxi, W Sichuan, S and SE Xizang, NW Yunnan), India (Kashmir), Pakistan.

Saprophytic in forests/grassy slopes. Fl. Jul–Sep.  $2n = 40, 46$ .

Marghor Lekh, Humla, 3100 m, 1979.7.31, KR Rajbhandari and B Roy 4182; Pisang-Bhratang, Manang, 3100 m, 1983.3.4, KR Rajbhandari 8852 (KATH).

**Neottia mucronata** (Panigrahi and J. J. Wood) Szlach.

*Listera mucronata* Panigrahi and J. J. Wood.

E Nepal (2400 m), Bhutan, China (SW Sichuan, Yunnan), India.

Saprophytic in shaded/damp places. Fl. Jul–Aug.

Near Banglep, 2500 m, 1973.5.24, PR Shakya and TK Bhattacharya 2301 (KATH).

**Neottia nepalensis** (N. P. Balakr.) Szlach.

*Listera nepalensis* N. P. Balakr.

CW Nepal (2900–3800 m).

Saprophytic on moist slopes.

Near Phagune Dhuri, Nepal, 11 000 ft, 1954.7.8, JDA Stainton, W Sykes and J Williams, no. 3431 (isotype: E); Chame, Manang, 2689 m, 1983.8.15, NP Manandhar 9908 (KATH).

**Neottia pinetorum** (Lindl.) Szlach.

*Listera pinetorum* Lindl.

C Nepal (2200–3650 m), Bhutan, China (S and SE Xizang, W Yunnan), NE India.

Saprophytic on under coniferous forest. Fl. Jun–Jul.  $2n = 40$ . Bamboo-Dovan, 2240 m, 2001.6.26, PR Shakya and S Poudel 10387 (KATH).

**Neottia tenuis** (Lindl.) Szlach.

*Listera tenuis* Lindl.

E Nepal (3000–4000 m), NE India (Sikkim), ?Tibet.

Saprophytic on moist slopes.

East Nepal, Williams 907 (Hara et al. 1978, Press et al. 2000).

**Neottianthe cucullata** (L.) Schltr.

ECW Nepal (400–4500 m), Bhutan, China (Anhui, N Fujian, Gansu, NE Guizhou, Hebei, Heilongjiang, Henan, W Hubei, Jiangxi, Jilin, Liaoning, Nei Mongol, Qinghai, Shaanxi, Shanxi, Sichuan, Xizang, NW Yunnan, Zhejiang), N India, Japan, Korea, Mongolia, Russia; E Europe.

Terrestrial in forests, thickets, grassy slopes, alpine grasslands. Fl. Jul–Oct.

Central Nepal, Lowndes 1370 (Hara et al. 1978, Press et al. 2000).

**Neottianthe cucullata** var. **calpicola** (W. W. Sm.) Soó

*Neottianthe calpicola* (W. W. Sm.) Schltr.

SE Gansu, NE Guizhou, S Qinghai, S and W Sichuan, E and S Xizang, NW Yunnan (Bhutan, India (Sikkim)). Terrestrial in forests, thickets and alpine grasslands. Fl. Jul–Oct.

Above Suma Kharka, Humla, 3850 m, 1985.8.18, PR shakya, MN Subedi and R Uprety 8735; Thorungse, Mustang, 3800 m, 1979.8.4, PR Shakya, SR Adhikari and KR Amatya 5247; Near Phedi, Manang, 4200 m, 1983.8.21, NP Manandhar 10081 (KATH).

**Neottianthe cucullata** var. **cucullata**

EW Nepal (2100–5000 m), Bhutan, China (Anhui, N Fujian, Gansu, Hebei, Heilongjiang, Henan, W Hubei, Jiangxi, Jilin, Liaoning, Nei Mongol, Qinghai, Shaanxi, Shanxi, W Sichuan, Xizang, NW Yunnan, Zhejiang), NE India, Japan, Korea, Mongolia, Nepal, Russia; E Europe.

Terrestrial on open grasslands. Fl. Aug–Sep.

Pisang-Bhratang, Manang, 3150 m, 1974.8.14, DP Joshi and TK Bhattacharya 2462/74; Dolakha, 4050 m, 1983.9.4, KR Rajbhandari 9865; Ne Kharka, 3600 m, 1988.7.28, M Suzuki et al. 8880764 (KATH).

**Neottianthe secundiflora** (Hook. f.) Schltr.

CW Nepal (2500–3200 m), Bhutan, China (E and S Xizang, NW Yunnan), India (Kumaun to Sikkim), Myanmar.

Terrestrial on humid grassland slopes. Fl. Aug–Oct.

Pina-Ghurchi, Mugu, 2800 m, 1985.8.23, PR Shakya, MN Subedi and RK Uprety 8784; Shyapru-Sherpagaon, Rasuwa, 8000 ft, 1965.9.13, TB Shrestha and PR Shakya 3815; Simigaon-Gyalche Kharka, Dolakha, 2200 m, 1983.8.31, KR Rajbhandari 9537A; Ghunsa Khola, Amjilassa-Kyapa, Taprejung, 2650 m, 1989.9.6, C Grey-Wilson et al. 275 (KATH).

**Nervilia aragoana** Gaudich.

*Nervilia scottii* (Rchb. f.) Schltr.

CE Nepal (500–1300 m), Bangladesh, Bhutan, China (Hubei, Sichuan, C and S Taiwan, S and SE Xizang, S and W Yunnan), India, Indonesia, Japan (Ryukyu Islands), Laos, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Vietnam; Australia, Pacific Islands.

Terrestrial in damp places. Fl. May–Jun.  $2n = 72$ .

Central Nepal, SSW 2746. East Nepal, Stainton 6755 (Hara et al. 1978, Press et al. 2000).

**Nervilia crociformis** (Zoll. and Mor.) Seidenf.

E Nepal (500–2100 m), S Taiwan, India, Indonesia, Malaysia, New Guinea, Philippines, Thailand, Vietnam; Africa, Australia.

Terrestrial in litter covered moist forest. Fl. May–Jun.

South of Ilam, 1300 ft, 1969.6.3, TB Shrestha and LHJ Williams 153990 (KATH).

**Nervilia gammieana** (Hook. f.) Pfitzer

CE Nepal (450–800 m), India (Jammu and Kashmir, Sikkim and Arunachal Pradesh Sikkim), Pakistan.

Terrestrial under forests with humus rich soil. Fl. Apr–Jun.

Central Nepal, SSW 2746a; Eastern Nepal, Stainton 6756 (Hara et al. 1978, Press et al. 2000).

**Nervilia macroglossa** (Hook. f.) Schltr.

E Nepal (600–1800 m), Indian (Assam), Myanmar, Vietnam.

Terrestrial on litter covered moist slopes.

Pearce and Cribb (2002).

Phulchoki, Lalitpur, 1800 m (Ph-R).

**Nervilia mackinnonii** (Duthie) Schltr.

C Nepal (900–1700 m), China (S Guizhou, C and NW Yunnan), NE India, Myanmar.

Terrestrial on litter-covered loose soil, in full shade. Fl. May. Fr. Jun.  $2n = 36$ .

Central Nepal: Bagmati Zone, Kathmandu District, Nagarjun forest, 1700 m, 15 May 2007, BB Raskoti 196 (TUCH).

**Nervilia plicata** (Andrews) Schltr.

EW Nepal (300–1000 m), Bangladesh, Bhutan, China (Fujian, S Gansu, Guangdong, Guangxi, Sichuan, S Taiwan, Yunnan) India, Indonesia, Laos, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Vietnam; N Australia.

Terrestrial on humus-rich damp places, in full shade. Fl. May–Jun. Fr. Jun.  $2n = 20, 72, 108$ .

Central Nepal (Lumbini Zone, Pokharathok-9, Arghakhanchi, 600–1000 m); 2007.5.27; Raskoti 204 (TUCH).

**Oberonia acaulis** Griff.

CE Nepal (600–2000 m), Bhutan, China (SE Xizang, S and SE Yunnan), India, Myanmar, Thailand, Vietnam.

Epiphytic mostly on *Schima wallichii*, *Engelhardtia spicata*. Fr. Sep–Dec.  $2n = 30$ .

Hyanja-Naudara, Kaski, 4400 ft, 1976.10.4, H Tabata et al. 6456; Mewa Khola, Taplejung, 1150 m, 1977.5.24, PR Shakya 4384; Ranga pani, Ilam, 2000 ft, 1980.3.25, RB Tamang 130 (KATH).

**Oberonia brachystachys** Lindl.

E Nepal (200–800 m), NE India, Malaysia, Myanmar, Thailand.

Epiphytic on main branches of the tree. Fl. Mar–Apr.

Golakharka forest, Ilam, 450 m, 1979.4.17, P Pradhan, R Niroula and M Gorkhali 748 (KATH).

**Oberonia caulescens** Lindl.

CE Nepal (1600–2400 m), Bhutan, China (Guangdong, W Hubei, S Hunan, W Sichuan, Taiwan, SE Xizang, W to SE Yunnan), India, Vietnam.

Epiphytic mostly on *Schima wallichii*, *Eurya acuminata*. Fl. and Fr. Jul–Oct.  $2n = 26, 30$ .

Wallich 1950 (K); Chandrakot, Kaski, 1300 m, 1979.9.12, R Niraula and N pradhan 13/1979; Above Nundhaki, Sankhuwashabha, 2260 m, 1991.3.28, PR Shakya 6640 (KATH).

**Oberonia emarginata** King and Pantl.

*Oberonia micrantha* King and Pantl.

E Nepal (1600–2000 m), Bhutan, India, Thailand.

Epiphytic on tree trunks and large branches. Fl. Sep.

Shakya (1999), Pearce and Cribb (2002), Rajbhandari and Dahal (2004).

**Oberonia ensiformis** (Sm.) Lindl.

*Malaxis ensiformis* Sm., *Oberonia iridifolia* Lindl.

CE Nepal (1400–1700 m), China (N Guangxi, S and W Yunnan), India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on lowland trees especially on *Schima wallichii*, *Mallotus philippensis*. Fl. Sep–Nov, Fr. next Mar.  $2n = 30$ .  
Upper Nepal, N Wallich, no. s.n.; Narainhetty Upper Nepal, Nepal, 1802.11.30, F Buchanan-Hamilton, no. s.n., (LINN); Khorlak-Machha Khola, Gorkha, 840 m, 1983.6.10, PR Shakya, MK Adhikari and MN Subedi 7799; Torikhet, Dolakha, 950 m, 1977.7.12, KR Rajbhari and B Roy 1223; Godak, Ilam, 3500 ft, 1977.10.3, P Pradhan, KR Rajbhandari and B Roy 1223 (KATH).

**Oberonia falcata** King and Pantl.

E Nepal (1300–2500 m), NE India, Laos, Malaysia, Sumatra, Thailand, Vietnam.

Epiphytic mostly on medium sized tree trunks. Fl. Jun–Jul.

Pothana-Tolka, Kaski, 1900 m, 1983.7.8, KR Rajbhandari 7330; Chichila, Sankhuwasabha, 1900 m, 1988.12.5, DB Karkee 744 (KATH); Subedhi, Chaudhary and Shakya 971 (TUCH).

**Oberonia falconeri** Hook. f.

C Nepal (550–1000 m), China (S and SW Yunnan), India, Laos, Malaysia (Peninsular), Thailand, Vietnam.

Epiphytic mostly on *Sapium insigne*, *Alnus nepalensis*, *Eugenia* sp. Fl. Apr–May, Fr. Aug–Oct.  $2n = 30$ .

Nepal, N Wallich 1948a (K); Chir, Bajhang, 1100 m, 1984.4.14, P Pradhan, RK Uprety, N Pradhan and N Dabadi 1303; near Chhinchu, Surkhet, 700 m, 1979.6.28, KR Rajbhandari and B Roy 2655; Chitwan area, 1500 ft, 1967.8.27, PR Shakya 9381; Singati, Dolakha, 990 m, 1979.5.16, NP Manandhar and MK Adhikari 1404; Chiuribas, Sunsari, 2700 ft, 1978.6.18, P Pradhan and R Niraula 548; Garawa, Ilam, 280, 1974.6.8, P Pradhan, MM Amatya and R Shrestha 179/74 (KATH); Subedi 946 (TUCH).

**Oberonia jenkinsiana** Griff. ex Lindl.

C Nepal (400–1200 m), China (W to SE Yunnan), NE India, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks mostly on pine forest. Fl. and Fr. Sep–Nov.  $2n = 30$ .

Chappak, Bagmati, 1400 m, 1995.5, LR Shakya and DM Bajracharya 20 (KATH).

**Oberonia longilabris** King and Pantl.

C Nepal (1000 m), India.

Epiphytic on small sized trunks and branches. Fl. Jul–Sep.

