This paper is a continuation of previous research (Ormerod, 2016) that deals with various problems that the author encountered during studies of Neotropical orchids.

Type species: *Maxillaria atropurpurea* Lindl.

A genus of 18–20 species mostly confined to Brazil, with a few outliers reaching north to Venezuela, and south to Argentina. The genus was effectively revised by Koehler and Amaral (2004) with a seemingly sound taxonomic approach, but curiously they omitted several synonyms and quoted incorrect types for a number of names.

**Bifrenaria parthonii** (Dumort.) Ormerod, *comb. nov.*  
TYPE: BRAZIL. Without locality, *cult. L.B.vanHoutte* s.n. (Holotype: lost).

Heterotypic synonyms:  
  
- *Stenocoryne clavigera* (Rchb.f.) Kraenzl., Xenia Orch. 3: 142. 1896.

**Stenocoryne wendlandiana** Kraenzl., Xenia Orch. 3: 154. 1896.  

**Adipe wendlandiana** (Kraenzl.) M. Wolff, Orchidee (Hamb.) 41, 2: 37. 1990.

**Distribution:** Brazil.

After analysis of the protologue of *Maxillaria parthonii* I conclude it is the earlier name for *Bifrenaria clavigera*. Dumortier notes the compressed, unifoliate pseudobulbs, multiflorous inflorescence, rose-gray petals, lateral sepals forming a mentum, unlobed labellum with denticulate margins, inside with carmine points, and a medial citron yellow spot. A good image exemplifying these characters has been published by Chiron and Bolsanello (2014) as *B. clavigera*.

Type species: *Lycaste locusta* Rchb.f.

A genus of 40–45 large-flowered species occurring in the Caribbean and South America. It has until recently been known as *Sudamerlycaste* Archila until Pupulin and Karremans (2017) showed that *Ida* was the oldest name, and that the publication dates of the former were erroneous. In a recent treatment (Ormerod, 2018) of *Xylobium* Lindl., an excluded species (*X. insolitum*) was transferred to the younger name; this is here corrected.

**Ida insolita** (Szlach. & Kolan.) Ormerod, *comb. nov.*  
Basionym: *Xylobium insolitum* Szlach. & Kolan., Phyton (Horn) 54, 1: 73. 2014.  
TYPE: COLOMBIA. Norte de Santander: Municipio de Playa de Belen, Quebrada la Teneria, Area Natural Unica los Estoraques, 1600 m, 14 April 2002, R.Galindo-Tarazone 805 (Holotype: COL; Isotype: UIS, images seen).


**Distribution:** Colombia.

**Microchilus** Presl, Reliq. Haenk. 1, 2: 94. 1827.  
Lectotype species (Ormerod 2002: 214): *Microchilus minor* Presl

A genus of Goodyerinae with about 145–150 species confined to the New World, distributed from Mexico and the Caribbean to Argentina and Paraguay. It is particularly well represented in the Andes of Colombia, where about half the species occur. Apart from the two new species described here, it is necessary to propose some new synonymy.

TYPE: PERU. Cuzco: Prov. Urubamba, ruins of Machu Pichu, 2100 m, 28 July 1966, C.Vargas C. 17638 (Holotype:...
**Microchilus croatii** Ormerod, sp. nov.

Type: ECUADOR. Zamora-Chinchipe: along road between Zumba and Vilcabamba, 74.5 km N of Zumba, 44.3 km S of Yangana, 1233 m, 28 July 2004, T.B.Croat 92514 (Holotype: SEL; Isotype: MO, not seen). Fig. 1.

Additional specimen examined: PERU. Cuzco: Prov. La Convencion, Distrito Quellouno, road to Lacco, 1000–2100 m, 27 August 2007, L.Valenzuela, A.Carazas, B.Rado & S.Flores 10223 (Holotype: MO).

**Distribution:** Peru.

**Additional specimen examined:** PERU. Cuzco: Prov. Urubamba, Machu Pichu, 500 m N of Sayacmarca and Ayobamba Rivers, 2405 m, 12 October 1982, B.Peyton & S.TilneyPeyton 1481 (MO).

