

New bryophyte taxon records for tropical countries 6

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Indonesia: Java

Cololejeunea hyalina G.Asthana & S.C.Srivastava

Cibodas, ca.1700m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers JAV 2/91 (herb.Eggers), det. T.Pócs. Distribution: India (Asthana & Srivastava 2003).

(Steph. ex G.Hoffm.) Kachroo & R.M.Schust. ex J.J.Engel & B.C.Tan).

Gradstein & al. (2005) listed the species under *C. imbricata* from an altitude of 800-1000m. The specimens collected 1995 by J.Eggers are from Lore Lindu NP near Anaso, epiphyllous in rainforest at 1700m alt. (CEL 2/91) and at 1950m (CEL 2/130).

Indonesia: Sulawesi (Celebes)

Anastrophyllum bidens (Reinw. & al.) Steph. Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1700m alt., on tree roots in mountain rainforest, leg. 1995 J.Eggers CEL 2/76 and CEL 2/77; ca.1900m epiphytic on fallen branch in mountain forest, leg. 1995 J.Eggers CEL 2/20. Distribution: Australia, Bhutan, Borneo, China, India, Indonesia (Ceram, Irian Jahya, Java, Sumatra), Malaysia, Nepal, Papua New Guinea, Philippines, Solomon Isl., Sri Lanka, Thailand (Schill & Long 2003).

Cheilolejeunea vittata (Steph. ex G.Hoffm.) R.M.Schust. & Kachroo

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1900m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/114. Distribution: Australia, China, Indonesia, Malaysia (Borneo), Papua New Guinea, Philippines, Sri Lanka (Zhu, So & Wang 2002).

Cheilolejeunea trapezia (Nees) Kachroo & R.M.Schust. (syn. *Cheilolejeunea imbricata* (Nees) S.Hattori; *Cheilolejeunea longifolia*

Cololejeunea ceratilobula (Chen) R.M.Schust. North Prov., Dumega Bone NP, ca.200m alt., epiphyllous in lowland rainforest, leg. 1995 J.Eggers CEL 3/5 c.per. Distribution: Cambodia, China, Indonesia, Japan, Malaysia, Sri Lanka, Vietnam (Zhu & So 2001).

Cololejeunea dozyana (Sande Lac.) Schiffn. Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, 1950m alt., epiphyllous in mountain

rainforest, leg. 1995 J.Eggers CEL 2/124 c.per. Distribution: China, Indonesia, Malaysia, Philippines (Zhu & So 2001).

Cololejeunea equalbi Tixier

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/134 c.andr. + gemm. Distribution: China, Indonesia (Ceram), Japan, Papua New Guinea, Philippines, Vietnam (Zhu & So 2001).

Cololejeunea gottschei (Steph.) Mizut.

Central Prov., Lore Lindu NP near Camarora, 700m alt., epiphyllous in rainforest, leg. J.Eggers CEL 1/14 c.per. + gemm. Distribution: Bangladesh, Cambodia, China, India, Malaysia, New Guinea, Philippines, Sri Lanka, Vietnam (Zhu & So 2001).

Cololejeunea inflectens (Mitt.) Benedix (incl. *C. peculiaris*)

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1700m alt. and 1900m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/96 and CEL 2/111 resp. Distribution: Australia, Cambodia, China, East African Islands, Indonesia, Japan, Malaysia, Micronesia, New Caledonia, Papua New Guinea, Philippines, Sri Lanka, Vietnam (Zhu & So 2001).

Cololejeunea lanciloba Steph.

Central Prov., Lore Lindu NP near Camarora, 700m alt., epiphyllous in rainforest, leg. 1995 J.Eggers CEL 1/11; North Prov., Dumega Bone NP, 200m alt., epiphyllous in lowland rainforest, leg. J.Eggers CEL 3/10. Distribution: Africa, Australia, Cambodia, China, Hawaii, India, Indonesia, Japan, Malaysia, New Caledonia, Nicobar Isl., Polynesia, Sri Lanka, Thailand (Zhu & So 2001).

Cololejeunea planissima (Mitt.) Abeyw.

North Prov., Dumega Bone NP, 200m alt., epiphyllous in lowland rainforest, leg. J.Eggers CEL 3/9 c.per., det. T.Pócs (herb. Eggers). It is a reduced form with fragmentary developed or none hyaline marginal cells. Distribution: Cambodia, China, India, Indonesia, Japan,

Korea, Laos, Malaysia, Micronesia, Sri Lanka, Tanzania (Zhu & So 2001).