Satyawati, Palpa, 600 m, BB Raskoti 147 (TUCH).

**Oberonia mucronata** (D. Don) Ormerod and Seidenf.

E Nepal (1400–1800 m), Bangladesh, Bhutan, China (S and SW Yunnan), India, Indonesia, Laos, Malaysia, Myanmar, Philippines.

Epiphytic mostly on *Shorea robusta*, *Schima wallichii*. Fl. and Fr. Aug–Dec.  $2n = 30, 40$ .

Raja Rani, Morang, 570 m, 1979.4.19, R Pradhan, R Niraula and M Gorkhali 787; Rangapani, Ilam, 2000 ft, 1977.10.10, P Pradhan, KR Rajbhandari and R Niroula 357 (KATH).

**Oberonia myosurus** (Forster f.) Lindl. ex Wall.

CW Nepal (1000–1500 m), China, Thailand, Myanmar, Vietnam.

Epiphytic on tree trunk or main branches of the tree. Fl. Aug–Oct.

Central Nepal, N Wallich 1947 (K). Chahara, Palpa (Ph-R).

**Oberonia nepalensis** L. R. Shakya and R. P. Chaudhary  
C Nepal (750–1600 m).

Epiphytic on tree trunks.

Pokhara District (Around Annapurna Conservation Area), Nepal, 1100 m, 1996/5, Shakya, L. R.; Singh, R. L. and Chaudhary, R. P., no. 27 (holotype: KATH).

**Oberonia obcordata** Lindl.

C Nepal (1100–1800 m), China (SE Xizang), NE India, Thailand.

Epiphytic mostly on *Castanopsis indica*, *Ficus* sp. Fl. Sep–Oct.  $2n = 30$ .

Tika Dhunga, 2000 m, 1978.3.26, PM Amatya and B Roy 475/78; Hurure, Sankhuwasabha, 6200 ft, 1981.9.25, PR Shakya 6675 (KATH).

**Oberonia pachyphylla** King and Pantl.

E Nepal (200–800 m), India, Laos, Thailand, Vietnam.

Epiphytic on branches of the tree. Fl. Mar–Apr.

Godak, Ilam, 550 m, 1979.4.16, P Pradhan, R Aniroula, M Gorkhali 738 (KATH).

**Oberonia pachyrachis** Rchb. f. ex Hook. f.

WCE Nepal (1000–1500 m), Bhutan, China (S Xizang, SW Yunnan), N India, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. Nov–Mar, Fr. May.  $2n = 30$ .

Nepal, Verschoyle 55 in spirit; Nepal, K White 400 in spirit (K); near Putalibang, Pyuthan, 1250 m, 1988.9.12, NK Bhattarai and SR Baral 88/356; Bhainse, Makwanpur, 2000 ft, 1978.9.13, R Bahadur 644; Phedi Kharka-Khani gaon, Dolakha, 1800 m, 1983.9.14, KR Rajbhandari 10284; Pakribas, Dhankuta, 5400 ft, 1981.9.15, PR Shakya 6512; Godak-Mailbelli, Ilam, 3500 ft, 1977.10.3, P Pradhan, KR Rajbhandari and R Niraula 227 (KATH); Subedi 867 (TUCH).

**Oberonia prainiana** King and Pantl.

*Oberonia brunnescens* Ridl.

E Nepal (500–1500 m), NE India (Sikkim).

Epiphytic mostly on *Ficus* sp. Fl. Jun–Jul.

Busti, 300 ft, 1978.8.5, PR Shakya et al. 626 (KATH).

**Oberonia pyrulifera** Lindl.

CE Nepal (300–800 m), Bhutan, China (W to SE Yunnan), India, Laos, Thailand.

Epiphytic on branches of tree. Fl. and Fr. Sep–Nov.

Jiri-Chordung, Dolakha, 2400 m, 1977.8.17, KR Rajbhandari and B Roy 2296 (KATH).

**Oberonia recurva** Lindl.

*Oberonia parvula* King & Pantl.

C Nepal (200–1500 m), China (Guangxi), NE India (Assam, Darjeeling, Sikkim), Sri Lanka.

Epiphytic on median sized tree. Fl. Oct–Feb.

BB Raskoti (KATH).

**Oberonia rufilabris** Lindl.

C Nepal (300–1500 m), Bangladesh, Cambodia, China (S Hainan, SE Yunnan), NE India, Malaysia, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. and Fr. Nov–Jan.

Central Nepal, Dobremez 5 (Hara et al. 1978, Press et al. 2000).

**Odontochilus crispus** (Lindl.) Hook. f.

C Nepal (400–2400 m), Bhutan, China (SE Xizang, NW Yunnan), NE India (Assam).

Epiphytic mostly on *Quercus* sp. Fl. Aug–Oct, Fr. Sep–Oct.

Central Nepal, Wraber 150 (LJU) (Hara et al. 1978, Press et al. 2000).

**Odontochilus lanceolatus** (Lindl.) Blume

*Anoetochilus lanceolatus* Lindl.

EC Nepal (800–2200 m), Bhutan, China (Guangdong, Guangxi, C Taiwan, Yunnan), India NE (Assam), Myanmar, Taiwan, Thailand, Vietnam.

Terrestrial in evergreen broad-leaved forests and valleys. Fl. Jun–Sep.  $2n = 60, 120$  (Wu et al. 2010).

Central Nepal, Flatt 93; East Staiton 1362 (Hara et al. 1978, Press et al. 2000).

**Oreorchis foliosa** (Lindl.) Lindl.

CE Nepal (2500–4500 m), Bhutan, India (Simla to Sikkim), Myanmar, S. E. Tibet, W. China.

Terrestrial herb in open meadows. Fl. Jun–Aug, Fr. May.

Khaptad, Doti, 2959 m, 1981.7.2, PR Shakya, LR Sharma and KR Amatya 6284 (KATH).

**Oreorchis foliosa** var. **indica** (Lindl.) N. Pearce and P. Cribb

CE Nepal (2700–3800 m), Bhutan, China (W Sichuan, Taiwan, S Xizang, NW Yunnan), N India, Japan.

Terrestrial in forests and alpine meadows. Fl. Sep.  $2n = 42, 84$ .

Press et al. (2000), Pearce and Cribb (2002), Rajbhandari and Dahal (2004).

**Oreorchis micrantha** Lindl.

CE Nepal (2600–3000 m), Bhutan, China (E and S Taiwan, S and SE Xizang), NE India, Myanmar.

Terrestrial in moist forest. Fl. Jun.

Dovan, Kaski, 2350 m, 2001.6.26. PR Shakya and S Poudel 10396; Deorali-Serdomga, 2700–3400 m, 1985.7.6, H Oba et al. 60115 (KATH).

**Oreorchis nepalensis** N. Pearce & P. J. Cribb

C Nepal (2700–3100 m), China (S Xizang).

Terrestrial in moist and shade areas. Fl. May–Jun.

Press et al. (2000), Pearce and Cribb (2002), Rajbhandari and Dahal (2004).

**Oreorchis porphyranthes** Tuyama

C Nepal (3000–3100 m).

Terrestrial on moist slopes.

South of Gurjakhani, central Nepal, 10 300 ft, 1954.6.7, Stainton, J. D. Adam; Sykes, William and Williams, John, no. 3048 (isotype: BM and E).

**Ornithochilus difformis** (Wall. ex Lindl.) Schltr.

CE Nepal (1400–1800 m), Bhutan, China (S Guangdong, Guangxi, SW Sichuan, S and SW Yunnan), India (Assam, Garwal, Sikkim), Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam.

Epiphytic mostly on *Schima wallichii*, *Mallotus philippensis*. Fl. May–Jul.  $2n = 38$ .

Chhetchhet to Lambagar, Dolakha, 1700 m, 1977.7.15, KR Rajbhandari and B Roy 1392 (KATH).

**Otochilus albus** Lindl.

*Coelogyne alba* (Lindl.) Reich. f.

CE Nepal (1500–2400 m), China (SE Xizang), NE India, Myanmar, Thailand, Vietnam.

Mostly epiphytic on *Rhododendron arboreum*. Fl. Jun–Jul.

Bhorlong, 1979.6.16, R Bahadur 811; Ramche-Thale, Rasuwa, 2000 m, 1969.6.2, H Kani 11885 (KATH); Subedi, Chaudhary and Shakya 970 (TUCH).

**Otochilus fuscus** Lindl.

*Coelogyne fusca* (Lindl.) Rchb. f.

C Nepal (750–2500 m), Bhutan, Cambodia, China (Yunnan), NE India, Myanmar, Thailand, Vietnam.

Mostly epiphytic on *Myrsine* sp., *Lyonia ovalifolia*, *Eurya acuminata*, *Castanopsis* sp. Fl. Nov–Jun, Fr. Oct–Dec.  $2n = 40$ .

Makwanpur Gadhi, 1600 m, 1992.2.24, KJ White 15; Tiplund, Sindhuli, 3500 ft, 1975.12.27, PR Shakya and KR Rajbandari 3492; above Num, Sankhuwasabha, 1660 m, 1990.12.22, PR Shakya 9545; Hanspokhari, Ilam, 1550 m, 1979.4.13, P Pradhan, R Niraula and M Gorkhali 692 (KATH); Subedi, Chaudhary and Shakya 863 (TUCH).

**Otochilus lancilabius** Seidenf.

ECW Nepal (1400–2500 m), Bhutan, China (SE Xizang, SW Yunnan), NE India, Laos, Vietnam.

Epiphytic mostly on *Quercus* sp. Fl. Oct–Nov.

Panchase Lekh, Kaski, 2350 m, 1973.12.13, DP Joshi and MM Amatya 73/1171; Hathi Tauke, Phulchoki, Lalitpur, 8000 ft, 1967.10.26, NP Manandhar and party 6894; Mangsing Danda, 6000 ft, 1881.10.4, PR Shakya 6894 (KATH); Subedi 790 (TUCH).

**Otochilus porrectus** Lindl.

*Coelogyne porrecta* (Lindl.) Rchb. f.

ECW Nepal (1000–2300 m), China (NW to SE Yunnan), NE India, Myanmar, Thailand, Vietnam.

Epiphytic on *Lyonia ovalifolia* or lithophytic on moist forest. Fl. and Fr. Oct–Dec.  $2n = 40$ .

Chichila, Sankhuwasabha, 1900 m, 1998.12.6, DB Karkee 755 (KATH).

**Pachystoma pubescens** Blume

*Pachystoma senile* (Lindl.) Rchb. f.

C Nepal (500–1800 m), Bangladesh, Bhutan, Cambodia, China (Guangdong, S Guangxi, SW Guizhou, Hainan, Taiwan, S Yunnan), India, Indonesia, Laos, Malaysia, Myanmar, ? Nepal, New Guinea, Philippines, Vietnam; Australia. Terrestrial in grassland/forests. Fl. Mar–Sep.

Pearce and Cribb (2002), Rajbhandari and Dahal (2004).

**Panisea demissa** (D. Don) Pfitzer

*Panisea parviflora* (Lindl.) Lindl.

C Nepal (1500–2400 m), SC China (without precise locality), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic mainly on *Quercus glauca*, *Lyonia ovalifolia*, *Pyrus pashia*, *Eurya acuminata*, *Daphniphyllum himalense*. Fl. Apr. Doko Bhanjyang, Kathmandu, 2400 m, 1975.3.16, DP Joshi and KR Rajbhandari 75/645; Nigale-Surkey, Dolakha, 2300 m, 1977.7.9, KR Rajbhandari and B Roy 1106; Mansing Dada, 6800 ft, 1981.10.3, PR Shakya 6862 (KATH); Subedi, Chaudhary and Shakya 1012 (TUCH).

**Panisea panchaseensis** Subedi

C Nepal, (2200–2450 m). Epiphytic on tree trunks. Nepal. Fl. Nov–Dec.

Subedi, A. 1780, 12 Nov 2007, Kaski district, Panchase forest, (holotype: KATH, isotype: TUCH).

**Panisea tricallosa** Rolfe

E Nepal (100–2100 m), Bhutan, China (Hainan, S and SW Yunnan), NE India, Laos, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. Dec, Fr. May–Jun. 2n = 40.

Pearce and Cribb (2002).

**Panisea uniflora** (Lindl.) Lindl.

C Nepal (1000–2300 m), Bhutan, Cambodia, China (S Yunnan), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic mainly on *Shorea robusta*, *Zizyphus incurva*, *Schima wallichii*, *Eugenia formosa*. Fl. Oct–Mar. 2n = 40.

Dhaibunket, Nuwakot, 1550 m, 1967.5.6, DH Nicolson 3272; North side of Phulchoki, Lalitpur, 7500 ft, 1978.4.19, R Bahadur 405; Chisapani, Illam, 1600 ft, 1981.6.3, S Dahal, U Tiwari and M Basukala 200 (KATH).

