

Telipogon szmiti (Orchidaceae, Telipogoneae), a new species from Southern Ecuador

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Abstract: A new species of the genus *Telipogon* from Southern Ecuador is formally described and illustrated. This species is related to *T. fritillum* and *T. dalstroemii* but is clearly distinguished from both of them by its different petals and lip structure.

Key words: Orchidaceae, *Telipogon*, new species, Ecuador

1. Introduction

Telipogon Kunth (Orchidaceae, Vandoideae) occurs in Central and South America, from Costa Rica to Venezuela, and throughout the Andes from Colombia to Bolivia. The genus consists of approximately 135 species, of which 50 are known from Ecuador (Dodson 2003). The species of *Telipogon* grow as terrestrials or epiphytes in montane rainforests. Some of them are endemic to small areas and sometimes may be restricted to a single valley (Nauray Huari & Galán de Mera 2008).

The results of molecular studies conducted by Williams *et al.* (2005) suggest that *Telipogon* should be classified as a member of *Oncidiinae* Benth. This view is shared by some botanists (Nauray Huari & Galán de Mera 2008). However, this genus and other 3 genera classified within *Telipogoninae* Schltr. distinctly differ from the representatives of *Oncidiinae* by having four pollinia, a tape-shaped rostellum and tegula (Szlachetko 1995).

The representatives of the *Telipogon* genus are small to medium-sized, epiphytic or terrestrial plants with very short or well-developed stems without pseudobulbs. The leaves are distichous, often narrow, coriaceous or fleshy; the terminal inflorescence is erect, often elongate, racemose above and bears one to several flowers. The flowers are often medium-sized or large, sometimes very small. The sepals are subequal, free, wide-spreading and narrow, whereas the petals are commonly much larger,

often transverse, prominently veined and usually reticulated. The lip is very similar to the petals but is often broader or rarely smaller, commonly simple and sessile. The column is usually abbreviated, footless and wingless, long-setose or hispid; the anther is erect, distinctly 2-celled, and the pollinia are 4 in number (Schweinfurth 1961; Szlachetko 2003).

The species of *Telipogon* are probably pollinated by flies of the *Tachinidae* family. The flies are common in habitats where the plants occur. Most of the insects have spines on their dorsal abdomen which are similar to the structures found on the column or callus of the *Telipogon* species (Dodson 2003).

While botanising in Ecuador, our colleagues and the senior author, discovered a small population of a species of *Telipogon* not known to plant collectors. The in-depth studies of the collected specimen have revealed that the plant unquestionably represents a new species of the genus.

2. Material and methods

A standard procedure of analysing the collected material was followed. Both vegetative and generative features of the new species were investigated in detail. The selected parts of the flower were thereafter boiled, dissected, measured, examined under a binocular microscope and illustrated. The results were then analysed and compared with the type material,

diagnostic features and original illustrations of the *Telipogon* species. The studied specimen was also photographed.

3. Results and discussion

Telipogon szmiti Szlach., Mytnik & Baranow *sp. nov.* (Figs 1-3)

Haec species T. fritillum et T. dalstromii similis est, sed petalis deltoideo-suborbicularibus et multo minoribus, labello late auriculato, ambitu cordato, pilis rigidis erectisque vix tecto differt. Labelli nervi non nisi partibus distalis videntur; ramosi nigrique sunt.

Type: Ecuador. Along a road between Zumba and Amaluza. 08.2008, Szlachetko, Szmit & Kusibab 8538 (Holotype: UGDA-DLSz! – spirit).

