

Shortia sinensis Hemsley (Diapensiaceae): a new species and family for the flora of Vietnam

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Summary: A population of *Shortia sinensis* Hemsley was found in Hoang Lien mountains (Northern Vietnam, Lao Cai prov.). This is probably the first finding of a representative of the family Diapensiaceae for the Vietnamese flora. *Shortia* is one of the temperate floristic elements that can be found in northern tropical mountains because of the appropriate climate.

Keywords: Diapensiaceae, Hoang Lien, *Shortia sinensis*, flora of Vietnam

The small family Diapensiaceae (Ericales: APG III 2009) comprises about twenty species in five genera (TAKHTAJAN 2009). The family is restricted to temperate and cold regions of the northern hemisphere. The southernmost genera whose geographical ranges reach the mountains of tropical regions are the monospecific genus *Berneuxia* Decne. (southwestern China and Upper Burma) and the oligotypic genus *Shortia* Torr. & A. Gray (southwestern China, Taiwan, Japan, and southeastern United States) (TAKHTAJAN 2009). *Shortia* includes six species, only two of which have been recorded from the territories adjacent to Vietnam: *Shortia sinensis* Hemsley in SE Yunnan and *Shortia rotundifolia* (Maxim.) Makino in Taiwan. Both species prefer wet rocky forests at altitudes about 1000–2000 m (HAINING & BARTHOLOMEW 2005).

During the expedition to the Hoang Lien National Park (Lao Cai province, Sa Pa district) in November–December 2009 plants of *Shortia sinensis* (Fig. 1) were found. The locality is not far from the Tram Ton Station at the bank of Thac Bac river, around N 22°20' E 103°47' at an elevation of about 1600 m a.s.l. This location is 30 km far from the Chinese border.

The determination of the species was carried out by using the Flora of China (HAINING & BARTHOLOMEW 2005). The family Diapensiaceae is absent in the Illustrated Flora of Vietnam (PHAM HOANG HO 1999–2000) as well as in the checklist of Phan Si Pan (NGUYEN & NGUYEN 1998), which includes the place of our finding. *Shortia sinensis* in Vietnam is only mentioned once in www.botanyvn.com. However, there are no details or references about this species there. Therefore, our finding seems to be the first documented record from Vietnam.

The Socialist Republic of Vietnam mainly lies in the Palaeotropical kingdom, but its northern part mostly belongs to the Holarctic kingdom (TAKHTAJAN 1978; AVERYANOV et al. 2003b). That's why some territories within northern Vietnam possess significant elements of the Holarctic flora. Therefore, findings of new species for the Vietnamese flora can be expected in the very north of the country, especially in mountain areas along the Chinese border.

The Hoang Lien mountains are famous for their unique floristic features which are caused by the interaction of temperate, subtropical and tropical elements. The monsoon climate of Hoang Lien mountains with moderately warm summer, cold winter and year-round sufficient humidity