**Paphiopedilum venustum** (Wallich ex Sims) Pfitzer

*Cypripedium venustum* Wall.

E Nepal (1100–1600 m), Bhutan, China (S and SE Xizang -Dinggyê, Mêdog), NE India.

Terrestrial in humus rich soils near seepage banks. Fl. Jan–Mar. 2n = 38, 40, 40 + 2B, 41, 42.

BB Raskoti 2011, no. 350 (KATH).

**Papilionanthe teres** (Roxb.) Schltr.

*Vanda teres* (Roxb.) Lindl.

CE Nepal (200–2100 m), Bangladesh, Bhutan, China (S Yunnan), NE India (Sikkim), Laos, Myanmar, Thailand, Vietnam.

Epiphytic mainly on *Mitragyne parviflora*, *Eugenia formosa*, *Shorea robusta*. Fl. May–Jun. 2n = 38, 40.

Garuwa, Jhunga, Sindhuli, 360 m, 1987.5, NP Manandhar and LP Kattel 11942; Majhi gaon-Pilwa Khola, 460 m, 1977, 6, 10, PR Shakya 4612; Saktim, Ilam, 1600 ft, 1978.6.12, P Pradhan and R Niraula 527 (TUCH); Subedi, Chaudhary and Shakya (TUCH).

**Papilionanthe uniflora** (Lindl.) Garay

*Aerides uniflora* (Lindl.) Summerh.

C Nepal (1500–2100 m), Bhutan, NE India.

Pendulous epiphytic on tree trunks and main branches. Fl. Jul–Aug.

Mahaveer, Makwanpur, 1800 m, 1992.3, KJ White 18; Nagibhir, 7000 ft, 1962.10.27, TB Shrestha and AV Upadhyay 622; Hanspokhari, Ilam, 5200 ft, 1977.10.1, P Pradhan, KR Rajbhandari and R Niraula 190 (KATH); Subedi, Chaudhary and Shakya 1003 (TUCH).

**Papilionanthe vandaram** (Rchb. f.) Garay

*Aerides vandaram* Rchb. f.

E Nepal (1600–1700 m), Bhutan, S China, NE India, Myanmar.

Epiphytic on tree trunks. Fl. May.

East Nepal, 1964, fide Nakao, l.c. t. 94 (Hara et al. 1978, Press et al. 2000).

**Pecteilis susannae** (L.) Raf.

CE Nepal (150–1800 m), Cambodia, China (Fujian, Guangdong, Guangxi, Guizhou, Hainan, Jiangxi, SW Sichuan, Yunnan), India, Indonesia, Laos, Malaysia, Myanmar, Thailand, S Vietnam.

Terrestrial in open moist grasslands. Fl. Jul–Sep. 2n = 36, 42, 44.

Bedkot-Naula, Kanchanpur, 500–960 m, 1981.9.12, I Sharma, R Joshi, R Uprety and I Pandey 300; Syulibhang, Pyuthan, 1400 m, 1988.9.15, NK Bhattra and SR Baral 88/370; near Syabrubensi, Bagmati, east of Trisuli, Rasuwa, 1500 m, 1966.9.17, DH Nicolson 2531; Gandhe Panitumlingtar, Sankhuwasabha, 429 m, 1986.8.27, TB Shrestha and PR Shakya 8894 (KATH).

**Pecteilis triflora** (D. Don) Tang & Wang

CW Nepal (400–1200 m), India (Kumaon).

Terrestrial on moist open areas.

Bajura-Rigla, Bajura, 1200 m, 1972.8.11, MS Bista and DP Joshi 319; Jimali, Salyan, 1000 m, 1979.8.17, KR Rajbhandari and B Roy 4794; Near Darbhand, Myagdi, 1805 m, 2009.8.15, K Maden s.n., Tilkeni, Ilam, 3200 ft, 1977.10.4, P Pradhan, KR Rajbhandari and R Niraula 241 (KATH).

**Pelatantheria insectifera** (Rchb. f.) Ridl.

*Sarcanthus insectifer* Rchb. f.

C Nepal (200–1000 m), Bangladesh, NW and NE India (Assam, Andaman Islands), Myanmar, Thailand, Vietnam.

Epiphytic on large tree trunks. Fl. Dec–Oct.

Chitwan National Park (Ph-R).

**Peristylus affinis** (D. Don) Seidenf.

Nepal (450–900 m), China (Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan), NE India, Laos, Myanmar, Nepal, Thailand.

Terrestrial on open grasslands. Fl. Jun–Sep. 2n = 28, 42, 44, 46 + 0–3B.

Ghanteshower, Doti, 1500 m (Ph-R).

**Peristylus aristatus** Lindl.

*Habenaria aristata* (Lindl.) Hook. f.; *Peristylus exilis* Wight.

C Nepal (2000–2200 m), NE India (Sikkim), Sri Lanka.

Terrestrial on moist and humid slopes.

Kanyam, Ilam, 1979.8.29, RB Thapa, S Tamang S Magar 911; Nagarkot, Bhaktapur, 1800 m, 2007.8.28, BB Raskoti 220 (KATH).

**Peristylus constrictus** (Lindl.) Lindl.

C Nepal (300–2300 m), Bhutan, Cambodia, China (SW and W Yunnan), NE India (Sikkim), Myanmar, Thailand, Vietnam.

Terrestrial on open slopes. Fl. Jun–Aug.  $2n = 38, 42$ .

Dhik Gad-Gokule, Baitadi, 600 m, 1984.7.12, PR Shakya, MK Adhikari and MN Subedi 7833; Thade Damar-Neopana, Bardia, 660 m, 1985.7.19, PR Shakya, MN Subedi and R Uprety 8349; Raja Rani, Morang, 570 m, 1977.6.14, P Pradhan and R Niraula 535; Pokharathok, Arghakhachi, 800 m, 2007.6.25, BB Raskoti 197 (KATH).

**Peristylus densus** (Lindl.) Santapau & Kalipada

Bangladesh, Cambodia, China (N Fujian, Guangdong, Guangxi, Guizhou, Jiangxi, Yunnan, Zhejiang), India, Japan, Korea, Myanmar, Thailand, Vietnam.

Terrestrial in grasslands. Fl. May–Oct.  $2n = 25 \pm 2, 42 + 0-2B, 44, 46, 48, 50$ .

Chandragiri, Kathmandu, 7000 ft, 1977.8.17, PR Shakya and P Pradhan 9598 (KATH).

**Peristylus duthiei** (Hook. f.) Deva & H. B. Naithani

*Herminium duthiei* Hook. f.

ECW Nepal (1000–2000 m), India (Garwal, Uttarakhanda). Terrestrial open grasslands.

Chankheli, Humla, 3500 m, 1979.7.25, KR Rajbhandari and B Roy 3849; Dori Lekh, Jumal, 3400 m, 1979.7.17, KR Rajbhandari and B Roy 3404; Sherpagaon-langtang, Rasuwa, 9000 ft, 1967.7.13, SB Malla 9096; Thodung, Ramechap, 3000 m, 1977.8.10, KR Rajbhandari and B Roy 2184 (KATH).

**Peristylus elisabethae** (Duthie) R. K. Gupta

*Habenaria elisabethae* Duthie; *Herminium elisabethae* (Duthie) Tang & Wang.

EW Nepal (2900–3200 m), Bhutan, China (C and S Xizang).

Terrestrial under coniferous forest or grasslands. Fl. Jul–Sep.  $2n = 42$ .

Ripulchayakti, Darchula, 2850 m, 1980.9.10, KR Rajbhandari and KJ Malla 5858; Hund, Manag, 3350 m, 1983.8.4, KR Rajbhandari 8824; Gyalche Kharka-Thang Dingma, Dolkha, 2800 m, 1983.9.1, KR Rajbhandari 9662; Phuni Tenga to Tenboche, Solukhumbu, 3520 m, 2005.9.15, KR Rajbhandari, S Rajbhandari, S Vaidya and UR Sharma DNEP3 AX 50; SW of Ghupha Phokari, 2900 m, 1989.8.30, C Grey-Wilson et al. 99 (KATH).

**Peristylus fallax** Lindl.

ECW Nepal (2700–3700 m), Bhutan, China (S Xizang, NW Yunnan), India.

Terrestrial in forests and alpine meadows. Fl. Jul–Sep.  $2n = 30, 34, 42$ .

Petagaon-Badigaon, Bajura and Bajhang, 2190–2230 m, 1991.8.16, M Suzuki et al. 9190679; Chhana-Bhabasen, Dailekh, 2500 m, 1979.7.5, KR Rajbhandari and B Roy 2867; Ghandruk, Deorali-Banthati, Kaski, 2550 m, 1983.7.11, KR Rajbhandari 7545; Chhumigalo, Dolakha, 3500 m, 1983.9.2, KR Rajbhandari 9749; Khapare, Ilam, 9100 ft, 1977.10.7, P Pradhan, KR Rajbhandari and R Niraula 287; Thesio, Solukhumbu, 3570 m, 2005.15,

CA Pendry, KK Shrestha and RC Poudel DNEP3 BX 105b (KATH).

**Peristylus goodyeroides** (D. Don) Lindl.

CE Nepal (500–1500 m), Bhutan, Cambodia, China (Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang), N India, Indonesia, Laos, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Vietnam.

Terrestrial on humus rich forest. Fl. Jun–Aug.  $2n = 23 + 2f, 42, 46, 47$ .

Lipna, Kanchanpur, 1000 m, 1980.8.12, KR Rajbhandari, PM Regmi and KJ Malla 5241; Kalagad, Kalikot, 1830 m, 1985.7.31, PH Shakya, MN Subedi and R Uprety 8471; Birethati, 4000 ft, 1964.7.15, TB Shrestha and MS Bista 1981; Nagdaha-Thotneri, Dolakha, 1300 m, 1977.8.3, KR Rajbhandari and B Roy 2033; Belu Bhaddure, 2500 ft, 1966.8.16, ML Banerji and PR Shakya 5738; Chisapani, Ilam, 2400 ft, 1978.6.12, P Pradhan and R Niraula 519 (KATH).

**Peristylus halmiltonianus** (Lindl.) Lindl.

*Habenaria halmiltoniana* (Lindl.) Hook. f.

E Nepal (1500–2100 m), NE India (Assam-Khasia, Sikkim).

Terrestrial on moist places. Fl. Aug.

Morung, Nepal, 1890, F Buchanan.-Hamilton fide Hook. f., l.c. (Hara et al. 1978, Press et al. 2000).

**Peristylus intrudens** (Ames) Ormerod

*Habenaria intrudens* Ames; *Peristylus taipoensis* (S. Y. Hu & Barretto) T. C. Hsu & S. W. Chung

Central Nepal (850 m), China, Philippines, Taiwan.

Terrestrial on humid slopes, grown on partial shade occurs in the tropical forest.

Rajapani, 850 m, BB Raskoti 268 (KATH).

**Peristylus lacertiferus** (Lindl.) J. J. Sm.

*Coeglossum acuminatum* Lindl.

C Nepal (300 m), India, Indonesia, Malaysia, Myanmar.

Terrestrial on moist slopes. Fl. Aug.

Maipokhari, Ilam (Ph-R).

**Peristylus lawii** Wight

*Habenaria lawii* (Wight) Hook. f.

C Nepal (400–1000 m), India (Uttarakhanda).

Terrestrial on moist sandy soil slopes. Fl. Aug.

Betkot-Pipna, Kanchanpur, 900 m, 1980.8.12, KR Rajbhandari, PM Regmi and KJ Malla 5212; Churiya hill, 2200 ft, 1967.8.23, PR Shakya 9358 (KATH).

**Peristylus mannii** (Rchb.) Mukerjee

*Platanthera mannii* (Reich. f.) Schltr.

C Nepal (1700–2900 m), China (S Sichuan, C and W Yunnan), India.

Terrestrial in forests, thickets, grassy slopes. Fl. Sep–Oct.

Lampokhari, Taplejung at 2900 m, BB Raskoti 250 (TUCH).

**Peristylus nematocaulon** (Hook. f.) Banerji & P. Pradhan

CE Nepal (2700–3600 m), Bhutan, China (SE Xizang), NE India.

Terrestrial on mossy slopes. Fl. Jul–Aug.  
Tashigaon-Ghongmai, Sankhuwasabha, 3330 m, 1986.9.6,  
PR Shakya 8968 (KATH).

**Peristylus parishii** Rchb. f.

*Habenaria parishii* (Reich. f.) Hook. f.  
E Nepal (600–800 m), China (N Guangxi, S and  
SE Yunnan), India, Myanmar, Thailand, Vietnam.  
Terrestrial on litter covered moist areas. Fl. Jun–Aug.  
Kahsigaon-Keronja, near Abuthum Lekh, Ganesh Himak,  
Dhading, 1900 m, 1992.8.2, WJ Baker et al. 122 (KATH).