Cololejeunea schmidtii Steph.

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, 1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/140 c.per., det. T.Pócs (herb. Eggers). Distribution: Cambodia, China, Japan, Laos, Papua New Guinea, Philippines, Sri Lanka, Thailand, Vietnam (Zhu & So 2001).

Colura ari (Steph.) Steph.

Central Prov., Lore Lindu NP near Camarora, 700m alt., epiphyllous in rainforest, leg. 1995 J.Eggers CEL 1/15; North Prov., Dumega Bone NP, 200m alt., epiphyllous in lowland rainforest, leg. J.Eggers CEL 3/7 c.per. Distribution: Australia, Bangladesh, Cambodia, China, Fiji, India, Indonesia, Japan (?), Malaysia, New Caledonia, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka, Vietnam (Zhu & So 2001).

Colura cf. meijeri Ast

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1700m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/100. Distribution: Indonesia (Java), Japan, Malaysia (Borneo), Sri Lanka.

Colura tenuicornis (A.Evans) Steph.

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1700m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/109. Distribution: Pantropical.

Ephemeropsis tjibodensis K.I.Goebel

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/84. Distribution: Australia, Borneo, Fiji, Indonesia (Java, Sumatra), Malaysia, New Caledonia, Sri Lanka.

Lejeunea flava (Sw.) Nees

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca. 1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/135. Distribution: Worldwide (Zhu & So 2001).

Leptolejeunea balansae Steph.

Central Prov., Lore Lindu NP near Camarora, 700m alt., epiphyllous in rainforest, leg. 1995 J.Eggers CEL 1/18; North Prov., Dumega Bone NP, 200m alt., epiphyllous in lowland rainforest, leg. J.Eggers CEL 3/4 c.andr. Distribution: Cambodia, China, India, Indonesia, Laos, Malaysia, Thailand, Vietnam (Zhu & So 2001).

Leptolejeunea elliptica (Lehm. & Lindenb.) Schiffn.

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1900m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/119. Distribution: Pantropical.

Leptolejeunea epiphylla (Mitt.) Steph.

Central Prov., Lore Lindu NP near Camarora, 700m alt., epiphyllous in rainforest, leg. 1995 J.Eggers CEL 1/12 c.andr.; North Prov., Dumega Bone NP, 200m alt., epiphyllous in lowland rainforest, leg. J.Eggers CEL 3/3 c.andr. Distribution: Africa, Cambodia, China, Japan, Laos, Papua New Guinea, Philippines, Solomon Isl., Sri Lanka, Thailand (Zhu & So 2001).

Leptolejeunea maculata (Mitt.) Schiffn.

Central Prov., Lore Lindu NP near Camarora, ca.700m alt., epiphyllous in rainforest, leg. 1995 J.Eggers CEL 1/13 c.per. + andr., Lore Lindu NP, Mt. Rore Katimbu near Anaso, 1700m alt., epiphyllous in mountain rainforest, leg. J.Eggers 1995 CEL 2/94. Distribution: Pantropical.

Leptolejeunea vitrea (Nees) Schiffn.

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/137 c.andr. Distribution: Indonesia (Java, Sumatra, Moluccas), Malaysia (Borneo), Philippines, Vietnam (Herzog 1942).

Metzgeriopsis pusilla K.I.Goebel

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1950m alt., epiphyllous in mountain rainforest, leg. 1995 J.Eggers CEL 2/129. Distribution: Borneo, Fiji, Malaysia, New Guinea.

Syzygiella subintegerrima (Nees) Spruce

Central Prov., Lore Lindu NP, Mt. Rore Katimbu near Anaso, ca.1700m alt., on decaying tree roots in mountain rainforest, leg. 1995 J.Eggers CEL 2/58 and 2/78. The species was already mentioned for Celebes in Grolle (1967), but not listed in Gradstein & al. (2005). Distribution: Borneo, Indonesia (Irian Jahya, Java, Sulawesi, Sumatra), Malaysia, New Ireland, Philippines (Grolle 1967), Sri Lanka (Inoue 1968).

Indonesia: West Papua (Irian Jaya / New Guinea)*Aphanolejeunea norrisii* Pócs

Vogelkop Penins., Arfak Mountains, between Inat Beap and Cianbri, 1750m alt., epiphyllous in mountain rainforest, leg. 1995 M.Lenz, det. J.Eggers (herb. Eggers NG 1/21 c.per.). Distribution: Papua New Guinea (Pócs & Piippo 1999).

