

**Supplementary information 2. Key to the species of *Rapatea*
(Modified from Berry, 2004)**

1. Leaf blades 0.5--2.5 cm wide.....2
 - 2(1). Receptacle plane-convex; bractlets strongly gradate.....*R. linearis*
Gleason (Amazonian of Brazil, Colombia, Guyana)
 2. Receptacle shallowly convex, at least hemispheric or elongate,
bractlets equal in length.....3
 - 3(2). Leaves blades orange punctate below, inflorescence elongate, base
of the involucre bract deeply cordate.....*R. xiphoides*
Sandw. (Guyana: Kaieteur savannas)
 3. Leaves blades if punctate, without orange dots, inflorescence shallowly
convex or at least hemispheric, base of the involucre bract truncate,
rounded or
subcordate.....4
 - 4(3). Base of leaf blades abruptly widened at the base above the petiole;
apex of leaf blade abruptly narrowed; petiole as long as the blade or
longer.....*R. longipes* Spruce ex Körn. (Río Negro basin: Amazonian of
Brazil, Colombia and Venezuela)
 4. Base of leaf blades gradually passing into the petiole; apex of leaf blades
not abruptly narrowed; petiole shorter than the
blade.....5

5(4). Apex of the involucral bracts attenuate 1--45 mm long, < twice as long as the expanded broader basal portion; lower surface of the leaf blade glandular-punctate or sparse verrucose mainly on the lower surface.....6

6. Plants 30--80 cm tall; lower surface of the leaf blade glandular-punctate; attenuate portion of the involucral bracts 10--45 mm long; peduncle of inflorescence 16--35 cm long, petals yellow.....*R. spruceana* Körn. (Río Negro basin: Amazonian of Brazil, Colombia and Venezuela)

6. Plants 15--30 cm tall, lower surface of the leaf sparsely verrucose; attenuate portion of the involucral bracts 1--5 mm long, peduncle of inflorescence 8--13 cm long; petals white.....*R. isanae* Aymard & Arellano-Peña (Río Negro basin: Amazonian Colombia)

5. Attenuate portion of the involucral bracts 20--80 mm long, 2--4 times longer than the expanded broader basal portion; lower surface of the leaf blade smooth (not glandular-punctate or sparsely verrucose).....7

7(5). Attenuate portion of the involucral bracts 20--35 mm long, 2--3.5 times longer than the expanded broader basal portion; lower surface of the leaf blade densely and minutely papillate; bracteoles aristate.....
.....*R. yapacana* Maguire (Venezuela, Amazonas state: savanna Yapacana)

7. Attenuate portion of the involucral bracts 35--80 mm long, 4--5 times longer than the expanded basal portion; lower surface of the leaf blade

not minutely papillate; bracteoles acute, apiculate, or sharply acuminate.....8

8(7). Plants slender; expanded basal portion of involucral bracts 7--12 mm wide; attenuate portion of involucral bracts 35--50 mm long, 4--5 mm broad; leaf blades 3--7 mm wide; peduncle 4--20 cm long, shorter than the leaves; plants growing in dense circular clumps of numerous individuals.....*R. angustifolia* Spruce ex Körn. (Río Negro basin: Amazonian of Brazil, Colombia and Venezuela)

8. Plants stout; expanded basal portion of involucral bracts 20--25 mm wide; attenuate portion of involucral bracts 55--85 mm long, 9--14 mm broad; leaf blades 9--15 mm wide; peduncle 35--45 cm long, longer than, or equal to, the leaves; plants generally growing as solitary individuals.....*R. circasiana* García-Barr. & L. E. Mora (Río Negro basin: Amazonian of Brazil, Colombia and Venezuela)

1. Leaf blades 3--14 cm wide.....9

9(1). Leaf sheath short, 2--9 (-15) cm long; involucral bracts 1.5--8 cm long, apex narrowed, 0.5--3.5 cm long; heads 1--3 cm broad.....10

10(9). Base of leaf blades gradually narrowed at the base to a union with the sheath, petiolar portion ca. 0.2 cm long; involucral bracts 6--8 cm long, narrowed apical part 3--3.5 cm long.....*Rapatea* sp.#A (Colombia; Cauca)

10. Base of leaf blades abruptly widened at the base above the petiole; portion more than 1 cm long; involucral bracts 1.5--3.5 cm long,

narrowed apical part 0.5--2.5 cm long.....11

11(10). Leaf sheaths lanceolate, 3 or more times longer than broad; petiole as long as the blade, leaf blades 3--3.5 cm wide, oblong-linear to lanceolate; narrowed apical part of the involucral bracts 0.5--1 cm long; peduncle 12--25(30) cm long; petals yellow.....*R. longipes* Spruce ex Körn. (Río Negro basin: Amazonian Brazil, Colombia and Venezuela)

11. Leaf sheaths strongly ventricose, 2--3 times longer than broad; petiole longer than the blade; leaf blades 3--6 cm wide, oblong-elliptic; apex 2--3 cm long; narrowed apical part of the involucral bracts 1--2.5 cm long; inflorescence 6--15 cm long; petals white.....*R. modesta* Maguire (Amazonian Colombia)

9. Leaf sheath elongate, 15--30 cm long; involucral bracts 5--25 cm long, apical attenuate portion 3--22 cm long; heads 3--8 cm broad.....12

12(9). Lamina base gradually narrowed to petiole region.....13

13(12). Petiolar region 0.5--3 cm long.....14

14(13). Leaves (4-) 5--9 cm wide; leaves smooth throughout; involucral bracts cordate at the base; bracteoles acuminate, spotted (maculate) at the apex.....*R. spectabilis* Pilg. (Brazil, Bolivia, Colombia, Ecuador and Peru)

14. Leaves 3--4 cm wide; lower surface of the leaves slightly scabridulous; involucre bracts truncate at the base; bracteoles cucullate-obtuse, without spots at the apex..... *R. scabra* Maguire (Venezuela, Amazonas state: Cerro Sipapo)

13. Petiolar region more than 3.5 cm long.....15

15(13). Leaves 4--12 cm wide, inflorescence 4--8 cm broad, involucre bracts 10--20 cm long, cordate, spikelets pedicellate (pedicels 10--20 mm long), widespread in the Neotropics (from Panama, Trinidad, Venezuela to Bolivia).....*R. paludosa* Aubl.