**Peristylus prainii** (Hook. f.) Kranzlin

*Habenaria prainii* Hook. f.  
CW Nepal (700–1800 m), NE India (Assam), Myanmar,  
Thailand, Vietnam.  
Terrestrial on humid areas.  
Doti-Bajlekh, Doti, 2100 m, 1972.8.1, MS Bista and  
DP Joshi 142; Gothe Danda, Phulchoki, Lalitpur, 6500 ft,  
1978.7.11, R Bahadur 579 (KATH).

**Peristylus richardianus** Wight

*Habenaria bicornuta* Hook. f.  
E Nepal (2000–2500 m), S India.  
Terrestrial on damp places.  
East Nepal, TI 6305493 (fr.) (Hara et al. 1978, Press et al.  
2000).

**Peristylus superanthus** J. J. Wood

E Nepal (3000–3600 m), NE India.  
Terrestrial in alpine meadows and *Rhododendron* forest. Fl.  
Jul–Aug.  
Nepal, Grey-Wilson 4104 (K).

**Peristylus tentaculatus** (Lindl.) J. J. Sm.

*Peristylus tipuliferus* (C. S. P. Parish & Rchb. f.) Mukerjee.  
E Nepal (100–300 m), Cambodia, China (S Fujian,  
S Guangdong, E Guangxi, Hainan, SE and W Yunnan),  
Thailand, Vietnam.  
Terrestrial in damp places. Fl. Nov–Apr.  
Lower slope of Dobala Danda, above Yamphudin, Taplejung,  
1930 m, 1989.9.26, C Grey-Wilson et al. 975 (KATH).

**Phaius flavus** (Blume) Lindl.

C Nepal (200–1500 m), Bhutan, China (N Fujian,  
Guangdong, Guangxi, Guizhou, Hainan, NHunan, Sichuan,  
Taiwan, SE Xizang, Yunnan), NE India, Indonesia, Japan,  
Laos, Malaysia, New Guinea, Philippines, Sri Lanka,  
Thailand, Vietnam.  
Terrestrial in shaded and moist areas. Fl. Apr–Oct.  $2n = 38,$   
42.  
Central Nepal, Wallich 3748 (Hara et al. 1978, Press et al.  
2000).

**Phaius tancarvilleae** (Banks ex L'Hér.) Blume

E Nepal (1300–2000 m), China (Fujian, Guangdong,  
Guangxi, Hainan, Taiwan, SE Xizang, Yunnan), widely  
distributed in tropical and subtropical Asia and Oceania.  
Terrestrial in damp places near stream sides. Fl. Mar–Jun.  
 $2n = 38, 44 + 4B, 46, 48, 52.$   
Chitwan, 200 m, 1987.6.21, R Uprety s.n. (KATH).  
(*P. tancarvilleae* spelling is often written as *P. tankervilleae*).

**Phalaenopsis deliciosa** Rchb. f.

E Nepal (200–500 m), Bhutan, Cambodia, China (S and  
W Hainan, S and SE Yunnan), India, Indonesia, Laos,  
Malaysia, Myanmar, Nepal, Philippines, Sri Lanka,  
Thailand, Vietnam.  
Epiphytic or lithophytic moist and humid areas. Fl. Jul–Aug.  
 $2n = 38.$   
Rajbhandari and Dahal (2004).

**Phalaenopsis mannii** Rchb. f.

E Nepal (150–600 m), Bhutan, China (S Yunnan), NE  
India, Myanmar, Vietnam.  
Epiphytic on *Shorea robusta*, *Schima wallichii*. Fl. Mar–Jun.  
 $2n = 38.$   
Citwan, 200 m, 1987.6.3, R Uprety, s.n., Biring Khola,  
Jhapa, 240 m, 1974.6.8, P Pradhan, MM Amatya and  
R Shrestha 74/181; Rangapani, Ilam, 450 m, 1979.4.16,  
P Pradhan, R Niraula and M Gorkhali 740 (KATH).

**Phalaenopsis parishii** Rchb. f.

*Phalaenopsis decumbens* (Griff.) Holttum  
E Nepal (200–500 m), Bhutan, China (Hainan), India,  
Ceylon, Burma, Malaysia.  
Epiphytic.  
East Nepal, TI 6307226 (Hara et al. 1978, Press et al. 2000).

**Phalaenopsis taenialis** (Lindl.) Christenson & Pradhan

*Doritis taenialis* (Lindl.) Hook. f., *Kingidium taenialis*  
(Lindl.) P. F. Hunt.  
CE Nepal (1100–2300 m), Bhutan, China (S Xizang,  
NW to SE Yunnan), NE India, Myanmar, Thailand.  
Epiphytic on tree trunks mostly on *Castanopsis indica*, *Alnus*  
*nepalensis*, *Ficus* sp. Fl. Apr–Jun.  $2n = 36, 38, 40, 57.$   
On way to Boglekh, Doti, 1690 m, 1984.4.6, P Pradhan,  
RK Uprety, N Pradhan and N Dabadi 1166; Phulchoki, Lal-  
itpur, 7000 ft, 1978.5.28, R Bahadur 439; Chhuling Khola,  
Dolakha, 1960 m, 1983.5.26, PR Shakya, MK Adhikari and  
MN Subedi 7634; Kabre, 1720 m, 1977.4.24, PR Shakya  
4153; Hanspokhari, Ilam, 5200 ft, 1978.6.7, P Pradhan and  
R Niraula 472 (KATH).

**Pholidota articulata** Lindl.

*Pholidota griffithii* Hook. f.  
CE Nepal (500–2300 m), Bhutan, Cambodia, China (SW  
Guizhou, SW Sichuan, SE Xizang, NW to SE Yunnan),  
India (Assam, Kumaun to Sikkim), Indonesia, Laos,  
Malaysia, Myanmar, Nepal, Thailand, Vietnam.  
Epiphytic or lithophytic shaded areas. Fl. Jun–Aug, Fr.  
Oct–Dec.  $2n = 38, 38 + 2B, 40, 40 + 2-6B.$   
Paribagar-Makaridag, Darchula, 1250 m, 1984.7.17,  
PR Shakya, MK Adhikari and MN Subedi 7870;  
Garam-Thale, 1900–2000 m, 1969.6.2, H Kanai 11885;  
Godavari-Phulchoki, Lalitpur, 1500–2200 m, 1984.4.29,  
KR Rajbhandari et al. 10370; Hille, Ilam, 8000 ft, 1977.10.6,  
P Pradhan, KR Rajbhandari and R Niroula 267 (KATH).  
(*P. articulata* and *P. griffithii* are treated as separate species in  
Hara et al. 1978, Press et al. 2000).

**Pholidota imbricata** Hook.

CE Nepal (600–2900 m), Bhutan, Cambodia, China (SW  
Sichuan, SE Xizang, S and W Yunnan), India (Kumaon



to Sikkim), Indonesia, Laos, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Sri Lanka, Thailand, Vietnam; Australia, SW Pacific islands.

Epiphytic on *Castanopsis tribuloides*, *Schima wallichii*. Fl. Jul–Sep, Fr. Oct–Jan.  $2n = 40$ .

Ghasa, Mustang, 1950 m, 1983.7.16, KR Rajbhandari 7825; Simigaon, Dolakha, 1600 m, 1977.7.19, KR Rajbhandari and B Roy 1560; Sanguribhanjyang, Sunsari, 4300 ft, 1978.6.18, P Pradhan and R Niraula 550; Hanspokhari, Ilam, 1666 m, 1974.7.12, P Pradhan, M Amatya and Rajani 264/74 (KATH); Subedi, Chaudhary and Shakya 965 (TUCH).

**Pholidota pallida** Lindl.

*Coelogyne pallida* (Lindl.) Rchb. f.

Nepal (800–2700 m), Bhutan, China (S and SW Yunnan), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic or lithophytic on shaded areas. Fl. Jun–Jul, fr. Oct.  $2n = 40$ .

Subedi, Chaudhary and Shakya 969 (TUCH); Doti at 1300 m (Amatya 2005).

**Pholidota protracta** Hook. f.

CE Nepal (500–2100 m), Bhutan, China (SE Xizang, NW Yunnan), NE India (Assam-Naga hills), Myanmar.

Epiphytic on *Quercus semicarpifolia*. Fl. Oct–Dec.  $2n = 40$ . Pothana-Tolaka, Kaski, 2000 m, 1983.7.8, KR Rajbhandari 7349; Mansing Danda, 6200 ft, 1981.10.2, PR Shakya 6869 (KATH).

**Pholidota recurva** Lindl.

*Coelogyne recurva* (Lindl.) Rchb. f.

C Nepal (700–1800 m), India (Sikkim), Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks or lithophytic on open rocks.

Makwanpur Garhi, Makwanpur, 1600 m, 1992.2.24, KJ White 22 (KATH).

**Pinalia acervata** (Lindl.) Kuntz.

*Eria acervata* Lindl.

E Nepal (300–3000 m), Bhutan, Cambodia, China (SE Xizang, S Yunnan), NE India, Laos, Myanmar, Nepal, Thailand, Vietnam.

Epiphytic on *Schima wallichii*. Fl. Apr–Aug, Fr. Sep.  $2n = 38, 40$ .

Rangapani, Ilam, 550 m, 1978.11.23, P Pradhan, NP Manandhar and N Amatya 895 (KATH).

**Pinalia amica** (Reich. f.) Kuntz

*Eria amica* Rchb.f.; *Eria confusa* Hook. f.

CE Nepal (600–2100 m), Bhutan, Cambodia, China (Taiwan, S Yunnan), India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic mainly in *Schima wallichii*. Fl. Mar–Apr, fr. Jun.  $2n = 36, 38, 40$ .

Ghasa, 2000 m, 1978.3.25, PM Amatya and B Roy 456/78; Godavari, Lalitpur, 6000 ft, 1978.4.11, R Bahadur 4000 (KATH).

**Pinalia bipunctata** (Lindl.) Kuntz.

*Eria bipunctata* Lindl.

C Nepal (1100–1700 m), China (S Yunnan), NE India, Thailand, Vietnam.

Epiphytic on tree trunks and main branches. Fl. Jun–Jul.

Bajrabarahi, Lalitpur, 1359 m, 2001, M Ghimire 115 (KATH).

**Pinalia excavata** (Lindl.) Kuntze.

*Eria excavata* Lindl.

C Nepal (500–2400 m), Himalaya (Kumaun to Assam and Sikkim), Bhutan, China (S and SE Xizang).

Epiphytic mostly on *Maesa chisia*, *Quercus semicarpifolia*, *Shorea robusta* or lithophytic on humus riched rocks. Fl. May–Jun.

Thula Kharka-Thenechok, Manag, 1950 m, 1975.6.15, DP Joshi and TK Bhattacharya 2733/75; Pothana-Tolka, Kaski, 2000 m, 1983.7.8, KR Rajbhandari 7357 (KATH).

**Pinalia graminifolia** (Lindl.) Kuntz.

*Eria graminifolia* Lindl.

Bhutan, China (S and SE Xizang, NW to SE Yunnan), NE India, Myanmar.

Epiphytic mainly on *Quercus semicarpifolia*, *Colebrokia oppositifolia*. Fl. Jun–Aug., Fr. Aug.  $2n = 38, 42$ .

Chitray, Kathmandu, 7400 ft, 1978.11.14, S Dahal and N Dawadi 865; Near Sindhuwa, Dhankuta, 2300 m, 1978.11.14, P Pradhan, NP Manandhar and N Amatya 794 (KATH).

**Pinalia stricta** (Lindl.) Kuntze

*Eria stricta* Lindl.

CE Nepal (300–1800 m), Bhutan, China (SE Xizang, SE Yunnan), NE India, Myanmar, N Vietnam.

Epiphytic mostly on *Schima wallichii*. Fl. Nov–Feb, Fr. Apr–May.  $2n = 40$ .

Below Num, Sankhuwasabha, 960 m, 2009.2.10, GD Bhatt and AP Bhattarai 9 (KATH).

**Platanthera arcuata** Lindl.

*Habenaria arcuata* (Lindl.) Hook. f.

CW Nepal (2600–3100 m), Bhutan, China (Xizang), NE India.

Terrestrial in mixed forest, grassland, damp scrub, under bamboo. Fl. Jun–Aug.

Khaptad Daha, Doti, 2800 m, 1981.7.3, PR Shakya et al. 6319; On way to Darma (Humla?), 2660 m, 1968.7.9, SB Malla 4186; Hinko, 2350 m, 1975.6.17, DP Joshi and TK Bhattacharya 75/2792; Dovan-Himalya, Kaski, 2400 m, 2001.6.26, PR Shakya and S Poudel 10401 (KATH).