Cololejeunea sigmoidea Ast & Tixier

Vogelkop Penins., Arfak Mountains, between Inat Beap and Cianbri, 1580m alt., epiphyllous in mountain rainforest, leg. 1995 M.Lenz, det. J.Eggers (herb. Eggers NG 1/31). Distribution: Borneo, Cambodia, China, India, Indonesia (Java), Japan, Malaysia, Thailand, Vietnam (Zhu & So 1998, 2001). Also in Papua New Guinea (see below).

Cololejeunea wightii Steph.

Vogelkop Penins., Arfak Mountains, between Inat Beap and Cianbri, 1330m alt., epiphyllous in mountain rainforest, leg. 1995 M.Lenz, det. J.Eggers (herb. Eggers NG 1/72). Distribution: Africa, Australia, Cambodia, China, Malaysia, Melanesia, Micronesia, New Caledonia, Thailand (Zhu & So 1999, 2001).

Malaysia (Mainland)*Cololejeunea malayana* Tixier

The species is not new for Malaysia: It was first collected in Tana Rata/Cameron Highlands 1970 by Tixier, 1971 in Maxwell Hill/Perak by Tixier. He published his finding 1980 as endemic to Malaysia, described and illustrated it in 1985.

1993 Szabo found the species in Kalimantan Barat (Borneo) and published it 1997. All records were epiphyllous. The species is mentioned here, because in my collection of 1986 from Gunung Berenbam / Cameron Highlands (c.1700m CEL 2/348, herb. J.Eggers, conf. T.Pócs), also epiphyllous, there are two deviations from Tixier's original description: 1. the inflated lobules have sigmoid cells in the basic part or at least a tendency. 2. the ligulate lobules have a single row margin of hyaline cells. As I have not seen the type, I cannot decide if these features may be an addition to Tixier's description or belong to a deviant form.

Drepanolejeunea foliicola Horik. (syn. *Rhaphidolejeunea foliicola* (Horik.) Chen) Pahang, Cameron Highlands, Brinchang, Djungle Walk No.3, 1500-1600m alt., epiphyllous in cloud forest, leg. 1986 J.Eggers MAY 2/372 c.andr. Distribution: China, Japan. Each leaf has only 1 (basal) ocellus, and the androecium is not covered by the bracteoles. So the specimen is clearly differentiated from the newly described *D. commutata* Grolle & Zhu (2000).

Papua New Guinea

Cololejeunea angulata (Steph.) Mizut. Mizutani (1965) described and illustrated this species and reported it from New Guinea and the Philippines. Tixier (1985) placed it in synonymy with *C. cuneata* (Lehm. & Lindenb.) Steph., but Szabo (1997) who collected it in Borneo (Kalimantan) regarded *angulata* as an independent species, especially in respect to the different gemmae. I agree with Szabo, as also the marginal hyaline cells are different in shape. On the other hand, *Cololejeunea sinuosa*, first reported and described by Onraedt (1989) from the Philippines and reported by me (Eggers & al. 1998) from Papua New Guinea, seems to be identical with *angulata* and should be regarded as its synonym.

Cololejeunea grushvitzkiana Pócs

The epiphyllous plants collected 1997 by J.Eggers (herbar no. PNG 6/175) in the Kiunga

area at 50m alt. and published (Eggers & al. 1998) under *C. balansae* (Steph.) Mizutani are in fact *C. grushvitzkiana* Pócs. My former erroneous determination was due to the wrong illustration in Tixier (1985) which became clear after the article of Zhu & So (2000). They placed *balansae* in synonymy with *C. goebelii* (Gottsche) Schiffn., depending mainly on the stylus which is 3-7 cells long. In the Papuan plants there is no obvious stylus. The only slight difference from the illustration provided by Zhu & So is that the perianths of the Papuan plants have a short beak. Distribution: Vietnam.

Cololejeunea sigmoidea Ast & Tixier Western Prov., Kiunga, ca.50m alt., epiphyllous in lowland rainforest, leg. 1997 J.Eggers PNG 6/239 c.gemmae. Distribution: Cambodia, China, India, Indonesia, Japan, Malaysia, Thailand, Vietnam (Zhu & So 2001). Also in the Indonesian part of New Guinea (see above).

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