Examination of the holotype of *Microchilus peruvianus* reveals no characters that distinguish this entity from *M. capitatus*. Critical characters such as the densely congested rachis, smallish flowers (sepalas 4.2–5.2 mm long), truncate-subbilobulate petals, apically clawed hypochile, obliquely spatulate-cuneate epichile lobules, and short column (2.0–2.4 mm long) are all found in the material at hand.

**Microchilus viridissimus** Ormerod, having flowers about the same size; however, it differs in having a lunate-anchoriform (vs. transversely oblong) labellum epichile with half as wide (0.4 vs. 0.9 mm) lobules, and a much stouter column.


Type: COSTA RICA. Cartago: Rio Atirro, La Esperanza, 800 m, 8 October 1974, P.J.M.Maas 1171 (Holotype: F; Isotype: MO).


Specimens from Panama tend to have flowers at the lower end of floral size (sepalas ca. 6 mm long) but otherwise do not differ from Costa Rican plants. In this regard I find no characters that justify the separation of *Microchilus campanensis* Kolan., which agrees in all features with the numerous examples already studied (see Ormerod, 2007, for specimen citation).


Type: COSTA RICA. Without locality, F.C.Lehmann s.n. (Holotype: B, destroyed; drawing AMES).

Homotypic synonym: *Erythrodes nigrescens* (Schltr.) Ames, Orch. 7: 74. 1922.


Type: PANAMA. Chiriqui: Valley of the Rio Caldero, from El Boquete to the Cordillera, 1400–1600 m, 1 February 1918, E.P.Killip 3561 (Holotype: AMES; Isotypes: GH; BH, NY, images seen).


**Microchilus atwoodii** Szlach. & Kolan., Phytotaxa 56, 2: 261. 2016 syn. nov.

Type: COSTA RICA. Puntarenas: Monteverde, in cloud forest owned by Campbell family, 1575 m, 2 March 1989, J.T.Atwood 89-10 (Holotype: MO; Isotypes: F, GH, K, 2 sheets).

Distribution: Costa Rica; Panama.

Additional specimens examined: COSTA RICA. Cartago: Cerro de La Carpinteria, 1500–1850 m, February 1924, P.C.Standley 35677 (US); same data, P.C.Standley 35614 (US); same data, P.C.Standley 35581 (US); Carpinteria Mountains, 1800 m, leg. C.Horich s.n., Univ. Calif. Berkeley 59.319 (US); same data, Univ. Calif. Berkeley 59.319-1 (MO); Eastward trail into mountains from road into Tapanti Reserve, ca. 1 km S of junction of Quebrada Salto and Rio Grande de Orosi, 1500–1800 m, 1 February 1986, M.H.Grayum, P.Sleeper, J.Dickie,
A.R. Smith & T. Beliz 6282 (MO); Hacienda Queveri, Rio Mache de Paraiso, along road leading to Rio Blanco, 1630 m, 15 July 1984, M.H. Grayum 3491 (MO); Estrella to Santa Maria road, 2135 m, 21 April 1928, H.E. Stork 1508 (MO).

Guanacaste: Canton de Abangares, 5 km N of Monteverde at the Rio Negro on road to Finca San Bosco, Atlantic slope, 1300 m, 2 February 1989, W. Haber 9086 & W. Zuchowski (MO). Puntarenas: near Monteverde, in Cordillera de Tilaran, 1500 m, 8 May 1971, F. Almeda & J. Utley 679 (DUKE); ca. 2 km SE of Monteverde, 1500–1550 m, 18–21 March 1973, W. Burger & J. L. Gentry Jr. 8543 (F, MO).

Cascajal, [received at K July 1919], C.H. Lankester 57 (K); Varablanca, April 1925, C.H. Lankester 1482 (K); San Luis de Zarcero, 1310 m, 15 February 1938, A. Smith H 335 (F).