**Platanthera bakeriana** (King & Pault.) Kranzlin

*Habenaria bakeriana* King & Pault.

E Nepal (2500–2700 m), Bhutan, China (Sichuan-Miyi, SE Xizang-Médog, N Yunnan-Baoshan, Luquan), NE India (Sikkim).

Terrestrial in moist forests, scrub. Fl. Jun–Aug.

Topkeogla, Taplejung, 3350 m, 1972.6.28, PR Shakya 1787 (KATH).

**Platanthera biermanniana** (King & Pault.) Kranzlin

*Habenaria biermanniana* King & Pault.

CE Nepal (2100–3200 m), India.

Terrestrial under *Rhododendron* forest. Fl. Jul–Aug.  
Ridge NE Gupha Pokhari, 2910 m, 1989.8.30, C. Grey-Wilson et al. 95 (KATH).

**Platanthera clavigera** Lindl.

ECW Nepal (2000–4600 m), Bhutan, China (S Xizang), India (Kashmir).

Terrestrial on open grasslands. Fl. Aug–Sep.

Thin, Darchula, 2300 m, 1980.8.27, KR Rajbhandari and JK Malla 5635; Birseni-Porkya, Bajura, 1560–2540 m, 1981.8.12, M Suzuki et al. 9160512; Simigaon-Gyalche Kharka, Dolakha, 2400 m, 1983.8.31, KR Rajbhandari 9542; Bhandar-Shivalaya, Ramechap, 2300–3800 m, 1985.8.6, H Obha et al. 8571422; Rigmo, Solukhumbu, 2600 m, 1997.7.3, KR Rajbhandari 9740022; near Hille, Ilam, 8000 ft, 1977.10.16, P Pradhan, KR Rajbhandari and R Niraula 265 (KATH).

**Platanthera edgeworthii** (Hook. f. ex Collet) Gupta

*Habenaria edgeworthii* Hook. f. ex Collet

CW Nepal (1200–3600 m), Bhutan, India, Pakistan.

Terrestrial on moist open grasslands. Fl. Jun–Sep.

Dhalaun, Bajhang, 1940 m, 1976.7.23, H Tabata, KR Rajbhandari and K Tsuchiya 1492; near Kadampur, Kalikot, 1800 m, 1985.7.31, PR Shakya, MN Subedi and R Uprety 8466; Bhrtang-Chame, Manang, 2800 m, 1983.8.5, KR Rajbhandari 8922 (KATH).

**Platanthera exelliana** Soo

C Nepal (4100–4200 m), Bhutan, China (W Sichuan, SE Xizang, NW Yunnan-Dêqên, Gongshan, Zhongdian), India (Sikkim).

Terrestrial in alpine/subalpine meadows. Fl. Aug–Sep.

Phokte-Mandanda, 11 500 ft, 1978.7.26, PR Shakya, P Pradhan, HK Saiju and N Shrestha 604; Rangdu Kharka-Horsola Kharka, Solukhumbu, 3700 m, 1997.8.10, KR Rajbhandari 9740218; Topke Gola, Taplejung, 12 200 ft, 1971.8.2, TB Shrestha and DP Joshi 431 (KATH).

**Platanthera latilabris** Lindl.

ECW Nepal (900–4000 m), Bhutan, China (SW Sichuan, S and SE Xizang, NE and NW Yunnan), India (Kashmir to Sikkim).

Terrestrial in forests/scrub grasslands. Fl. Jul–Aug.

Durpa, Humla, 2900 m, 1979.7.30, KR Rajbhandari and B Roy 4150; Chhanna to Bhabasen, Dailekh, 2200 m, 1979.7.5, KR Rajbhandari and B Roy 2863; Syapru gaon, Rasuwa, 2700 m, 1971.9.6, JF Dobrebremez 974; Tambe Danda, Ramechap, 2900 m, 1977.8.15, KR Rajbhandari and B Roy 2283 (KATH).

**Platanthera leptocaulon** (Hook. f.) Soo

CE Nepal (3000–4300 m), Bhutan, China (S Xizang, NW Yunnan), NE India.

Terrestrial in forests/grasslands on slopes. Fl. Aug–Oct.

Ankhu khola, Ganesh Himal, 2800 m, 1992.7.17, WJ Baker et al. 24 (KATH).

**Platanthera sikkimensis** (Hook. f.) Kranzlin

E Nepal (2600–2900 m), China (NW Yunnan-Gongshan), NE India (Sikkim).

Terrestrial or semi epiphytic on moist areas inside the dense forest. Fl. Jul–Aug.

Randgu Kharka-Horsola Kharka, Solukhumbu, 3600 m, 1997.8.10, KR Rajbhandari 9740216; Tinjure, 9500 ft, 1971.7.12, TB Shrestha and DP Joshi 104 (KATH).

**Platanthera stenantha** (Hook. f.) Soo

C Nepal (1500–3100 m), Bhutan, China (S and SE Xizang-Médog, Yadong, Yunnan-Bijiang, Gongshan), India (Sikkim), N Myanmar.

Terrestrial in coniferous forest. Fl. Aug–Sep.

Tatopani-Dana, Mustang, 1280–1450 m, 1996.7.28, KR Rajbhandari 9672116; Simigaon-Gyalche Kharka, Dolakha, 2400 m, 1983.8.31, KR Rajbhandari 9554 (KATH).

**Platanthera urceolata** (Hook. f.) R. M. Bateman

*Diphylax urceolata* (C. B. Clarke) Hook. f.; *Habenaria urceolata* C. B. Clarke.

CE Nepal (3000–4200 m), Bhutan, China (W Sichuan, NW Yunnan), NE India (Asma), N Myanmar. Epiphytic on *Rhododendron barbatum* or sometimes lithophytic on mossy rocks. Fl. Aug–Nov.

Near Mandanda, 1000 ft., 1964.9.26, ML Banerjee, TB Shrestha and AV Upadhyay 2958; Pheintang-Numbuk, Sankhuwasabha, 3230 m, 1986.9.14, TB Shrestha and PR Shakya 9118; Nr top of Deurali Danda, Simbu Kh.,-Omje Kh., 3300 m, 1989.9.22, C Grey-Wilson et al. 878 (KATH).

**Pleione coronaria** P. J. Cribb & C. Z. Tang

C Nepal (2500–3500 m).

Epiphytic on tree trunks.

Nepal, 1985, N Trudel 960 in spirit; Ankhu Khola, Ganesh Himal, JDA Stainton 3654 (K); Ankhu Khola, Ganesh Himal, 2650 m, 1992.7.17, WJ Baker et al. 26 (KATH).

**Pleione hookeriana** (Lindl.) J. Moore

CE Nepal (2200–4200 m), Bhutan, China (Guangdong, N and W Guangxi, SE Guizhou, S Xizang, SE Yunnan), NE India, N Laos, Myanmar, ? Thailand.

Mostly epiphytic on *Alnus nepalensis*, *Abies spectabilis*, *Tsuga* sp. and rarely terrestrial. Fl. Apr–Jun, Fr. Sep. 2n = 40.

Makgan Kharka-Guinsi (near Balche), Rasuwa, 2750–2200 m, 1994.8.16, F Miyamoto et al. 9420296; Kutuchang, 9800 ft, 1962.5.16, PN Suwal and AB Shrestha 771; Rem Kharka, Makalu-Barun, 3180 m, 1994.6.18, PR Shakya and KK Dangol 10174; Chhintapu, Ilam, 9000 ft, 1969.6.8, TB Shrestha 15524 (KATH).

**Pleione humilis** (Smith) D. Don

C Nepal (1800–3000 m), Bhutan, China (SE Xizang), NE India (Assam, Manipur, Sikkim), Myanmar.

Epiphytic mostly on *Quercus* sp., *Rhododendron* sp. It is also lithophytic or terrestrial. Fl. Feb–Mar.

Nepal, N Wallich 1963 (K); On way to Khaptad 2300 m, 1984.4.7, P Pradhan et al. 1217; Ghodapani, Kaski, 3000 m, 1978.3.26, PM Amatya and B Roy 462/78; Doko-bhanyang, Kathmandu, 2400 m, 1975.3.16, DP Joshi and KR Rajbhandari 75/640; Guranse-Basantapur, Dhankuta, 2200 m, 1982.1.30, KR Rajbhandari, S Bhattarai, I Sharma and R Joshi 6108 (KATH).

**Pleione maculata** (Lindl.) Lindl. & Paxton  
C Nepal (1400–2700 m), Bhutan, China (W Yunnan), India, Myanmar, N Thailand.  
Epiphytic or lithophytic on humid and moist places. Fl. Oct–Nov.  $2n = 40$ .  
Central Nepal, N Wallich s.n.; JDA Stainton 3654 (Hara et al. 1978, Press et al. 2000).

**Pleione praecox** (Smith) D. Don  
CE Nepal (1500–2500 m), Bangladesh, Bhutan, China (SE Xizang, SE and SW Yunnan), NW and NE India (Garwal to Sikkim), Laos, Myanmar, N Thailand, N Vietnam.  
Epiphytic mainly on *Rhododendron* sp., *Quercus* sp. or lithophytic in moist mossy rocks. Fl. Sep–Nov.  $2n = 40$ .  
Nepal, N Wallich, s.n. (K); Sheopuri, Kathmandu, 2000 m, 1966.11.23, DH Nicolson 2769; Mure-Hurure, Sankhu-wasabha, 1980 m, 1986.9.20, TB Shrestha and PR Shakya 9242; Hille, Ilam, 7900 ft, 1977.10.6, P Pradhan, KR Rajbhandari and R Niraula 268 (KATH).

**Podochilus cultratus** Lindl.  
C Nepal (400–800 m), NE India (Assam, Sikkim).  
Epiphytic mostly on *Schima wallichii*. Fl. Sep–Oct.  
Nepal, K White, s.n. in spirit (K); Rangapani, Ilam, 2000 ft, 1977.10.10, P Pradhan, KR Rajbhandari and R Niraula 356 (KATH).

**Ponerorchis chusua** (D. Don) Soó  
*Chusua pauciflora* (Lindl.) P. F. Hunt.  
ECW Nepal (2400–4900 m), Bhutan, China (E Gansu, Heilongjiang, Henan, SE and W Hubei, Jilin, Nei Mongol, Ningxia, E Qinghai, S Shaanxi, Sichuan, S and SE Xizang, NE and NW Yunnan), India NE and NW (Kumon, Assam), Japan, Korea, N Myanmar, Russia (Far East, Siberia).  
Terrestrial under forests, *Rhododendron* scrub, alpine grasslands, limestone outcrops, scree. Fl. Jun–Aug.  $2n = 42, 63, ca 98$ .  
Dori lekh, Jumla, 3400 m, 1979.7.17, KR Rajbhandari and B Roy 3399; Kallas-Poom gaon, Humla, 2700 m, 1979.8.1, KR Rajbhandari and B Roy, Thorungse Phedi, Mustang, 4000 m, 1983.7.23, KR Rajbhandari 8199; Tilicho Phedi, Manag, 4100 m, 1983.7.30, KR Rajbhandari 8627; Rangdu Kharka-Horsala Kharka, Solukhumbu, 3500 m, 1997.8.10, KR Rajbhandari 9740277; Numbuk-Yangri Kharka, 3100 m, 1988.7.18, M Suzuki et al. 8810450 (KATH); moist grass land, Siptyo, Dho Tarap, 4100 m, Maan-188 (TUCH).

**Porpax elwesii** (Rchb. f.) Rolfe  
CE Nepal (800–1800 m), India, Malaysia, Thailand, Vietnam.  
Epiphytic mostly on *Schima wallichii*. Fl. Apr–Aug.  
Bhaise, Kaki, 850 m, 1986.7.6, NP Manandhar and LP Kattel 11282; Near Sakejung, Ilam, 900 m, 1978.11.20, P Pradhan, NP Manandhar and A Amatya 670 (KATH); Subedi, Chaudhary and Shakya 795 (TUCH).

**Porpax meirax** (Parish & Rchb. f.) King & Pantl.  
*Eria meirax* (Parish & Rchb. f.) N. E. Br.  
E Nepal (1400–1800 m), India (Sikkim), Myanmar, Malaya.  
Epiphytic or lithophytic on sun exposed places.

East Nepal, TI 6307213 (Hara et al. 1978, Press et al. 2000).

**Pteroceras teres** (Blume) Holttum  
C Nepal (200–800 m), Bangladesh, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Thailand.  
Epiphytic on tree trunks and major branches mainly on *Litsea* sp., *Shorea robusta*. Fl. Jun.  
Nepal, 1990.05, K White, s.n. (K); Bhumlingtar, Sankhu-wasabha, 460 m, 199.10.1, DB Karkee 877 (KATH).

