Calanthe R.Br. is the largest genus in the tribe Collabieae under subfamily Epidendroideae of the family Orchidaceae. It comprises about 223 orchid species worldwide, commonly called 'Christmas orchids', with the distribution across tropical and subtropical Asia, Australia, Madagascar, Africa, central and south America, and the Caribbean (Chase, 2005; Chen et al., 2020; Yukawa & Cribb, 2014) while there are 18 species in Nepal, including Calanthe himalaiicum Raskoti, an endemic species (Raskoti et al., 2024). The Calanthe species are evergreen or deciduous herbs, usually terrestrial, rarely epipetric or epiphytic with thick roots, plicate leaves, mostly upright and sometimes with archic flowering stems (Kurzweil & Ormerod, 2019). The genus Calanthe, which was formerly divided into three genera, Calanthe, Cephalantheropsis Guillaumin, and Phaius Lour. has undergone several intrageneric taxonomic revisions (Nanjala et al., 2022). The members in this group are characterized by the presence of simple and plicate leaves, widely connivent sepal and petals, lip base fused with column and eight waxy pollinia (Kurzweil, 2010).

A distinct population of Calanthe species was collected from Sundarijal in Shivapuri-Nagarjun National Park (SNNP) located at the northern fringe of the Kathmandu Valley, central Nepal in November 2023. The plants were found to be naturally growing at the margin of Alnus nepalensis mixed forest. The morphological characteristics of the collected species was examined and compared with that of the other Calanthe species stored at the National Herbarium and Plant Laboratories (KATH), Godawari, Lalitpur district, Nepal. The morphology of the aforementioned Calanthe species did not resemble with any of the Calanthe species reported earlier from Nepal. Upon careful examination of different literatures (Pearce & Cribb, 2002; Xinqi et al., 2009), including the protologue (Hooker, 1890) and the type image, the species was identified to be Calanthe longipes Hook.f. The occurrence of C. longipes has been reported in Bhutan (Pearce & Cribb, 2002), China (Xinqi et al., 2009), India (Hooker, 1890); however, its presence in Nepal has not been reported in any of the previous literatures (Don, 1825; Hara et al., 1978; Rajbhandari, 2015; Rajbhandari & Rai, 2017; Raskoti, 2009; Rokaya et al., 2013; Shrestha et al., 2022) so far. Hence, the orchid "C. longipes" found in the SNNP is, no doubt, a new record for the flora of Nepal.

**Taxonomic treatment**

Description

Plants: 35–60 cm; Rhizomes: creeping; Stem: usually erect, cylindrical, 6–8 mm in diameter, striate when dry, with distinct nodes and internodes with leafy sheaths at base; Leaves: amplexicaul, elliptic to ovate-oblong, 10–26 cm × 2.5–6 cm, apex narrowly acute to acuminate, margins entire, both surfaces glabrous; Inflorescence: usually one, 10–20 cm, erect when anthesis, ascending after flower maturation; puberulent; lax to dense, 9–17 flowered; Floral bracts: caducous, lanceolate; Flowers: connivent in an inclined or horizontal manner, not completely opened; Sepals: spreading, lance-ovate to lanceolate, 6–8 mm × 2.5–3.5 mm, white, light yellowish-brown when mature, puberulent, apex shortly acuminate; Petals: lance-ovate to ovate, 5–6 mm × 2–3 mm, similar to sepals in colour; Lip: connivent, 4.5–5.5 mm × 3.5–4.5 mm including lateral lobes, oblong-ovate, 3-lobed, white with yellow-orange tinge at center; Lateral lobes: 1.5–1.8 mm, broadly triangular-ovate, apices rounded-truncate, irregularly cleft; Middle lobe: 1.6–1.8 mm × 2.5–3 mm (excluding claws), margins sinuate; Claws: 1.6–2 mm; Disk: yellow-orange with 2 lamellae, extending from lip base to the base of middle lobe; Column: 3–4 mm, puberulent at apex (see Figures 1–2).

Figure 1: Habit of Calanthe longipes (Photo: Rashika Kafle).
Figure 2: Voucher specimen of *C. longipes* deposited at the KATH.
Habitat and distribution

This species is found under closed canopy of the forests and also at the margin of the forests. This species may have more individuals if it is explored within the forests as evidenced by the discovery of over 12 of them growing in patches on the soil at the edges of the forests. It is distributed throughout the Tibetan plateau, East Himalaya, East Asia, and South East Asia. In Nepal, it is found in the SNNP located near the northern edge of the Kathmandu Valley in Bagmati Province (see Figure 3).

Figure 3: (A) Map showing the distribution of *C. longipes* in Nepal; (B) Map showing the location of SNNP within Bagmati Province; and (C) Map showing the site where *C. longipes* plants were detected within SNNP, Kathmandu Valley.

**Phenology:** October to November.

**Date of collection of specimens:** November 7, 2023.

**Specimens collected from:** 27°45'51"N latitude and 85°25'33"E longitude; 1555 m elevation; Sundarijal, Shivapuri-Nagarjun National Park, Kathmandu Valley, Bagmati Province, central Nepal.

**Specimens collected by:** H.R. Poudel, R. Chhetri, T.R. Pandey, R. Acharya, T.K. Thapa & R. Kafle

**Specimen examined by:** G. Parmar & R. Kafle

Key to the allied species of *Calanthe* in Nepal (for the identification of newly reported species)

1a. Lips without spur ................................. 2

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54
1b. Lips with spur .......................... 4

2a. Flowers pink, lip mid-lobe without lamellae ....................... C. puberula

2b. Flowers yellow or white, lip mid-lobe with lamellae ................................. 3

3a. Flowers yellow, lip disk with 3-5 lamellae ...................... C. tricarinata

3b. Flowers white, lip disk with 2 lamellae .............................. C. longipes

4a. Margin of lip mid-lobe fimbriate .......................... C. metoensis

4b. Margin of lip mid-lobe not fimbriate ........ 5

5a. Spur less than 5 mm long ................................. 6

5b. Spur longer than 5 mm ................................ 7

6a. Leaves elliptic to broadly lanceolate; flowers brick red with white striations …… C. brevicornu

6b. Leaves oblong-lanceolate; flowers dark brown with golden yellow lip ...................... C. mannii

7a. Flowers pinkish; lip pinkish or purple ........ 8

7b. Flowers greenish; lip yellowish or white .... 9

8a. Rhizome caespitose; lip pinkish, mid-lobe of lip cuneate; apex aristate ............ C. plantaginea

8b. Rhizome not caespitose; lip purple, mid-lobe of lip reniform; apex emarginate....... C. masuca

9a. Lip yellowish; spur straight ........ C. griffithii

9b. Lip white; spur arcuate ........ C. chloroleuca

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Author contribution statement

RK: Field visit, draft writing, manuscript revision.
MSTM: Conception, manuscript revision.
GP: Conception, draft writing, manuscript revision.

Data availability

The data that support the findings of this study are available on request from the corresponding author.

Conflict of interest

All the authors declare that there are no conflicts of interest.

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