For a long time, most herbarium material of relatively robust Central American Microchilus bore the name *Erythrodes killipii*. Nonetheless, a critical examination of the specimens showed that three species were actually confounded, the other two being *M. maasii* and *M. panamanicus*. Furthermore, study of a sketch of the type of *Physurus nigrescens* in AMES revealed this entity to be the older name for *Erythrodes killipii*. From the other two taxa (*M. maasii* and *M. panamanicus*) one can recognize *M. nigrescens* by its smaller (sepals to 6.5 mm long), more ovoid (vs. tubular, campanulate) flowers, shorter spur (3 mm long), and very stout column. There are no characters to separate *M. atwoodii*, though the rachis is somewhat laxer in the holotype than most in specimens, but the isotypes have subdensely flowered inflorescences just like the other material.


**TYPE:** PANAMA. Prov. de Panama: Cerro Trinidad, 800–1000 m, 20 October 1946, P.H. Allen 3768 (Holotype: AMES; Isotype: F).

**Distribution:** Panama. Additional specimens examined: PANAMA. Prov. Chiriqui: E of the Fortuna Dam main campsite, 1200–1600 m, 12 September 1977, J.P. Folsom & R. Dressler 5287 (MO); Campamento de Fortuna, site of the dam of Trocha 3 de November, between Santa Maria and Pinola, 1000–1200 m, 10–20 July 1977, J.P. Folsom 4199 (Holotype: MO 2622087, MO 3493352).
Microchilus topeonis Ormerod, sp. nov.

**TYPE:** ECUADOR. Tungurahua: 2 km E of Rio Topo, 1250–1450 m, 4 June 1985, B.A.Stein 2983 (Holotype: MO). Fig. 2.

**Habitat and ecology:** Slightly disturbed wet montane forest, 1250–1450 m.

**Etymology:** Named after the Rio Topo, which is near the type locality.

This species is superficially similar to *Microchilus anchorifer* (Schltr.) Ormerod in having leaves with dark green markings, but the petals are narrower, the spur longer, and the column longer.

**Usage synonym:** *Erythrophorum anchorifera* auct. non (Schltr.)


**Similar to Microchilus anchorifer** (Schltr.) Ormerod but the flowers with narrower (1.00 vs. 1.50–2.15 mm) petals, longer (3.2 vs. 1.9–2.0 mm) spur, and a longer (2.9 vs. 2.0–2.2 mm) column.

Terrestrial herb, to 43 cm tall in flower. Rhizome not seen. Stem erect, terete, 4-leaved in upper half, 10.5 × 0.25–0.30 cm. Leaves obliquely ovate-lanceolate to ovate-elliptic, acute to subacuminate, transversely mottled dark green, 2.90–7.00 × 1.45–2.65 cm; petiole and sheath 1.7–2.1 cm long. Inflorescence pubescent, to 33.1 cm long; peduncle 19.1 cm long; sheathing bracts 7, lax, 1.1–1.9 cm long; rachis subdensely and subsecundly many-flowered, 14 cm long; floral bracts ovate-lanceolate, acute, to 9.0 × 2.5 mm. Flowers white, green basally, externally pubescent. Pedicel with ovary clavate, pubescent, 7 mm long. Dorsal sepal oblong-lanceolate, acute, 4.9 × 1.5–1.6 mm. Lateral sepal obliquely oblong-ligulate, subacute, 5.9–6.0 × 1.3–1.5 mm. Petals obliquely ligulate-oblanceolate, obtuse, 4.9 × 1.0 mm. Labellum spurred, joined to column for 1.0–1.2 mm; spur obliquely clavate, obtuse, 3.2 mm long; hypochile narrowly cuneate-oblong, ca. 3.8 mm long, base 1.6 mm wide, subapical area 1.3 mm wide; epichile transversely oblong-rhombic, 0.9–1.0 × 2.9 mm, lobules ovate, obtuse, 0.7–0.8 mm wide. Column 2.9 mm long to tips of brachia, 3.5–3.6 mm long to tip of anther cap.

**Distribution:** Ecuador.

**Literature cited**