**Rhomboda abbreviata** (Lindl.) Ormerod  
*Odontochilus abbreviatus* (Lindl.) Tang & F. T. Wang  
Nepal (600–1200 m), China (Guangdong, Guangxi, Guizhou, Hainan), NE India, Myanmar, Thailand.  
Terrestrial in seepage banks. Fl. Aug–Sep.  
Central Nepal, N Wallich 7385 (K).

**Rhynchostylis retusa** (L.) Blume  
CE Nepal (300–1800 m), Bhutan, Cambodia, China (SW Guizhou, S Yunnan), NE India (Sikkim), Indonesia, Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam.  
Epiphytic mainly on *Quercus glauca*, *Schima wallichii*, *Mangifera indica*, *Rhododendron arboreum*, *Quercus lanuginosa*, *Bauhinia* sp., *Mallotus philippensis*. Fl. May–Jun, Fr. Jun–Jul.  $2n = 38$ .  
Sahepur, Doti, 1976.6.20, H Tabata, KR Rajbhandari and K Tsuchiya 618; Babai, Bardiya, 350 m, 1979.7.27, KR Rajbhandari 2662; Darbang-Muna, Myagdi, 1300 m, 1979.6.21, HK Saiju and SR Tuladhar 11/79; Sankhu, Kathmandu, 1530 m, 1975.3.14, DP Joshi and KR Rajbhandari 75/587; Chiurebas, 900 m, 1972.6.2, PR Shakya 1293; Godak, Ilam, 3500 ft, 1978.6.9, P Pradhan and R Niraula 486 (KATH).

**Satyrium nepalense** D. Don  
ECW Nepal (600–4600 m), Bhutan, China (SW Guizhou, NW Hunan, SW and W Sichuan, S and SE Xizang, NW, S, and SE Yunnan), India, Myanmar, Sri Lanka.  
Terrestrial on moist grasslands. Fl. Jul–Nov.  
West Nepal, PSW 5027, 4851; Central Nepal, Buchanan-Hamilton, s.n. (type); SSW 3533. East Nepal, JDA Stainton 1354 (Hara et al. 1978, Press et al. 2000).

**Satyrium nepalense** var. **ciliatum** (Lindl.) Hook. f.  
Bhutan, China (SW Guizhou, NW Hunan, SW and W Sichuan, S and SE Xizang, NW and SE Yunnan), NE India (Sikkim).  
Terrestrial on open moist grasslands. Fl. and Fr. Aug–Oct.  
Tambe Danda, Ramechap, 2900 m, 1977.8.15, KR Rajbhandari and B Roy 2286; Hear hill, Ilam, 7900 ft, 1977.10.6, P Pradhan, KR Rajbhandari and R Niraula 260 m (KATH).

**Satyrium nepalense** var. **nepalense**  
ECW Nepal (1000–3200 m), Bhutan, China (SW Guizhou, S Xizang, S and SE Yunnan), India (Sikkim), Myanmar, Sri Lanka.

Terrestrial on open moist grasslands. Fl. Sep–Dec.  $2n = 82$ , 123, 164.

Thin, Darchula, 2300 m, 1980.8.27, KR Rajbhandari and KJ Malla 5640; Bashala-Pategaon, Bajura 2020–2190 m, 1991.8.15, M Suzuki et al. 9160626; Lamchaur (Phulchoki), Lalitpur, 7000 ft, 1975.10.5, KR Rajbhandari, PM Amatya and NK Bhusal 75/851; Simigaon-Gyache Kharka, Dolakha, 2300 m, 1983.8.31, KR Rajbhandari 9577; Mopung-Thosa Kharka, Solukhumbu, 2800–3670 m, 1985.8.21, H Obha et al. 8571894; Hatiya-Hongaon, Sankhuwasabha, 1025 m, 2998.8.27, S Noshiro et al. 9820040 (KATH).

**Schoenorchis gemmata** (Lindl.) J. J. Sm.

E Nepal (450–2500 m), Bhutan, Cambodia, China (S Fujian, Guangxi, Hainan, Hong Kong, SE Xizang, W to SE Yunnan), NE India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on tree trunks. Fl. Mar–Jun, fr. Apr–Jul.  $2n = 36$ . Sudap, Khesewa Khola, 1600 m, 1977.5.1, PR Shakya 4190 (KATH).

**Smitinandia micrantha** (Lindl.) Holttum

CE Nepal (500–1400 m), Bhutan, Cambodia, China (SW Yunnan), NE India, Laos, Malay Archipelago (Borneo), Malaysia, Myanmar, Thailand, Vietnam.

Epiphytic mostly on *Sapium insigne*, *Schima wallichii*. Fl. Apr.  $2n = 38$ .

Beni-Berbung, Baglung, 1300 m, 1979.6.20, HK Saiju and SR Tuladhar 4/79; Khorlak, Gorkha, 870 m, 1983.5.23, PR Shakya, MK Adhikari and MN Subedi 7611; Sudap, Khesewa Khola, Taplejung, 1600 m, 1977.5.1, PR Shakya 4190; Chisapani, Ilam, 1600 ft, 1981.6.3, S Dahal, U Tiwari and M Basukala 199 (KATH).

**Spathoglottis ixioides** (D. Don) Lindl. ex Lindl.

*Cymbidium ixioides* D. Don

CE Nepal (1500–4600 m), Bhutan, China (S Xizang), India (Sikkim).

Lithophytic on moist seepage rocks. Fl. Aug–Sep.

Patlo Pkhari-Phedi Kharka, Dolakha, 2900 m, 1983.9.13, KR Rajbhandari 10234; Thaktor-Rigmo, Solukhumbu, 2600 m, 1997.7.31, KR Rajbhandari 9740021; below Chyamtang-Chyangrima, Sankhuwasabha, 2355 m, 1988.8.20, S Noshiro et al. 9820051 (KATH).

**Spiranthes sinensis** (Pers.) Ames

ECW (150–3400 m), Afghanistan, Bhutan, almost throughout China, India (Kashmir), Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Nepal, Philippines, Russia (Siberia), Thailand, Vietnam; Australia, New Zealand, Solomon Islands, Vanuatu, New Caledonia, Samoa.

Terrestrial in open moist grasslands. Fl. Jul–Aug.  $2n = 24$ , 30, 32.

Chhangru, Darchula, 2900 m, 1980.8.30 m, KR Rajbhandari and KJ Malla 5759; Poom Gaon, Humla, 2700 m, 1979.7.28, KR Rajbhandari and B Roy 4064; Dharapani-Tal, Manag, 1700 m, 1983.8.7, KR Rajbhandari 9071; Simigaon-Gyalche Kharka, Dolakha, 2200 m, 1983.8.31, KR Rajbhandari 9537; Mopung-Thosa Kharka, Solukhumbu, 2800–3670 m, 1985.8.21, H Obha et al. 8530977; Hille, Ilam, 7900 ft, 1977.10.6, P Pradhan, KR Rajbhandari and R Niraula 261 (KATH).

**Spiranthes spiralis** (L.) Chevall

C Nepal (100–1400 m), Western Himalaya, Iran, Europe. Terrestrial in grasslands and dunes, sometimes marshes and open pinewoods. Fl. Apr–Jun, Fr. Apr–Jun. Acharya KA 647 (TUCH).

**Stelis biflora** Sm.

C Nepal (100–500 m).

Central Nepal, F Buchanan-Hamilton, s.n. (type). According to Hara et al. (1978) the application of this name is uncertain and it has been mentioned that there is no specimen in the Smith herbarium at the Linnean Society of London.

**Stichorkis bootanensis** (Griff.) Marg.

*Liparis bootanensis* Griff.

CE Nepal (400–2450 m), Bhutan, China (N Fujian, S Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, SW Sichuan, Taiwan, SE Xizang, Yunnan), NE India, Indonesia, Japan, Malaysia, Myanmar, Philippines, Thailand, Vietnam.

Terrestrial or lithophytic on humid areas. Fl. Aug–Oct, Fr. Mar–May.  $2n = 38$ , 42.

Bajrabarahi, Lalitpur, 1400 m, 1997.6.21, Siddi 31; Shivapuri, Kathmandu, 7500 ft, 1978.7.6, P Pradhan 573 (KATH).

**Stichorkis elliptica** (Wight) Marg.

E Nepal (200–1600 m), China (S Sichuan, Taiwan, SE Xizang, S and W Yunnan), India, Indonesia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam; Pacific islands.

Epiphytic on moist areas. Fl. Nov–Feb, Fr. May.

**Stichorkis plantaginea** (Lindl.) Marg., Szlach. & Kulak

*Liparis plantaginea* Lindl.

C Nepal (800–2000 m), Bhutan, NE India (Assam), Thailand, Vietnam.

Terrestrial on humus riched slopes. Fl. Jun–Oct., Fr. Nov. Rajbhandari and Dahal (2004).

**Stichorkis stricklandiana** (Rchb.f.) Marg., Szlach. & Kulak

*Liparis stricklandiana* Rchb. f.

E Nepal (1000–2400 m), Bhutan, China (S Guangdong, Guangxi, Guizhou, Hainan, SE Xizang, NW to SE Yunnan), NE India, N Vietnam.

Epiphytic on granled tree trunks. Fl. Oct–Jan, fr. Apr–May.  $2n = 76$ .

Makwanpur District, 600–1200 m (White and Sharma 2000).

**Stichorkis viridiflora** (Blume) Marg.

*Liparis viridiflora* (Bl.) Lindl.

CE Nepal (500–2500 m), Bangladesh, Bhutan, Cambodia, China (Fujian, Guangdong, Guangxi, Hainan, SW Sichuan, Taiwan, SE Xizang, Yunnan), India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Vietnam; ? Pacific islands.

Epiphytic mainly on *Lyonia ovalifolia*, *Schima wallichii*. Fl. Mar.  $2n = 22 + 6B$ , 30, 38.

Lelebbhanjyang, Lalitpur, 7000 ft, 1977.9 21, R Bahadur 9576; Makwanpurgadhi, 1600 m, 1992.2.24, KJ White 16;

Faksinda, Sankhuwasabha, 550, 1999.10.13, DB Karkee 940; Rangapani, Ilam, 2000 ft, 1977.10.10, P Pradhan, KR Rajbhandari and N Niraula 355 (KATH).

**Sunipia bicolor** Lindl.

*Ione bicolor* Lindl.

ECW (900–2700 m), Bangladesh, Bhutan, China (SE Xizang, SE to W Yunnan), India, Myanmar, N Thailand.

Epiphytic in median sized sun exposed tree trunks. Fl. and Fr. Jul–Nov.  $2n = 40$ .

Pothana-Tolka, Kaski, 2000 m, 1983.7.8, KR Rajbhandari 7368; Chitlang Danda, Makwanpur, 2300 m, 1975.1.10, DP Joshi, KR Rajbhandari and MK Ghimire 75/216; Mangsing Danda, 7000ft, 1981.10.3, PR Shakya 6867 (KATH).

**Sunipia cirrhata** (Lindl.) P. F. Hunt

*Ione cirrhata* Lindl., *Sunipia paleacea* (Lindl.) P. F. Hunt

C Nepal (800–2200 m), Bhutan, China (Yunnan), India, Myanmar.

Epiphytic on median sized tree trunks. Fl. Oct–Dec.

Sheopuri Center, Kathmandu, 1800 m, 1966.11.17, DH Nicolson 2760; Phulchoki, Lalitpur, 7000 ft, 1977.11.7, P Pradhan and Party 374 (KATH).

(*S. cirrhata* and *S. paleacea* are treated as separate species in Hara et al. 1978, Press et al. 2000).

**Sunipia nepalensis** B. B. Raskoti & R. Ale

C Nepal (2400 m) (Raskoti and Ale 2011).

Epiphytic on mossy mid-sized tree trunks and main branches.

Makawanpur District, Daman, Simbhanjyang ca 27°36'N and 85°03'E, 2400 m, 2008.5, B. B. Raskoti 270 (holotype: KATH, isotype: TUCH).

**Sunipia scariosa** Lindl.

*Sunipia racemosa* (Sm.) Tang & Wang

C Nepal (1200–1800 m), China (S and W Yunnan), NE India, Myanmar, N Thailand, N Vietnam.

Epiphytic mainly on *Rhododendron arboreum*, *Lyonia ovalifolia*, *Schima wallichii*, *Quercus lanuginosa*. Fl. Mar–Apr. Sanguri Bhanjyang, Sunsari, 4100 ft, 1978.6.18, P Pradhan and R Niraula 545; near Phidim, Panchthar, 1450 m, 1978.11.18, P Pradhan, NP Manandhar and N Amatya 790 (KATH).

**Taeniophyllum scaberulum** J. D. Hook.

C Nepal (600–1500 m), India.

Epiphytic on fig tree trunk. Fl. Jun.

Kaskikot, 1500 m, 2000.7.15 (fl.), Subedi 140.

