

***Kefersteinia saccata* Pupulin, sp. nov.**

Holotype: Preserved from a plant in flower cultivated by A. Alfaro H. and originally collected in January 2006 by Alberto Rodríguez in Costa Rica, Alajuela, San Carlos, Río Cuarto, La Española, 4 km N of Santa Rita, 10°26'34"N, 84°11'73"W, 200 m, epiphytic on slender tree, c. 2.5 m from the soil, growing in shade close to a stream, 23.4.2007, *F. Pupulin 6549* (CR [spirit]) – Fig. 1.

Species *Kefersteiniae retanae* G. Gerlach similis, labello integro saccato ovato-subrhombico acuto, apice recurvo, callo obrheniformi recedit.

*Herb epiphytic*, erect, caespitose, to about 12 cm tall. *Roots* terete, thick, 3-4 mm in diameter, produced from the short rhizome. *Stem* abbreviated, enclosed by 4-5 imbricating sheaths provided with hyaline, scarious margins, the upper ones foliaceous, to 3 cm long. *Leaves* elliptic, acute, 6-10 cm long, 2.5-3.2 cm wide, narrowing at the base into a conduplicate petiole 0.7-2 cm long. *Inflorescence* a slender, arched to pendent, solitary flower; peduncle terete, to 3.5 cm long, with 1-2 triangular-infundibuliform, acute, membranous to scarious bracts. *Floral bract* double, the outer one broadly ovate, acute, 5-6 mm long, 4 mm wide, the subopposite internal bractlet narrowly lanceolate-ligulate, 5 mm long, 1.5 mm wide. *Ovary* subclavate, distinctly winged, 9 mm long including the pedicel. *Flowers* small for the genus, the dorsal sepal and the petals ringent, greenish cream, translucent, the petals with sparse, minute purple spots, the lip white with purple spots arranged in a few radiating lines, the callus pale yellow. *Dorsal sepal* narrowly elliptic, acute, strongly concave, abaxially subcarinate, 9 mm long, 3.5 mm wide. *Lateral sepals* lanceolate-elliptic, acute, minutely apiculate, concave, inrolled-folded toward the base, 10.5 mm long, 4.5 mm wide. *Petals* obliquely elliptic, acute, 10 mm long, 4.5 mm wide. *Lip* with a short cuneate claw, ovate-subtrapezoidal, acute, deeply concave-cymbiform, 9 mm long, 8 mm wide, the margins irregularly crenate, the apex upcurved; callus subbasal, pedicellate, obrheniform, bilobed, 1.6 mm long, 3 mm wide, about 2.5 mm high. *Column* semiterete from a narrow base,

stout, with a c. 2.5 mm long foot, 6.5 mm long excluding the foot, 3.5 mm wide at the middle, the ventral surface forming a transversely elliptic-subrectangular plate, the lateral margins infolded, provided with a median, longitudinal, infrastigmatic keel projecting at the rear into a high, thick, obtuse tooth. *Anther cap* cucullate, ovate, flattened, 3-dentate at apex, 2-celled. *Pollinia* 4 in two pairs of different size, linear-oblong, on a cross-shaped, folded stipe; viscidium hyaline, rounded.

*Etymology*. – From Latin *saccatus*, “saccate, sac-shaped”, in allusion to the saccate base of the lip.

*Distribution and habitat*. – Known only from the type locality in Costa Rica. The plant providing the type specimen was found growing as an epiphyte in shaded places in the tropical wet forests of the San Carlos plain, in northern Costa Rica, at about 200 m elevation.

*Phenology*. – Flowering occurs at least in May, at the beginning of the rainy season in Costa Rica.

*Relationship*. – The porrect petals, flanking the column up to the apex, the saccate, ovate-sub-rhombic lip, shorter than the column, acute and recurved at apex, and the obrheniform basal callus reminiscent of that of *Kefersteinia costaricensis* Schltr., distinguish *K. saccata* from its relatives, namely *K. retanae* G. Gerlach and *K. wercklei* Schltr. *K. saccata* is the smallest species of the genus in Mesoamerica. It belongs to a group of species characterized by the truly stipitate, cylindric-umbonate callus, and by the lateral lobes of the lip erect and flanking the column. However, the deeply saccate base of the lip, as well as the lip blade ending in a retrorse tooth, are unique features among species of *Kefersteinia* native to Central America (Pupulin 2001).