



## Four new species of orchids (Orchidaceae) in eastern Vietnam

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### Abstract

*Dendrobium thinkii* (D. sect. *Breviflores*), *Sarcoglyphis tichii*, *Taeniophyllum phitamii* (T. subgen. *Codonosepalum* Schltr.) and *Trichoglottis canhii* are described and illustrated as species new to science. All are local endemics of the area associated with Truong Son Range (Annamese Cordilleras) within territories of Dac Lak, Kon Tum and Lam Dong provinces of the southern Vietnam known in national geography as the Central Highlands or Tay Nguyen Plateau. All discovered plants are well-defined, taxonomically isolated species representing very strict plant endemism quite typical for the southern part of eastern Indochina.

**Key words:** plant taxonomy, plant diversity, plant endemism, nature protection

### Introduction

The paper contains new results of successive collaborative efforts of botanists and orchid enthusiasts in studies of the orchid diversity in areas associated with the Truong Son Range (Annamese Cordilleras) within territories of Dac Lak, Kon Tum and Lam Dong provinces of the southern Vietnam known in national geography as the Central Highlands or Tay Nguyen Plateau (Nguyen *et al.* 2010, Averyanov 2012a,b, 2013, Averyanov *et al.* 2012a,b, 2013, 2015a,b, Averyanov & Truong 2015, Choudhary *et al.* 2013, Duy & Averyanov 2015, Kumar *et al.* 2014, Nuraliev *et al.*, 2014, 2015, Schuiteman *et al.* 2013). It includes illustrations and descriptions of four new species discovered in this area. All discovered species are rare local endemics with very limited distribution. Valid name, species description, appropriate citation of the type, data on ecology, phenology, distribution, expected IUCN Red list status and notes on expected relations are provided for each species. When new data provided here are included, the known number of the orchids in Vietnam reaches 170 genera and 1186 species (Averyanov *et al.* 2015a,b). All mentioned species were discovered in April 2015 during botanical field investigations organized by botanists of the Tay Nguyen Institute for Scientific Research of Vietnam Academy of Science and Technology.

### Material and Methods

Specimens of the new species suitable for description were collected in 2015. Fresh flowers and inflorescences from living plants were fixed and stored in 70% ethanol. Measurements of the floral parts for the description were made on both herbarium and liquid-fixed materials. Fresh flowers and their fleshy parts shrink up to 15–20% in size during the drying process of making herbarium specimens. In describing quantitative characters, infrequent extreme values (i.e. rarely occurring minimal and maximal values) of a variation range are parenthesized respectively before and after the normal variation range.

### Taxonomic treatment

*Dendrobium* Swartz (1799: 82)