

*SPIRANTHES SPIRALIS* (ORCHIDACEAE),  
A NEW RECORD FOR THE NEPAL HIMALAYA

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**Abstract.** *Spiranthes spiralis* is newly recorded from the Nepal Himalaya. A detailed description and illustration is provided.

**Keywords:** Himalaya, Nepal, New record, Orchidaceae, *Spiranthes*

The nearly cosmopolitan, terrestrial genus *Spiranthes* Rich. comprises about 40 species, attaining its maximum diversity in North America, with fewer species in Mexico, Central America, northern South America, Europe, temperate and tropical Asia, Australia, New Zealand, and the southwest Pacific islands (Pridgeon et al., 2003). In Nepal, it is represented by a single species, the pink-flowered *S. sinensis* (Pers.) Ames (Hara et al., 1978; Press et al., 2000; White and Sharma, 2000; Rajbhandari and Dahal, 2004). However, during a recent inventory (in April, 2009) of the orchids of the Pokhara valley in central Nepal, an unidentified species of *Spiranthes* was collected at ca. 900 m. The species has subsequently been confirmed as the widespread *S. spiralis* (L.) Chevall. (Autumn Lady's-tresses), which represents a new record for the Nepal Himalaya. The collected specimen is deposited at Tribhuvan University Central Herbarium (TUCH) and National Herbarium, Godavari, Kathmandu (KATH). Details of this taxon are provided below.

*Spiranthes spiralis* (L.) Chevall., *Fl. Gén. Env. Paris* 2: 330. 1827. Fig. 1.

Synonyms: *Ophrys spiralis* L., *Sp. Pl.*: 945. 1753.

*Epipactis spiralis* (L.) Crantz, *Strip. Austr. Fasc.*, ed. 2 6: 473. 1769.

*Spiranthes autumnalis* (Balb.) Rich., *De Orchid. Eur.*: 37. 1817.

*Neottia spiralis* (L.) Sw., *Neues J. Bot.* 1: 51. 1805.

*Plants* 10–25 cm tall. *Stem* grayish-green, pubescent with 3–7 sheaths. *Leaves* 3–6, glabrous, elliptic to linear lanceolate, acute, dark green, 2.0–3.5 × 0.5–0.8 cm, radical, decussate. *Inflorescence* of 3–20 flowers, spirally twisted, 5–10 cm long raceme, densely pubescent; floral bracts ovate-lanceolate, 0.5–0.6 × 0.3–0.4 cm, weakly pubescent. *Flowers* white with green on the labellum, small, pubescent, glandular, 0.6–0.7 cm long. *Sepals* obtuse, 0.3–0.5 × 0.1 cm. *Petals* undulate, 0.3–0.4 × 0.1 cm. *Labellum* oblong-ovate, slightly broadened above the middle with slightly undulate edges, two visible nectaries at the base, 0.4–0.5 × 0.15–0.20 cm. *Pollinia* 2. *Ovary* suberect or spiral, sessile or subsessile, pubescent, 0.3–0.5 × 0.15 cm.

**Phenology:** April–June (flowering and fruiting).

**Distribution:** Europe, North Africa, Asia to Western Himalaya.

**Etymology:** from the Greek *spiralis* (twisted, coiled), *anthos* (flower) in reference to the spiral arrangement of the flowers.

*Spiranthes spiralis* differs from *S. sinensis* (Pers.) Ames, until now the only species of *Spiranthes* attributed to Nepal, in a number of features: white flowers (vs. pink); number of flowers per twist from 4–5 (vs. more than 8); floral bract acute (vs. long acuminate); labellum with distinct proximal and distal part with its wider proximal lobe and narrower distal lobe (vs. slightly equal). In addition, *Spiranthes spiralis* generally has a longer inflorescence than *S. sinensis*.