15. Leaves 3--4 cm wide, inflorescence ca. 3 cm broad, involucre bracts 8--10 cm long, involucre bracts rounded or deeply cordate at the base, spikelet sessile or pedicels not longer than 3 mm (Brazil, Guayana Shield of Suriname and Venezuela).....16

16(15). Involucre bracts deeply cordate at the base; spikelet bractlets 5(-7) nerved at the apex.....*R. pycnocephala* Seub. (Brazil: Bahia, Goiás, Maranhão, Mato Grosso, Pará, Piauí, Rondônia)

16. Involucre bracts rounded at the base; spikelet bractlets 3--nerved at the apex.....*R. sessiliflora* (Maguire) Aymard & Arellano-Peña (Brazil-Amazonas, Suriname and Venezuela)

17. Floral receptacle convex or hemispheric.....21
- 21(17). Leaves blades oblong, abruptly short-acuminate at the apex, constricted at the base into an evident petiole of 1--20 cm long.....22
22. Leaves blades coriaceous, petiolar portion 10--20 cm long; bracteoles rigid, 3--7-nerved, short--acuminate.....*R. muaju* García-Barr. & L. E. Mora (Brazil-Acre, Colombia, Ecuador and Peru)
- 22(21). Leaves blades membranaceous; petiolar portion 1--10 cm long; bracteoles membranaceous, 3--5-nerved, long--aristate.....23
- 23(22). Leaves blades ca. 50 x ca. 10.5 cm; base subcordate to oblique; petiolar portion 8--10 cm long; penducle of the inflorescence 18--25 cm long; bracteoles 5--nerved.....*R. saulensis* Boom (French Guiana and Suriname)
23. Leaf blades 16--21 x 4--8 cm; base inequalateral; petiolar portion 1--3 cm long; penducle of the inflorescence 4--5 cm long; bracteoles 3--5-nerved.....*R. undulata* Ducke (Amazonian of Brazil, Colombia and Peru)
21. Leaf blades lanceolate, gradually acuminate at the apex, cordate or attenuate at the base, with a shorter petiole, 5--20 mm or less of long.....24

24(21). Leaf blades smooth; inflorescences elongate-hemispheric;
bracteoles not all
gradate.....25

25(24). Leaf blades 33--38 x 5--6 cm, leaf sheaths 10--14 cm long,
ventricose.....*R. ulei* Pilg. var. *ulei* (Amazonian of Brazil, Guyana, French
Guiana and Peru)

25. Leaves blades 40--60 x 10--14 cm, leaf sheaths 20--30 cm long,
elongate.....
....26

26(25). Inflorescence uni--capitate.....*R. ulei* Pilg. var. *latifolia* Maguire
(Brazil, Amazonas state)

26. Inflorescences multicapitate.....*R. ulei* Pilg. var. *latifolia* Maguire fm.
multicapitata Maguire (Brazil, Amazonas state)

24. Leaves blades glandular--papillate; inflorescences shallow--
hemispheric to sub-hemispheric; bracteoles evidently
gradate.....27

27(24). Peduncle 3--14 cm long; involucre bracts broadly deltoid, nearly as
broad as long, 6--10 cm
long.....28

28(27). Lower surface of leaf sheath densely brown-pubescent with
elongate, crisp-villosulous, loose, multicellular hairs; upper surface of leaf
with short, divaricate, pointed hairs irregularly scattered on the veins in
addition to the minutely papillate surface; spikelets 16--20 mm long
(excluding the sepals); lowest bracteoles 12--13 mm long; anthers ca. 5

mm long; filaments glabrous.....*R. steyermarkii* Maguire (Guayana Shield of Guyana and Venezuela)

28. Lower surface of leaf sheath brown--dotted between smaller, pale punctuations; upper leaf surface densely verruculose--papillate throughout; spikelets 23--25 mm long (excluding the sepals); lowest bracteoles 17--18 mm long; anthers ca. 10 mm long; filaments ciliolate.....*R. aracamuniana* Steyerm. (Venezuela, Amazonas state: Cerro Aracamuni)

27. Peduncle 20--50 cm long; involucral bracts lanceolate, longer than broad, 10--25 cm long.....29

29(27). Bracteoles stiff, obviously different in size, the lower ones much less than $\frac{1}{2}$ the length of the spikelet; leaf blades 25--75 cm long, 6--11 cm wide; involucral bracts 10--20 cm long; lower leaf surface with the primary veins acutely elevated, separating the broad, flat depressions; primary veins of upper leaf surface shallowly raised, not presenting a plaited appearance, 0.5--1 mm apart.....*R. fanshawei* Maguire (including *R. fanshawei* var. *minor*) Guayana Shield of Guyana and Venezuela

29. Bracteoles sub-membranaceous, of nearly equal length; leaf blades ca. 130 cm long, 9--12 cm wide; involucral bracts ca. 25 cm long; lower leaf surface with shallowly convex surfaces separated by shallow sulcations, lacking acutely elevated primary veins; primary veins of upper surface

conspicuously elevated and presenting a plaited appearance, 1--2 mm apart.....*R. chimantensis* Steyerm. (Venezuela, Bolívar state: Chimantá tepui)