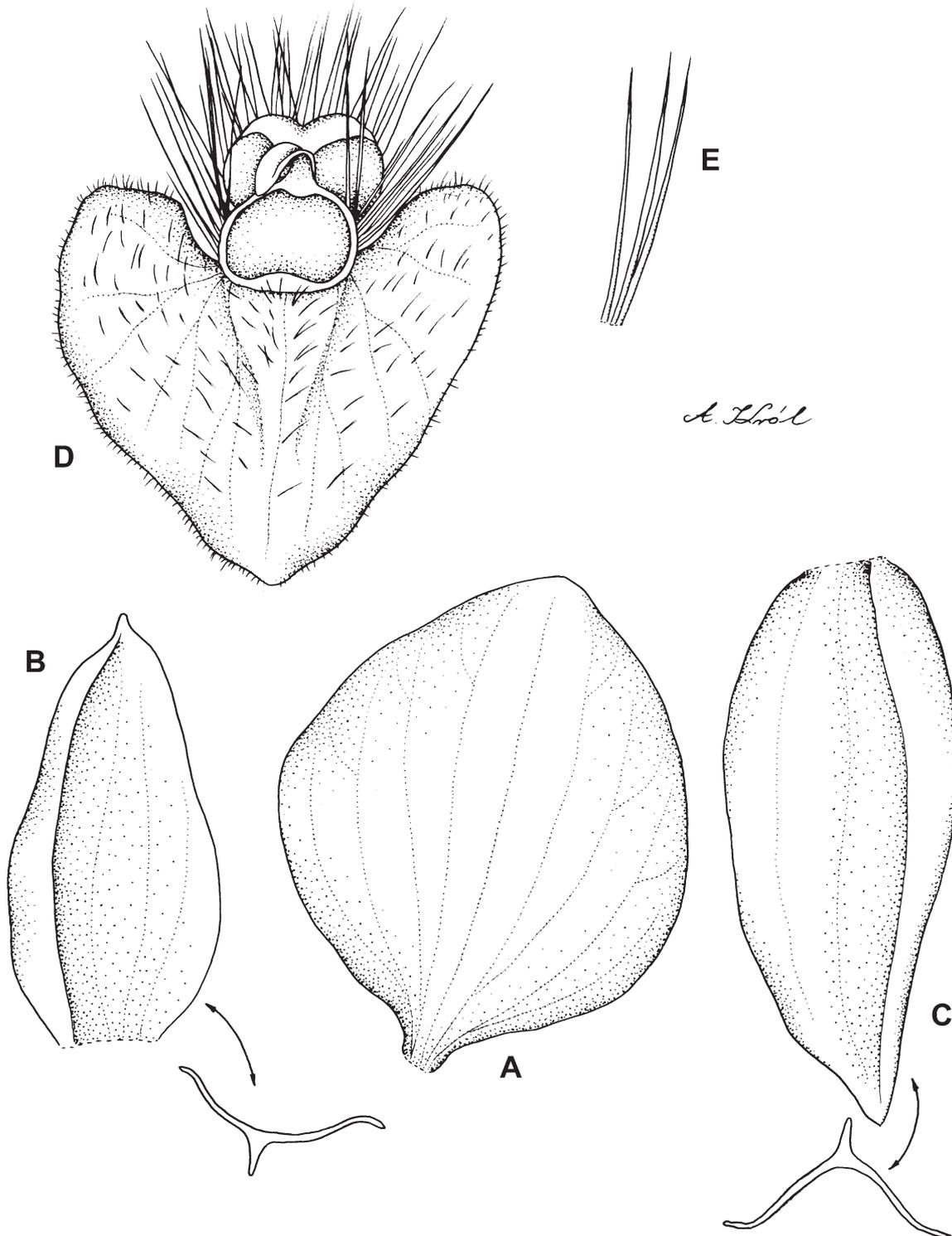


Fig. 1. *Telipogon szmiti* – flower parts

Explanations: A – petal, B – dorsal sepal, C – lateral sepal, D – lip, E – stiff hairs of the lip lamina (drawn by A. Król from the holotype)



Fig. 2. *Telipogon szmiti* – a plant (photograph by B. Szmit)

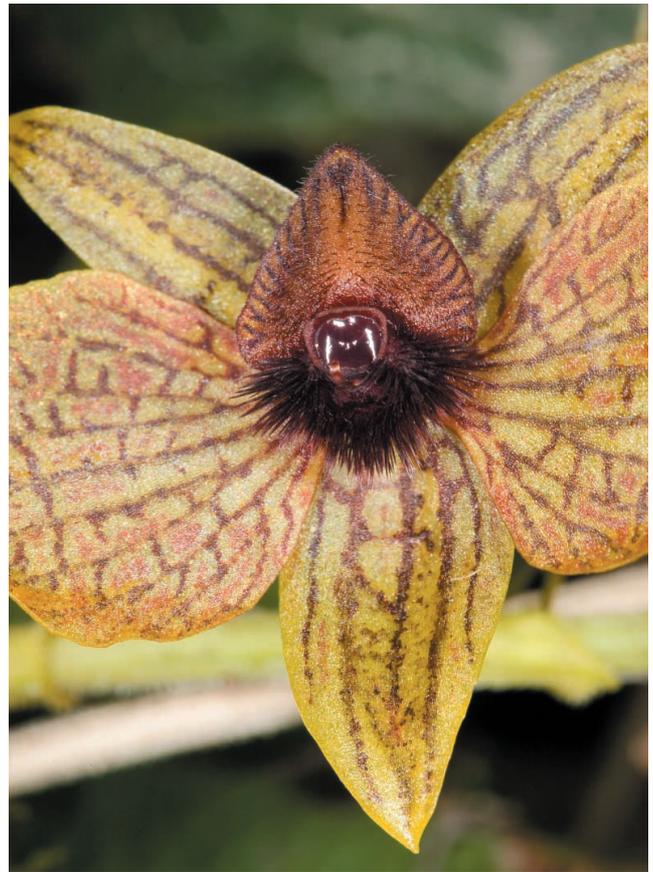


Fig. 3. *Telipogon szmiti* – a flower (photograph by B. Szmit)

ETYMOLOGY: Named in honour of Bronisław Szmit, the co-collector of the type specimen.