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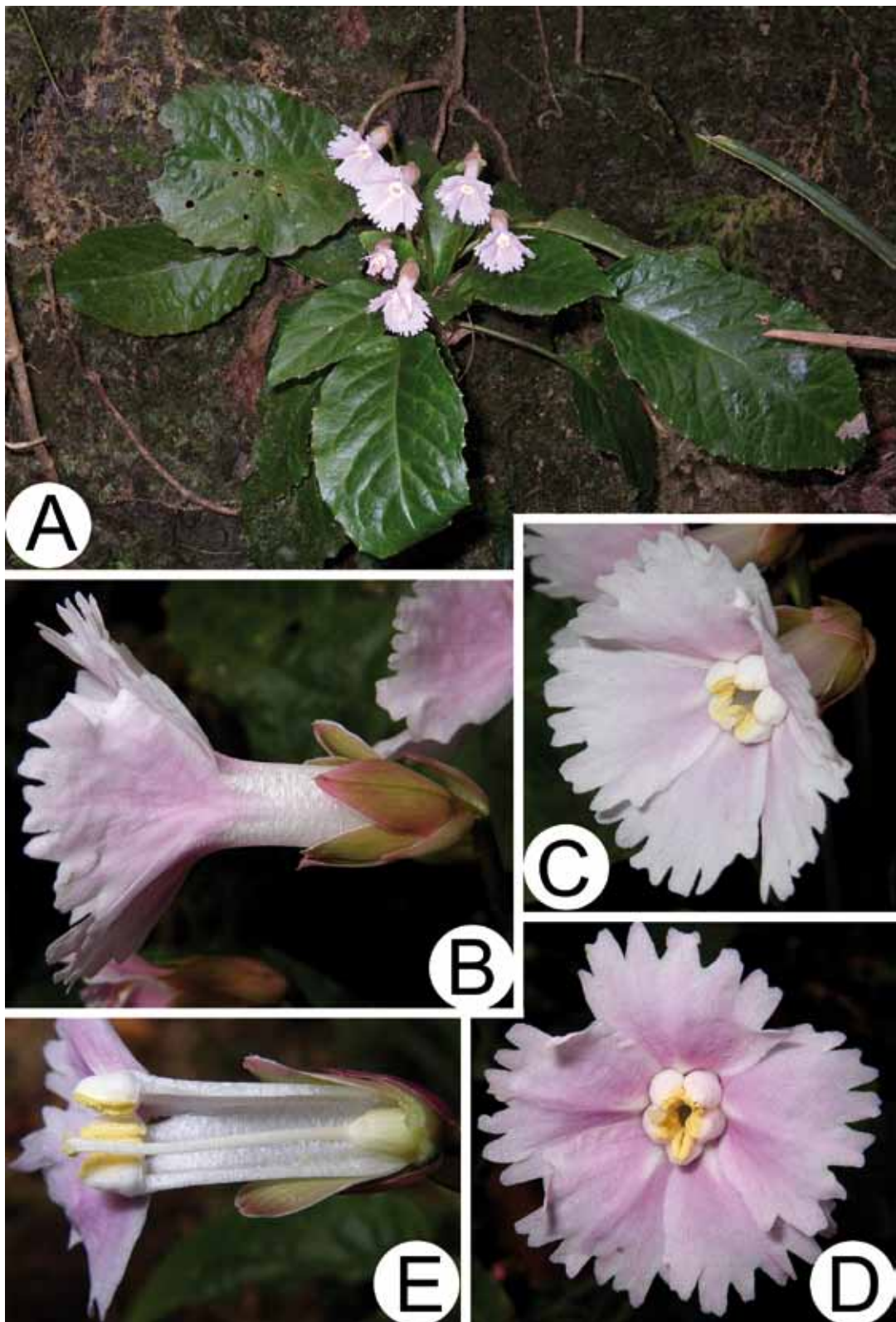


Figure 1. *Shortia sinensis*. A – habit; B, C, D – flower; E – longitudinal-section of flower.

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(AVERYANOV et al. 2003a,b) finely suits for subtropical and temperate species. However, the family Diapensiaceae is believed to be an example of strongly temperate families occurring in southeastern Yunnan, but not in southern Yunnan and in Vietnam (ZHU & YAN 2009). Indeed, the Hoang Lien mountains were first referred to the Southern-Chinese floristic province (TAKHTAJAN 1978) and then – more precisely – to the Sikang-Yunnan province (AVERYANOV et al. 2003a). In fact, this means that the flora of this mountain area is more closely related to the southern Chinese flora than to the flora of tropical Vietnam. AVERYANOV et al. (2003a) noticed, that “few acceptable botanical surveys exist for the Vietnamese portion of the Sikang-Yunnan floristic province”. More floristic findings can be expected in this area.

Acknowledgements

We are grateful to Dr Dmitry D. Sokoloff for help in species determination and revising of this paper.

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Zeitschrift/Journal: [Wulfenia](#)

Jahr/Year: 2010

Band/Volume: [17](#)

Autor(en)/Author(s): Nuraliev Maxim S.

Artikel/Article: [Shortia sinensis Hemsley \(Diapensiaceae\): a new species and family for the flora of Vietnam 25-27](#)