Three new species of *Macrocarpaea* Gilg from Peru are described and illustrated, one based on a single specimen from a poorly known locality, and two from recently collected material that have been sequenced and included in a new molecular phylogeny of the genus (Vieu and Grant in prep.). This paper continues a series of studies in preparation of a full monograph (Grant, 2003, 2004, 2005, 2007, 2008, 2011, 2014; Grant and Struve, 2001, 2003; Grant and Trunz 2011; Grant and Weaver, 2003).

1. *Macrocarpaea abiseo* J.R. Grant, sp. nov. TYPE: PERU. San Martín: Dist. Huallaga, Valley of Rio Apisconcho, 30 km above Jucushamba, 7˚55’S, 77˚10’W, 3000 m, 4 September 1965, A.C. Hamilton & P.M. Holligan 688 (Holotype K).

*Macrocarpaea abiseo* is a new species from Amazon-facing slopes of the Andes in central Peru that differs from *Macrocarpaea pajonalis* in having slightly visible secondary veins on its leaves, spicate calyces, and flowers that are less nodding.

*Shrub* glabrous to hyaline spicate, especially spicate on petioles, bracteoles, and calyces which are covered with short simple hairs. *Stems* terete to slightly quadrangular, solid, 4–5 mm in diameter just below the inflorescence. *Leaves* oval to obovate, sessile to short-petiolate, 3.0–8.5 cm long. *Petioles* 0–10 mm, robust with slight vagination one quarter the length of the petiole; *interpetiolar ridge* 2–3 mm.

*Flowers* pedicellate, erect; *pedicels* 5–8; *bracteoles* inconspicuous and scabrous, linear to triangular, 1.0–2.5 × 0.5–1.0 mm. *Calyx* campanulate, 6–8 × 5–6 mm, hyaline spicate, faintly rugose, ecarinate, reniform to ovate; *calyx lobes* 1–2 × 2.5–3.0 mm, rounded. *Corolla* funnel-shaped, 28–33 mm long, 12–15 mm wide at the apex of the tube, yellow, smooth; *corolla lobes* ovate, 7–8 × 6–7 mm, obtuse to rounded. *Stamen* 15–20 mm long; filaments 10–15 mm long, filiform, flattened; *anthers* elliptic to sagittate, 5 × 1.5–2.0 mm, sagittate, versatile; *pistil* 26–28 mm long; *ovary* 6.5–7.0 × 2–3; *style* 17–18 × 0.5–0.75 mm; stigma lobes spathulate, 2.5–3.0 × 2 mm. *Capsules* and seeds unknown.

**Distribution and habitat:** *Macrocarpaea abiseo* occurs on Amazon-facing slopes of the Andes in central Peru. Since this area has been little explored, it is not surprising there are novelties in the region. The only other species of *Macrocarpaea* known from this area is *Macrocarpaea gran-pajatena* J.R. Grant.

**Etymology:** Named for Parque Nacional del Río Abiseo in Peru, where it occurs.

*Macrocarpaea abiseo* has thick leathery leaves with scarcely visible secondary veins. It appears to belong to a group of species from southern Ecuador and Peru with these characteristics including *M. harlingii*, *M. lorantheoides*, *M. luya*, *M. pajonalis*, and *M. stenophylla*. It may be most closely related to *M. pajonalis*, a common species of the Oxapampa and Huánuco region of Pasco and Huánuco in central Peru. However, *M. abiseo* has more visible secondary veins on its leaves, hispid calyces, and flowers that are less nodding. *Macrocarpaea pajonalis* is always completely glabrous. Additional collections from the Oxapampa region that may eventually be attributed to *M. abiseo* are *Perea* 694, Valenzuela 13762, van der Werff 22970. These were collected within the general distribution of *M. pajonalis*, but at higher elevations.


2. *Macrocarpaea felicitata* J.R. Grant & J. Vieu, *sp. nov*.  
**TYPE:** PERU. Pasco: Dist. Oxapampa, bosque primario y de arenisca, 10°40′36″S, 075°18′55″W, 2400 m, arbolito 4 m, flores amarillo-verdosas, 21 February 2006, *R. Rojas, A. Peña, J. Mateo, & C. Rojas 3935* (Holotype: MO; Isotype: NY). Fig. 2.