Plants rather small. Stem c. 4-6 cm long, few-leaved. Leaves 3.5-5 cm long, 1.5-2.5 cm wide, oblong-elliptic to ligulate, acute, relatively thick, green. Inflorescence 3-flowered, axis compressed, wings c. 1.5 mm wide. Floral bracts 12 mm long, triangular-ovate, acute, keeled outside. Pedicel and ovary 26 mm long, triangular in cross-section, ovary keels prominent. Dorsal sepal 17 mm long, 8 mm wide; oblong-ovate to ligulate-ovate, acute, concave, thin, keeled outside, 5-nerved, beige with brown nerves and yellow apex. Petals 19 mm long, 16 mm wide, deltoid-suborbicular to almost flabellate, obtuse, shortly clawed, somewhat oblique at base, with 9 brown, anastomosing nerves, beige with purplish suffusion. Lateral sepals 17 mm long, 8 mm wide, obliquely oblong-lanceolate to ovate-lanceolate, acute, concave, thin, keeled outside, 3-nerved, yellowish-beige with brown nerves. Lip 9 mm long and wide, cordate in outline, obtuse at the apex, broadly auriculate at the base, convex in the centre, covered by stiff erect hairs on the lamina and minutely, unevenly ciliolate along margins, with 9 branching nerves, orange-brown with brown distal stripes. Gynostemium typical for the genus, 4 mm long, covered densely in stiff blackish hairs.

ECOLOGY: A terrestrial plant, growing in a secondary forest along a river, in full sun and in stony soil (Fig. 4).

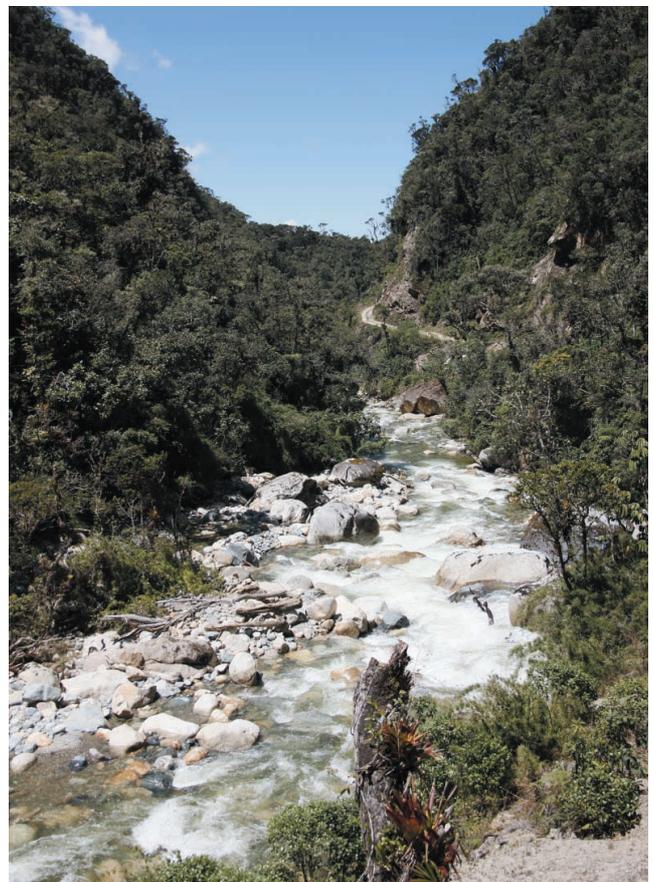


Fig. 4. *Telipogon szmiti* – the habitat where the plant was found (photograph by B. Szmit)

GENERAL DISTRIBUTION: Ecuador, presently only known from the type locality.

TAXONOMIC NOTES. The new species is related to *Telipogon fritillum* Rchb.f. & Warsz. and *T. dalstromii* Dodson. It is, however, sharply distinguished from both of the species named by its different petals and lip structure. The petals are deltoid-suborbicular and much smaller. The lip is broadly auriculated, cordate in

outline, scarcely covered in stiff erect hairs, and only the distal parts of the lip nerves are branched and black in colour.

Acknowledgements. We would like to express our gratitude to Dr Guy R. Chiron (the editor of *Richardiana*) for his priceless help in translating the diagnostic description of the new species into Latin. We would also like to thank Anna Król for illustrating the new species.

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