**Data dictionary:**

**Associated with raw data file guadua\_lemmas\_palesa\_raw\_3.xlsx**

The following variables are to be used:

* Specimen: Specimen collector and number, with species name included
* Country: Country in which the specimen was collected
* Region: Region in which specimen was collected: Mexico, Central America, Andes, or Eastern South America
* Species: Species name
* Habit: Habit typical of species: Small arching, tall and erect, or leaning and climbing
* Habitat: Habitat typical of species: Forest, river, or savanna
* General\_habitat: Habitat typical of species, with river and forest categories combined to include savanna or general forest habitats.
* Recorder: Primary researcher observing presence/absence data: JAC (Josephine A. Crock) or EKM (Elizabeth Kathleen McMurchie)
* Notes\_lemma: Basic introductory notes taken for lemmas of some specimens
* Notes\_palea: Basic introductory notes taken for paleas of some specimens
* Lemma\_papillae\_simple: Lemma: Simple papillae present on long cells: 0 = absent, 1 = present
* Lemma\_papillae\_bifurcated: Lemma: Bifurcated papillae present on long cells: 0 = absent, 1 = present
* Lemma\_papillae\_branch: Lemma: Branching papillae present on long cells: 0 = absent, 1 = present
* Lemma\_prickle: Lemma: Prickle hairs: absent = 0, present = 1
* Lemma\_bicellular\_microhair: Lemma: Bicellular microhairs: absent = 0, present = 1
* Lemma\_macrohair: Lemma: Macrohairs: absent = 0, present = 1
* Lemma\_rondel: Lemma: Rondel shaped silica bodies: 0 = absent, 1 = present
* Lemma\_cross: Lemma: Cross-shaped silica bodies: 0 = absent, 1 = present
* Lemma\_bilobate\_vertical: Lemma: Bilobate vertically elongated silica bodies: 0 = absent, 1 = present
* Lemma\_bilobate\_horizontal: Lemma: Bilobate horizontally elongated silica bodies: 0 = absent, 1 = present
* Lemma\_saddle: Lemma: Saddle-shaped silica bodies: 0 = absent, 1 = present
* Lemma\_vertical\_elongated: Lemma: Vertically elongated (rounded but not bilobate) silica bodies: 0 = absent, 1 = present
* Lemma\_horizontal\_elongated: Lemma: Horizontally elongated (rounded but not bilobate) silica bodies: 0 = absent, 1 = present
* Lemma\_reniform\_vertical: Lemma: Reniform, vertically elongated silica bodies: 0 = absent, 1 = present
* Lemma\_reniform\_horizontal: Lemma: Reniform, horizontally elongated silica bodies: 0 = absent, 1 = present
* Lemma\_stomata: Lemma stomata: 0 = absent, 1 = present
* Lemma\_stomata\_freq: Lemma stomata: 0 = frequent, 1 = infrequent
* Lemma\_stomata\_subsidiary\_cells\_triangular: Lemma stomata subsidiary cells triangular: 0 = absent, 1 = present
* Lemma\_stomata\_subsidiary\_cells\_domed: Lemma stomata subsidiary cells dome-shaped: 0 = absent, 1 = present
* Lemma\_stomata\_subsidiary\_cells\_parallel: Lemma stomata subsidiary cells parallel sided: 0 = absent, 1 = present
* Palea\_papillae\_simple: Palea: Simple papillae present on long cells: 0 = absent, 1 = present
* Palea\_papillae\_bifurcated: Palea: Bifurcated papillae present on long cells: 0 = absent, 1 = present
* Palea\_papillae\_branch: Palea: Branching papillae present on long cells: 0 = absent, 1 = present
* Palea\_mar\_prickle: Palea margin: Prickle hairs: absent = 0, present = 1
* Palea\_mar\_bicellular\_microhair: Palea margin: Bicellular microhairs: absent = 0, present = 1
* Palea\_mar\_macrohair: Palea margin: Macrohairs: absent = 0, present = 1
* Palea\_sul\_prickle: Palea sulcus: Prickle hairs: absent = 0, present = 1
* Palea\_sul\_bicellular\_microhair: Palea sulcus: Bicellular microhairs: absent = 0, present = 1
* Palea\_sul\_macrohair: Palea sulcus: Macrohairs: absent = 0, present = 1
* Palea\_rondel: Palea: Rondel shaped silica bodies: 0 = absent, 1 = present
* Palea\_cross: Palea: Cross-shaped silica bodies: 0 = absent, 1 = present
* Palea\_bilobate\_vertical: Palea: Bilobate vertically elongated silica bodies: 0 = absent, 1 = present
* Palea\_bilobate\_horizontal: Palea: Bilobate horizontally elongated silica bodies: 0 = absent, 1 = present
* Palea\_saddle: Palea: Saddle-shaped silica bodies: 0 = absent, 1 = present
* Palea\_vertical\_elongated: Palea: Vertically elongated (rounded but not bilobate) silica bodies: 0 = absent, 1 = present
* Palea\_horizontal\_elongated: Palea: Horizontally elongated (rounded but not bilobate) silica bodies: 0 = absent, 1 = present
* Palea\_reniform\_vertical: Palea: Reniform, vertically elongated silica bodies: 0 = absent, 1 = present
* Palea\_reniform\_horizontal: Palea: Reniform, horizontally elongated silica bodies: 0 = absent, 1 = present
* Palea\_stomata: Palea stomata: 0 = absent, 1 = present
* Palea\_stomata\_freq: Palea stomata: 0 = frequent, 1 = infrequent
* Palea\_subsidiary\_cells\_triangular: Palea stomata subsidiary cells triangular: 0 = absent, 1 = present
* Palea\_subsidiary\_cells\_domed: Palea stomata subsidiary cells dome-shaped: 0 = absent, 1 = present
* Palea\_subsidiary\_cells\_parallel: Palea stomata subsidiary cells parallel sided: 0 = absent, 1 = present