**Tainia minor** Hook. f.

E Nepal (2000–2300 m), China (SE Xizang, W to SE Yunnan), NE India, Myanmar.

Epiphytic on tree trunks. Fl. May–Aug.  $2n = 40$ .

Tashingaon, Sankhuwasabha, 1950 m, 1998.12.8, DB Karkee 791 (KATH).

**Thelasis longifolia** Hook. f.

C Nepal (800–1300 m), India.

Epiphytic on tree trunks and main branches.

Lamoduwali, Parbat, 1250 m, 1974.7.20, DP Joshi and TK Bhattacharya 1732/74; Hedangna-Hum, Sankhuwasabha, 1050 m, 1999.10.13, DB Karkee 944 (KATH).

**Thelasis pygmaea** (Griff.) Lindl.

C Nepal (800–1500 m), China (Hainan, Hong Kong, E and S Taiwan, S and SE Yunnan), India, Indonesia, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Vietnam; Pacific islands (Solomon Islands).

Epiphytic mainly on *Pinus roxburghii*. Fl. Apr–Oct.  $2n = 30$ .

Central Nepal, SSW 6430 (Hara et al. 1978, Press et al. 2000).

**Thunia alba** (Lindl.) Rchb. f.

CE Nepal (500–1800 m), Bhutan, China (SW Sichuan, SE Xizang, S, SE, and W Yunnan), NE India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam.

Epiphytic mainly on *Schima wallichii*, *Quercus lanuginosa*. Sometimes lithopytic. Fl. Jun.  $2n = 36, 38, 40, 42, 44, 80$ .

Nepal, 1984, C Bailes and K White 895; Nepal, AD Schilling, 1983.04 in spirit (K); Bhasu-Sahejapur, Doti, 1515 m, 1976.6.19 m, H Tabata et al. 580; Chhanna, Dailekh, 1850 m, 1979.7.5, KR Rajbhandari and B Roy 2822; Tal-Jagat, Lumjung, 1550 m, 1983.8.8, KR Rajbhandari 9124; Bahun Danda-Bhachok, ca 1200 m, 1979.8.9, PR Shakya, SR Adhikari and KR Amatya 5322; Sanguri Bhanjyang, Sunsari, 4100 ft, 1978.6.18, P Pradhan and R Niraula 546; Rangapani, Ilam, Ilam, 550 m, 1978.11.23, P Pradhan, NP Manandhar and N Amatya 898 (KATH); Subedi 983 (TUCH).

**Thunia alba** var. **bracteata** (Roxb.) N. Pearce & P. J. Cribb

*Thunia venosa* Rolfe

C Nepal (600–1600 m), Bhutan, NE India.

Epiphytic/lithophytic on moist areas.

Kalikasthan, Rasuwa district, 1400 m (Ph-R).

**Tipularia josephi** Rchb.f. ex Lindl.

E Nepal (2200–3100 m), Bhutan, China (SE Xizang), NE India, Myanmar.

Terrestrial on humus riched slopes. Fl. Aug.

Tambe Danda-Those, Ramechap, 2750 m, 1977.8.15, KR Rajbhandari and B Roy 2269; Chyangrima-Chhotam Khola, Sankhuwasabha, 2555 m, 1998.8.21, S Noshiro et al. 9820070 (KATH).

(Hara et al. 1978 and Press et al. 2000 have written *T. josephi*).

**Trichotosia dasyphylla** (C. S. P. Parish & Rchb. f.) Kraenzl.

*Eria dasyphylla* Parish & Rchb. f.

C Nepal (800–850 m), China (S and SW Yunnan), India, Laos, Myanmar, Thailand, Vietnam.

Epiphytic on upper part of the large tree trunks. Fl. Jun–Sep.

Subedi, Chaudhary and Shakya 795 (TUCH). Lamidanda, Lalitpur, 1400 m (Ph-R).

**Uncifera acuminata** Lindl.

E Nepal (1200–1600 m), Bhutan, China (S Yunnan), NE India (Assam).

Epiphytic on tree trunks and branches in humid forest. Fl. Apr–Jul.

East Nepal, TI 6305501 (fr.) (Hara et al. 1978, Press et al. 2000).

**Uncifera lancifolia** (King & Prantl.) Schltr.

C Nepal (2000–2200 m), India.

Epiphytic on tree trunks and branches in humid forest. Fl. Jun–Jul.

Press et al. (2000), Rajbhandari and Dahal (2004).

**Uncifera obtusifolia** Lindl.

C Nepal (900–1100 m), Bhutan, NE India (Assam).

Epiphytic on tree trunks and branches in humid forest. Fl. Aug–Sep.

Central Nepal, TI 26160 (Hara et al. 1978, Press et al. 2000).

**Vanda alpina** (Lindl.) Lindl.

*Trudelia alpina* (Lindl.) Garay

C Nepal (1100–1800 m), Bhutan, China (S Yunnan), NE India (Assam-Khasia), N Vietnam.

Epiphytic on *Quercus lanuginosa*, *Prunus cerasoides*, *Engelhardtia spicata*, *Pyrus pashia*. Fl. Jun. 2n = 38.

Bhumtare, Dadeldhura, 1640 m, 1984.4.1, P Pradhan, RK Upreti, N Pradhan and N Dabadi 1120; Chir, Bajang, 1100 m, 1984.4.14, P Pradhan, RK Upreti, N Pradhan and N Dabadi 1304; Derbang-Muna, 1100 m, 1979.6.21, HK Saiju and SR Tuladhar 16/79; Godavari, Lalitpur, 5500 ft, 1979.7.16, P Pradhan and party 828 (KATH).

**Vanda cristata** Wall. ex Lindl.

*Trudelia cristata* (Lindl.) Senghas

CE Nepal (1200–2300 m), Bhutan, Chian (SE Xizang, SW Yunnan), India (Garwal to Sikkim), N Vietnam.

Epiphytic on *Prunus cerasoides*, *Eurya acuminata*, *Schima wallichii*, *Ficus neritifolia*, *Acacia catechu*, *Quercus glauca*, *Shorea robusta*, *Mangifera indica*. Fl. May. 2n = 28, 38, 76.

Nahapani, 1400 m, 1973.4.18, JF Dobremez 1877; Chhipechhipe Pani, Dailekh, 1090 m, 1991.2.25, NP Manandhar 432-91; Temple Hill, Kathmandu, 5500 ft, 1965.5.30, Schilling and Sayers 323; Syabru Besi-Lama Hotel, Rasuwa, 1480–2480 m, 2001.5.18, S Akiyama et al. 21000024; Khesewa-Sudap, 1800 m, 1977.5.1, PR Shakyia 4184; Hanspokari, Ilam, 5000 ft, 1978.6.6, P Pradhan and R Niraula 465 (KATH).

**Vanda cristata** var. **muliflora** Hort.

*Trudelia cristata* var. *muliflora* Hort.

Nepal (600–700 m), India.

Epiphytic on medium sized tree trunks. Fl. May.

Hetauda, 400 m (Ph-R).

**Vanda pumila** Hook. f.

*Trudelia pumila* (Hook. f.) Senghas.

C Nepal (500–1500 m), Bhutan, China (W Guangxi, Hainan, S Yunnan), NE India, Laos, Myanmar, Nepal, N Thailand, Vietnam.

Epiphytic on exposed tree trunks. Fl. Mar–May. 2n = 38, 40, 72, 76.

Press et al. (2000), Pearce and Cribb (2002).

**Vanda tessellata** (Roxb.) Hook. ex G. Don

*Vanda roxburghii* R. Br.

CE Nepal (200–600 m), India, Myanmar, Sri Lanka.

Epiphytic mainly on *Dalbergia sissoo*, *Madhuca latifolia*. Fl. Jul–Aug.

Nepal, fide Herklots, l.c. (1975) (Hara et al. 1978, Press et al. 2000).

**Vanda testacea** (Lindl.) Rehb. f.

*Vanda parviflora* Lindl.

CE Nepal (200–2200 m), India (Kumaun to Sikkim), Myanmar, Sri Lanka.

Epiphytic on tree trunks. Fl. May–Jun.

Jhunga, Sinduli, 360 m, 1987.5, NP Manandhar and LP Kattel 11942; Majhi gaon-Pilwa Khola, 460 m, 1977.6.10, PR Shakyia 4612; Saktim, Ilam, 1600 ft, 1978.6.12, P Pradhan and R Niraula 527 (KATH).

**Vandopsis undulata** (Lindl.) J. J. Sm.

CE Nepal (300–2100 m), Bhutan, China (SE Xizang, S and W Yunnan), NE and NW India.

Epiphytic on *Schima wallichii*, *Mangifera indica*, *Castanopsis indica* or lithophytic on rocks.

Fl. May–Jun. 2n = 38.

Singhpur, Suklaphanta, Kanchapur, 225 m, 1984.3.28, P Pradhan, RK Upreti, N Pradhan and N Dabadi 944; Chater, Banke, 600 ft, 1980.7.27, TK Bhattacharya 3005; Tashingaon, Sankuwabha, 1950 m, 1998.12.8, DB Karkee 792; Sudap, Taplejung, 1880 m, 1977.5.1, PR Shakyia 4186 (KATH).

**Zeuxine affinis** (Lindl.) Benth. ex Hook.

E Nepal (800–2200 m), Bangladesh, Bhutan, China (Guangdong, Hainan, Hunan, Taiwan, Yunnan), India, Laos, Malaysia, Myanmar, Thailand, Vietnam.

Terrestrial on litter covered damp places. Fl. Feb–May. 2n = 20.

BB Raskoti 107 (KATH).

**Zeuxine flava** (Lindl.) Trimen

CE Nepal (1200–2300 m), Bhutan, China (SE Yunnan), N India, Malaysia, Myanmar, Thailand, Vietnam.

Terrestrial on primary forest. Fl. May.

Bajrbarahi, Lalitpur, 1400 m, 1985.5.2, Siddi 32; Himakhola, Panchthar, 4400 ft, 1967.4.10, SB Malla 7711; Tashigaon, Sankuwabha, 1950 m, 1998.12.8, DB Karkee 793; Patauti, Nigali, Arghakhanchi, 1400 m, 2007.4.20, BB Raskoti 120 (KATH).

**Zeuxine goodyeroides** Lindl.

E Nepal (1800–3000 m), NE India (Sikkim).

Terrestrial on damp places. Fl. Sep–Oct.

East Nepal, 1964, fide Banerji, l.c. (Hara et al. 1978, Press et al. 2000).

**Zeuxine grandis** Seidenf.

C Nepal (700 m) India, China, Thailand, Vietnam.

Terrestrial on full shade in the moist and humid forest.

Satyawati, Palpa district, 700 m, BB Raskoti 325 (KATH).

**Zeuxine longilabris** (Lindl.) Trimen

C Nepal (800–1100 m), India, Myanmar, Sri Lanka.

Terrestrial.

Central Nepal, Gardner 173 (Hara et al. 1978, Press et al. 2000).

**Zeuxine nervosa** (Wall. ex Lindl.) Benth. ex Trimen

*Zeuxine nervosa* (Lindl.) Trimen.

C Nepal (200–1200 m), Bangladesh, Bhutan, Cambodia, China (S Taiwan, S and SW Yunnan), NE India (Assam), Japan (Ryukyu Islands), Laos, Myanmar, Sri Lanka, Thailand, Vietnam.  
Terrestrial in damp places. Fl. Feb–Mar. 2n = 20.  
Central Nepal, Wallich s.n. (ann. 1819) (Hara et al. 1978, Press et al. 2000).

***Zeuxine reflexa*** King and Pantl.

E Nepal (1050–4300 m), Bhutan, China (Hong Kong, Taiwan), NE India, Thailand.  
Terrestrial on moist places. Fl. Apr–May.  
Chunde Khola, Sankhuwasabha, 1320 m, 1991.4.3, PR Shakya 9678 (KATH).

***Zeuxine strateumatica*** (L.) Schltr.

C Nepal (400–1200 m), Afghanistan, Bhutan, Cambodia, China (Fujian, Guangdong, Guangxi, Hainan, Hubei, Sichuan, Taiwan, Yunnan), India, Japan, Kashmir, Laos, Malaysia, Myanmar, New Guinea, Philippines, Sri Lanka, Thailand, Vietnam; SW Asia, Pacific islands.  
Terrestrial in levee banks, damp places. Fl. Mar–Jul. 2n = 20, 22, 40, 42, 50, 100.  
Mahendranagar, Kanchanpur, 150 m, 1983.2.15, KJ Malla 1394; Naudanda, Kaski, 1250 m, 1975.6.14, DP Joshi and TK Bhattarchaya 75/2657; Pairegaon, Trisuli, Nuwakot, 710 m, 1975.2.16, MM Amatya and KR Rajbhandari 75/85; Tarahara, Sunsari, 750 ft, 1969.2.7, TK Bhattacharya 10651; Barkurwa, Dhankuta, 1971.2.18, NP Manandhar 17055 (KATH).