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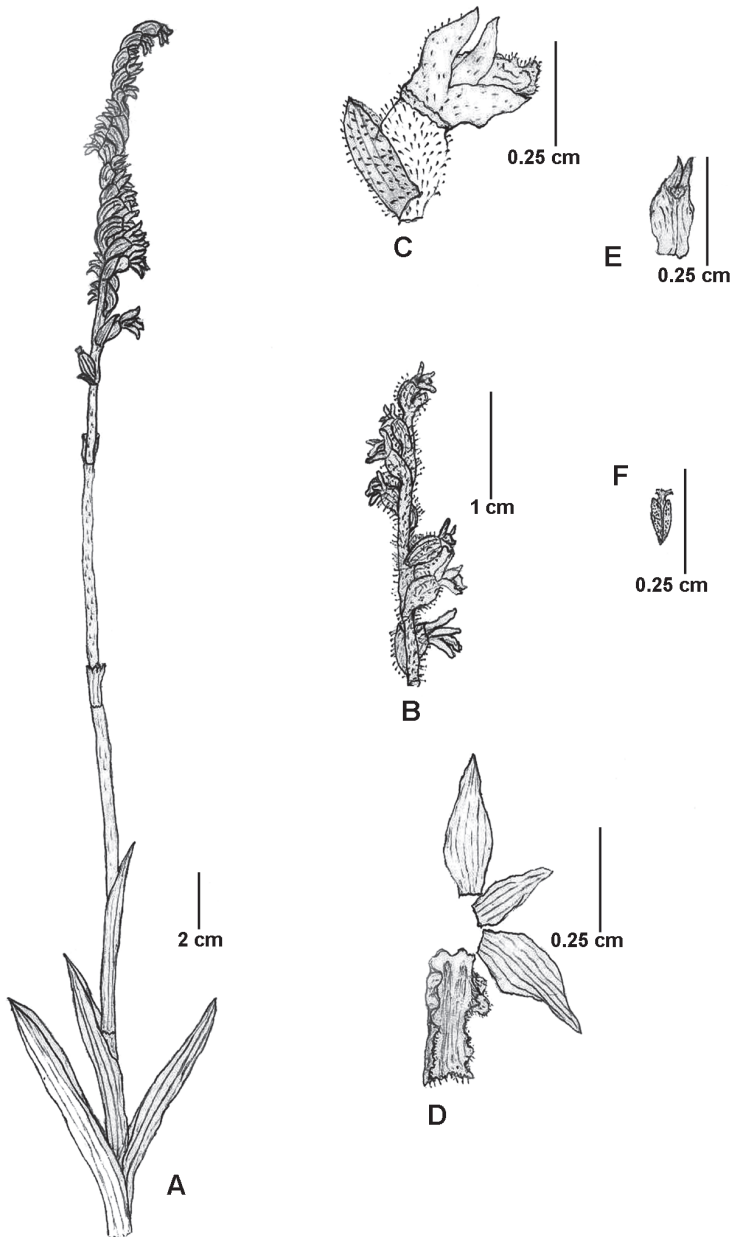


FIGURE 1. *Spiranthes spiralis* (L.) Chevall. **A**, habit; **B**, inflorescence; **C**, flower, lateral view; **D**, flower analysis: dorsal and lateral sepal, petal and labellum; **E**, column; **F**, pollinarium. Based on material collected by KPA. Drawn by KPA and AS.

#### LITERATURE CITED

- HARA, H., W. T. STEARN, AND L. H. J. WILLIAMS. 1978. *An Enumeration of the Flowering Plants of Nepal*. Vol. I. British Museum (Natural History), London.
- PRESS, J.R., K.K. SHRESTHA, AND D.A. SUTTON. 2000. *Annotated Checklist of the Flowering Plants of Nepal*. The Natural History Museum, London.
- PRIDGEON, A. M., P. J. CRIBB, M. W. CHASE, AND F. N. RASMUSSEN. 2003. *Genera Orchidacearum* Vol. 3 Orchidoideae (Part 2) Vanilloideae. Oxford University Press.
- RAJBHANDARI, K. R., AND S. DAHAL. 2004. Orchids of Nepal: A Checklist. *Botanica Orientalis*. 4: 89–106.
- WHITE, K., AND B. SHARMA. 2000. *Wild Orchids in Nepal*. White Lotus Press, Thailand.