*Macrocarpaea felicitata* is a new species from Amazon-facing slopes of the Andes in central Peru that differs from *Macrocarpaea stenophylla* in being a 4 m tall tree with a large panicle of trumpet-shaped corollas and hispid to spiculate calyces. Small tree to 6 m, hyaline hispid to spiculate with short simple hairs on stems, petioles, leaves, inflorescences, bracts and calyces. *Stems* terete to slightly quadrangular, solid to hollow, 7–10 mm in diameter just below the inflorescence.

*Leaves* oval to broadly elliptic, petiolate, 45 cm long. *Petiole* 6 mm long, robust with strong open vagination one half the length of the petiole; interpetiolar ridge 1–3 mm high. *Blade* 39 × 22 cm, entire, dark green, with slightly impressed veins above, and slightly raised veins below, hyaline hispid to spiculate throughout especially along veins on lower surface, papery thin; leaf base aequilateral, oblique, to cuneate; leaf apex obtuse to acute. *Inflorescence* a much branched open thyrs 29–36+ cm high; branches 10–25 cm long; 5–10 flowered per branch. *Bracts* ovate, oval, elliptic, to narrowly oblanceolate, sessile to petiolate, 12–190 × 2–100 cm; bract base aequilateral to oblique, cuneate, rounded to short-attenuate; bract apex acute to obtuse; bract petioles 0–25 mm long. *Flowers* pedicellate, spreading; pedicel 9–26 mm long, linear to lanceolate; bracteoles 1.5–12 × 0.5–2.0 mm.
Figure 2. *Macrocarpaea felicitata*. **A**, lower leaf; **B**, habit of flowering stem; **C**, bud and pistil in calyx. **A** from Vieu et al. JVII (NY), **B-E** from Rojas et al. 3975 (MO).
**Calyx** campanulate, 8–11 × 5–6 mm long, hyaline hispid to spicate with short simple hairs, ecarinate; calyx lobes ovate to reniform, 1.5–2.0 × 2–3 mm, rounded to obtuse, the edges slightly fimbriate. **Corolla** funnel-shaped, 57–63 mm long, 23–30 mm wide at the apex of the tube, greenish-yellow, smooth; corolla lobes ovate to elliptic, 11–18 × 7–14 mm, apex obtuse to rounded. **Stamens** 43–48 mm long; filaments 38–42 mm long, filiform, flattened; anthers elliptic to sagittate, 5–6 × 1.5–3 mm, sagittate, versatile; pollen glabra-type. **Pistil** 60–62 mm long; ovary 8–11 × 3–4 mm; style 45–47 × 1 mm; stigma lobes spathulate to oblong, 5–6 × 1.0–2.5 mm. Capsules and seeds unknown.

**Distribution and habitat:** *Macrocarpaea felicitata* occurs in primary to secondary forests on Amazon-facing slopes of the Andes on the Cordillera Central in central Peru near Oxapampa. This is the area where *Macrocarpaea* species including *M. revoluta* (Ruiz & Pavon) Gilg, J.R. Grant, M. ostentans (Ruiz & Pavon) Gilg, J.S. Pringle, M. felicitata J.R. Grant, M. angustifolia J.R. Grant, M. pajonalis J.R. Grant, M. revoluta (Ruiz & Pavon) Gilg, M. robin-fosteri J.R. Grant, M. tahuantinsuyoana J.R. Grant, M. viscosa (Ruiz & Pavon) Gilg, and M. wallnoeferi J.R. Grant. *Macrocarpaea felicitata* can be easily identified within this group in having small (5 mm long) puberulent hairy calyces.

**Etymology:** From the Latin, *felicitata*.


3. **Macrocarpaea huamantanga** J.R. Grant & J. Vieu, sp. nov. TYPE: PERU. Cajamarca: Distrito de Jaén, caserío San Jose, camino hasta la catarata “del velo de la novia,” Bosque de Huamantanga, 5˚42.370 S, 78˚57.106 W, 2223 m, 21 February 2012, J. Vieu & D. Desrousseaux 43 [DNA voucher = JV47] (Holotype: NY; Isotype: MO). Fig. 3.