*Acknowledgements* – This study was supported by GAČR 526/09/0549. It was partly supported by RVO 67985939.

## References

- Acharya, K. P. and Rokaya, M. B. 2010. Medicinal orchids of Nepal: are they well protected? – *Our Nature* 8: 82–91.
- Acharya, K. P. et al. 2010. *Spiranthes spiralis* (Orchidaceae), a new record for the Nepal Himalaya. – *Harvard Papers Bot.* 15: 71–72.
- Amatya, G. 2005. Orchids of far-western Nepal. – IUCN Nepal.
- Anonymous 2001. Flowering plants of Nepal (phanerogams). – *Bull. Dept of Plant Resour.* No. 18, Ministry of forest and soil conservation, HMG/Nepal, pp. 150–152.
- Bajracharya, D. M. 2001. *Eria apertiflora* Summerh. and *E. bipunctata* Lindl. (Orchidaceae), new records for the Nepal Himalaya. – *J. Japanese Bot.* 76: 297–302.
- Bajracharya, D. M. 2004. The genus *Eria* Lindley (Orchidaceae) in the Himalayas. A taxonomic revision. – PhD thesis, Tribhuvan Univ., Nepal.
- Bajracharya, D. M. and Shrestha, K. K. 2003. *Eria nepalensis* (Orchidaceae), a new species from Nepal. – *J. Japanese Bot.* 78: 158–161.
- Bajracharya, D. M. and Shrestha, K. K. 2004. Two new records of *Eria* Lindl. (Orchidaceae) for Nepal. – *Himalayan J. Sci.* 2: 46–47.
- Bajracharya, D. M. et al. 1993. *Oberonia micrantha* King et Pantling, a new record of orchid from Nepal. – *Newslett. Himalayan Bot.* 14: 5–6.
- Bajracharya, D. M. et al. 2002. *Eria baniiaii* sp. nov. (Orchidaceae) – a new species from Kathmandu valley, Nepal. – *J. Orchid Soc. Ind.* 16: 91–93.
- Bajracharya, D. M. et al. 2003. *Eria pokharensis* sp. nov. (Orchidaceae); a new species from Nepal Himalaya. – *J. Orchid Soc. Ind.* 17: 1–4.
- Bajracharya et al. 2006. *Eria clausa* King et Pantl. (Orchidaceae), a new record from Nepal. – *J. Japan. Bot.* 81: 304–307.
- Baniya, C. B. et al. 2010. The elevation gradient of lichen species richness in Nepal. – *Lichenologist* 42: 83–96.
- Benerji, M. L. 1963. Outline of Nepal phytogeography. – *Vegetatio* 11: 288–296.
- Benerji, M. L. 1978. The orchids of Nepal Himalaya. – *Today and Tomorrow's Printers and Publishers, New Delhi*, pp. 34–37.
- Benerji, M. L. and Pradhan, P. 1984. The orchids of Nepal Himalaya. – *J. Cramer*.
- Benerji, M. L. and Thapa, B. B. 1976. Orchids of Nepal. – *J. Bombay Nat. Hist. Soc.* 73: 149–156.
- Chaudhary, R. P. 1998. Biodiversity in Nepal: status and conservation. – S. Devi, Saharanpur, India and Tecpress Books, Bangkok.
- de Milleville, R. and Shrestha, T. B. 2004. Nepal orchids in pictures. – Malla Prakashan, Nepal.
- Don, D. 1825. *Prodromus florum Nepalensis*. – J. Gale, London.
- DuPuy, D. and Cribb, P. 1988. The genus *Cymbidium*. – *Timber Press*.
- Ghimire, M. 2009. Epiphytic orchids of Nepal. – *Banko Janakari* 18: 53–63.
- Hara, H. and Williams, L. H. J. 1979. An enumeration of flowering plants of Nepal. Vol. 2. – *Brit. Mus. Nat. Hist. Lond.*
- Hara, H. et al. 1978. An enumeration of flowering plants of Nepal. Vol. 1. – *Brit. Mus. Nat. Hist. Lond.*
- Hara, H. et al. 1982. An enumeration of flowering plants of Nepal. Vol. 3. – *Brit. Mus. Nat. Hist. Lond.*
- Maity, D. et al. 2009. Taxonomic status of *Gymnadenia orchidis* Lindl. var. *pantlingii* Renz (Orchidaceae). – *Feddes Rep.* 120: 232–235.
- Malla, S. B. et al. 1976. Catalogue of Nepalese vascular plants. *Bull. Dept Plant Resour.* No. 7.
- Margonska, H. and Kowalkowska, A. 2008. Taxonomic revision of *Dienia* (Malaxidinae, Orchidaceae). – *Ann. Bot. Fenn.* 45: 97–104.
- Panigrahi, G. and Wood, J. J. 1974. A new species of *Listera* (Orchidaceae) from Asia. – *Kew Bull.* 29: 731.
- Panthi, M. P. and Chaudhary, R. P. 2005. A new distribution record of *Diplomeris hirsute* (Lindl.) Lindl. (Orchidaceae) from Arghakhanchi District, Nepal. – *J. Nat. Hist. Mus.* 22: 129–133.
- Pearce, N. and Cribb, P. 2002. The orchids of Bhutan. – *R. Bot. Gard. Edinb.*
- Polunin, O. and Stainton, A. 1984. *Flowers of the Himalaya*. – Oxford Univ. Press.
- Press, J. R. et al. 2000. Annotated checklist of the flowering plants of Nepal. – *Nat. Hist. Mus. Lond.*, <<http://www.efloras.org>>.
- Rai, S. K. et al. 2007. *Didymoplexis pallens* Griffith (Orchidaceae): a new record for Nepal. – *Pleione* 1: 55–56.
- Rajbhandari, K. R. 2001. Ethnobotany of Nepal. – *Ethnobot. Soc. Nepal, Kathmandu*.
- Rajbhandari, K. R. 2003. A list of new records of Gramineae and Orchidaceae of Nepal. – *Bot. Orientalis* 27–30.
- Rajbhandari, K. R. 2004. Floral diversity (flowering plants) of Nepal. – *Earth Preserv. Nepal* 1: 12–18.
- Rajbhandari, K. R. and Baral, S. R. (eds) 2010. Catalogue of Nepalese flowering plants – I: Gymnosperms and monocotyledones. – *Natl Herb. Plant Lab., Godavari, Nepal*.

- Rajbhandari, K. R. and Bhattarai, S. 2001. Beautiful orchids of Nepal. – Keshab R. Rajbhandari, Kathmandu.
- Rajbhandari, K. R. and Dahal, S. 2004. Orchids of Nepal: a checklist. – Bot. Orientalis 4: 89–106.
- Rajbhandari, K. R. et al. 2000. Orchid diversity of Nepal and their conservation need. Proc. 8th Int. Workshop of BIO-REFOR: Biotechnology Applications for Reforestation and Biodiversity Conservation, Kathmandu, Nepal, 28 Nov – 2 Dec 1999 (Bista, M. S. et al. eds), BIO-REFOR, IUFRO/SPDC, Tokyo, Japan, pp. 249–252.
- Raskoti, B. B. 2009. The orchids of Nepal. – Published by B. B. Raskoti and R. Ale, Kathmandu.
- Raskoti, B. B. 2013. A new species of *Bhutanthera* (Orchidaceae; Orchidoideae) from Nepal. – Phytotaxa 62: 57–60.
- Raskoti, B. B. and Ale, R. 2009a. *Goodyera foliosa* var. *commelinoides* (orchidaceae): a new record to orchid flora of Nepal. – Scientific World 7: 47–48.
- Raskoti, B. B. and Ale, R. 2009b. *Nervilia makinmoni* Duthie. and *Nervilia plicata* (Andrews) Schltr. (Orchidaceae): new records for flora of Nepal. – Bot. Orientalis 6: 109–110.
- Raskoti, B. B. and Ale, R. 2010. *Malaxis biaurita* (Lindley) Kuntze (Orchidaceae): a new record for Nepal. – Himalayan J. Sci. 6: 41–42.
- Raskoti, B. B. and Ale, R. 2011. A species of *Sunipia* (Orchidaceae) from Nepal. – Phytotaxa 31: 55–58.
- Raskoti, B. B. and Ale, R. 2012. *Liparis ferruginea* Lindley (Orchidaceae) – a new record for the flora of Nepal. – Taiwaniana 57: 308–311.
- Raskoti, B. B. and Shakya, L. R. 2009. *Oberonia longilabris* King & Pantling (Orchidaceae): a new record for Nepal. – Pleione 3: 107–109.
- Raskoti, B. B. et al. 2008. *Zeuxine affinis* (Lindl.) Bentham ex Hook. f. (Orchidaceae) – a new record for Nepal. – Pleione 2: 252–254.
- Raskoti, B. B. et al. 2012. *Neottia chandrae* sp. nov. (Orchidaceae) from Nepal. – Nord. J. Bot. 30: 187–189.
- Shakya, L. R. 1999. Revision of the genus *Oberonia* in the Himalayas. – PhD thesis, Tribhuvan Univ., Kathmandu, Nepal.
- Shakya, L. R. 2000. *Oberonia jenkinsiana* Griff. ex Lindl. (Orchidaceae), a new record for Nepal. – Rheedeia 10: 149–151.
- Shakya, L. R. and Bania, A. M. S. 1998. *Pachystoma senile* (Lindley) Reichb. f. (Orchidaceae), a new record for Nepal. – Newslett. Himalayan Bot. 24: 10–12.
- Shakya, L. R. and Chaudhary, R. P. 1999. Taxonomy of *Oberonia rufilabris* (Orchidaceae) and allied new species from the Himalaya. – Harvard Pap. Bot. 4: 357–363.
- Shakya, L. R. and Shrestha, M. R. 2007. Two new taxa of orchidaceae from central Nepal. – Edinb. J. Bot. 64: 1–5.
- Shakya, L. R. et al. 2002. *Oberonia parvula* King et Pantling (Orchidaceae): a new record for Nepal. – In: Das, A. P. (ed.), Perspectives of plant biodiversity. Proc. Natl Seminar Plant Biodiv. Syst. Conserv. Ethnobot. 9–11 Nov 2000, Dehra Dun-Bishen Singh Mahendra Pal Singh, pp. 213–216.
- Shrestha, M. R. et al. 2007. A new species of *Malaxis* Solander ex Swartz (Orchidaceae) from Dolpa. – Pleione 1: 6–7.
- Stainton, J. D. A. 1972. Forest of Nepal. – John Murray.
- Stainton, A. 1988. Flowers of Himalaya: a supplement. – Oxford Univ. Press.
- Subedi, A. 2002. Orchids around Pokhara valley of Nepal. Occasional paper. Vol. 1. – Local Initiatives Biodiv. Res. Devel. (LI-BIRD) Pokhara, Nepal.
- Subedi, A. et al. 2011. *Panisea panchaseensis* sp. nov. (Orchidaceae) from central Nepal. – Nord. J. Bot. 29: 361–365.
- Thakur, R. B. et al. 2010. Enumerating the status of orchid species of Makawanpur District. – Hamro Kalpabrichha 20: 1–18.
- Tsukaya, H. and Ohba, H. 2000. *Malaxis monophyllos* (L.) Sw. (Orchidaceae), a new record from Nepal with description of a new variety. – J. Japanese Bot. 75: 314–316.
- Tuyama, T. 1975. A new species of Orchidaceae, *Oreorchis porphyranthes* from Nepal. – J. Japanese Bot. 50: 65–70.
- Vij, S. P. and Shekhar, N. 1987. Cytological investigations in Indian *Cymbidium*. – J. Orchid Soc. Ind. 1: 29–43.
- Wallich, N. 1824–1826. Tentamen florum nepalensis illustratae. – Asiatic Lithographical Press, London.
- Web 1. JSTOR plant science. – <<http://plants.jstor.org>>, accessed 30 Jun 2010 – 20 Jan 2011.
- Web 2. World checklist of selected plant families. – <<http://apps.kew.org/wcsp/home.do>>, accessed 20 Apr 2012 – 20 Feb 2011.
- White, K. and Sharma, B. 2000. Wild orchids of Nepal: guide to the Himalayan orchids of Rajpath and Chitwan Jungle. – White Lotus, Bangkok.
- Wu, Z. Y. and Hong, D. (eds) 2009. Flora of China. (Orchidaceae). – Science Press, Miss. Bot. Gard. Press.

Supplementary material (Appendix NJB1230 at <[www.oikos.oikosoffice.lu.se/appendix](http://www.oikos.oikosoffice.lu.se/appendix)>). Appendix 1.