*Macrocarpaea huamantanga* is a new species closely related to *M. chthonotropa*, yet differs in having generally ob lanceolate leaves, and an urceolate-campanulate calyx with thickened calyx lobes and a thickened area at the base between each calyx lobe.

**Tree** to 4 m, glabrous throughout. **Stems** terete to slightly quadrangular above, hollow, 7–13 mm in diameter just below the inflorescence. **Leaves** elliptic, oblong, ovate to obovate, short-petiolate, 36–40 cm long. **Petioles** 20–30 mm long, robust with strong open vagination one-third the length of the petiole; interpetiolar ridge 2–3 mm. **Blades** 36–37 × 11–17 cm, entire, not revolute, dark above and conspicuously lighter below, with slightly impressed veins above, and slightly raised veins below, glabrous above and below, papery thin; leaf base aequilateral to oblique, cuneate, decurrent on the petiole to the base of the leaf; leaf apex acute to acuminate. **Inflorescence** a much branched open thyrs 50+ cm; branches 18–40 cm long; 5–15 flowered per branch. **Bracts** elliptic, oblong, ovate to oblanceolate, sessile to short-petiolate, 10–220 × 4–70 mm; bract base aequilateral to oblique, cuneate, decurrent on the petiole to the base of the bract; bract apex acuminate; bract petiole 0–10 mm long. **Flowers** pedicellate, erect; pedicels 8–22 mm long; bracteoles inconspicuous and scabrous, linear, triangular to ovate, 1–10 × 1–3 mm. **Calyx** campanulate to urceolate, 5–7 × 6–7 mm, glabrous, rugose, ecarinate, but calyx lobes thickened dorsally, and thickened basally between each calyx lobe; calyx lobes ovate, 2–4 × 2–4 mm, acute to obtuse. **Corolla** funnel-shaped, 28–38 mm long, 10–15 mm wide at the apex of the tube, yellow, smooth; corolla lobes ovate, 8–11 × 6–7 mm, apex obtuse to rounded. **Stamens** 20–23; filaments 16–18 filiform, flattened; anthers elliptic to oblong, 4–5 × 2 mm, sagittate, versatile; pollen glabra-type. **Pistil** 30–32 mm long; ovary 5–7 × 1–3 mm; style 21–22 × 0.5–1.0 mm; stigma lobes spathulate, 3–4 × 1–2. **Capsules** ellipsoidal to linear-long, 24–26 × 7–9 mm, smooth to faintly ribbed, faint-orangeish tan, erect to slightly spreading. **Seeds** “Perimetrically winged type,” flattened, roughly 3-4 sided in outline, yet appearing as myriads of different puzzle pieces, straw-colored, testa reticulate, wings ribbed.

**Distribution and habitat:** *Macrocarpaea huamantanga* occurs in the understory of primary forest of the Andes of Cajamarca in northern Peru.

**Etymology:** Named for its locality at Bosque de Huamantanga, Jaén, Cajamarca.

**Additional specimens examined:** PERU. Cajamarca: Distrito de Jaén, caserío San Jose, camino hasta la catarata “del velo de la novia,” Bosque de Huamantanga, 5˚42.370 S, 78˚57.106 W, 2223 m, 21 February 2012, J. Vieu & D. Desrousseaux 42 [DNA voucher = JV45], and 44 [DNA voucher = JV48] (NY).

*Macrocarpaea huamantanga* is most closely related to *M. chthonotropa* as can be seen in both morphology as well as in DNA sequences. It is distinct in having generally ob lanceolate leaves, a large paniculate inflorescence with comparatively small flowers, and an urceolate-campanulate calyx with thickened calyx lobes, and a thickened area at the base between each calyx lobe.
Figure 3. *Macrocarpaea huamantanga*. A, lower leaf and habit of flowering stem; B, bud; C, pistil in calyx. All drawn from Vieu & D. Desrousseaux 43 (NY).


