Heringeriana
Jardim Botânico de Brasília
https://revistas.jardimbotanicodf.org/index.php/heringeriana
ISSN 2359-165X

Original article

Myrtaceae in Alto Quiriri, Garuva, Santa Catarina, Brazil

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Received 25 November 2024 | **Accepted** 28 April 2025 | **Published** 18 July 2025

Citação: Vieira, F.C.S., Carvalho, R.J. & Sano, P.T. (2025) "Myrtaceae in Alto Quiriri, Garuva, Santa Catarina, Brazil" Heringeriana 19 (2025): e918062. doi.org/10.70782/heringeriana.v19i1.918062

Abstract: A floristic survey of Myrtaceae was conducted in the Alto Quiriri region (Santa Catarina), through collecting expeditions in altomontane vegetation refuges and Altomontane Dense Ombrophilous Forest, at altitudes of 1000 meters above sea level with analysis of materials held in biological collections, resulting in 37 native species, included in 9 genera. The most representative genera are *Myrceugenia*, *Myrcia* and *Eugenia* with 11, 10 and 9 species, respectively, followed by *Psidium* with two species and *Blepharocalyx*, *Myrciaria*, *Pimenta*, *Plinia* and *Siphoneugena* represented by one species each. Identification keys, descriptions, illustrations, taxonomic comments and information on the geographical distribution of the species of Myrtaceae from Alto Quiriri are provided. Five species are on the national list of threatened species and *Eugenia quiriri* is suggested for inclusion.

Keywords: Myrtaceae, Iquererim, Atlantic Forest.

Resumo: (Myrtaceae no Alto Quiriri, Garuva, Santa Catarina, Brasil.) A florística de Myrtaceae na região do Alto Quiriri (Santa Catarina) foi realizada através de expedições de coleta em refúgios vegetacionais altomontanos e floresta ombrófila densa altomontana, em cotas acima dos 1000 metros de altitude sobre o nível do mar e através da análise de materiais coletados por outros pesquisadores, resultando em 37 espécies nativas, incluídas em 9 gêneros. Destacam-se os gêneros *Myrceugenia*, *Myrcia* e *Eugenia* com, respectivamente, 11, 10 e 9 espécies, seguidos de *Psidium* com duas espécies e *Blepharocalyx*, *Myrciaria*, *Pimenta*, *Plinia* e *Siphoneugena* representados por uma espécie. São fornecidas chaves de identificação, descrições, ilustrações, comentários taxonômicos e informações sobre a distribuição geográfica das espécies de Myrtaceae do Alto Quiriri. Cinco espécies estão na lista nacional de espécies ameaçadas e *Eugenia quiriri* tem sua inclusão sugerida.

Palavras-chave: Mirtáceas, Iquererim, Floresta Atlântica.

Introduction

Myrtaceae is a botanical family of woody plants ranging from subshrubs less than 1m tall to large trees. It has a pantropical distribution with two centers of diversity on the Australian continent and in the Neotropical region (Wilson et al., 2001; Sobral, 2003). The native Brazilian species are characterized by opposite leaves (rarely verticillate), entire margins, without stipules, presence of translucent glands, predominantly white flowers (except for *Feijoa* and *Myrrhinium*), inferior ovary and berry-like fruit, mostly with a persistent calyx (Landrum & Kawasaki, 1997; Sobral, 2003). The total number of species worldwide is estimated at 5,500 (Utteridge & Bramley, 2014), and in Brazil there are between 1,000 and 1,212 species (Landrum & Kawasaki, 1997; Myrtaceae in Flora e Funga do Brasil, 2025).

In the Atlantic Forest, the family highlights both in terms of density and species richness (Mori et al., 1983), and is also well represented in the Altomontane Dense Ombrophilous Forest subformation and in altomontane vegetation refuges (Veloso, 1992; Roderjan, 1994; Rocha, 1999; Portes et al., 2001; Koehler et al., 2002; França & Stehmann, 2004; Meireles et al., 2008; Murray-Smith et al., 2009; Scheer & Mocochinski, 2009).

The Alto Quiriri (AQ) region arises between these high-altitude formations and is located in the Quiriri mountain range, at the southern end of the Brazilian Serra do Mar, reaching an altitude of 1,538 m at its highest point (Gonçalves et al., 2006), the hill of the same name is also known as Iquererim (Reitz et al., 1965). The area is covered in forest-like vegetation, typical of the high moun-

tains of the Brazilian coast, as well as altitude fields or vegetation refuges (Veloso, 1992).

In this region, the historical botanists Raulino Reitz and Roberto Miguel Klein carried out several expeditions between 1956 and 1961 (Reitz et al., 1965), finding species not yet described by science, such as *Myrcia rupicola* D.Legrand (Legrand & Klein, 1969a) in Myrtaceae. Although the area has been the focus of significant botanical sampling, it continues to yield surprises, with new taxa still being described, such as *Chaetogastra cordeiroi* F.S.Mey. & R.Goldenb. and *Chaetogastra cristaensis* F.S.Mey & R.Goldenb. in Melastomataceae (Meyer & Goldenberg, 2016), *Hieracium reitzianum* Cabrera ex Urtubey in Asteraceae (Urtubey, 2019), *Valeriana sobraliana* Rabuske & Iganci in Valerianaceae (Rabuske-Silva & Iganci, 2019) and in Myrtaceae, *Eugenia quiriri* Sobral & F. C.S.Vieira (Sobral et al., 2019), as well as new occurrences for Santa Catarina, *Myrceugenia seriatoramosa* (Kiaersk.) D.Legrand & Kausel and *Myrcia squamata* (Mattos & D.Legrand) Mattos (F. C. S. Vieira, 2010; F. C. S. Vieira & de Quadros, 2010).

Considering that the locality has recorded important additions to Santa Catarina's biodiversity and is threatened by a long history of grazing, use of fire and currently unsupervised ecotourism, the aim of this work is to learn about the floristic composition of Myrtaceae in the AQ region, contributing to the knowledge about the biodiversity of the Brazilian Atlantic Forest and local conservation. Descriptions, identification keys, illustrations and taxonomic comments on the species found in the region are provided.

Material and Methods

The Quiriri Mountain Range (Figure 1) is located at 48°57'16" W and 26°01'29" S, in the northeastern region of Santa Catarina state. It spans the municipalities of Campo Alegre and Garuva and borders the northern areas of Guaratuba and Tijucas do Sul, in the state of Paraná. The Quiriri Mountain Range is part of a morphostructural unit called the Morro Redondo complex formed by alkaline granites and associated with volcanic rocks covering an area of approximately 250 km² (Vilalva 2007). The soils formation in the region are Cambissolo as the most common and occurring on the slopes of the hills and elevations; Litholic, associated with rocky outcrops especially on the hilltops; and Yellow Red Podzolic, less common and found on the western slopes and on the plateau. The closest weather station to the area studied is in the city of Joinville, where an average annual rainfall of 2418 mm was recorded, with a minimum average of 1,676.4 mm in 2,000 and a maximum of 3,299 mm in 1998 (Gonçalves et al., 2006; Lopes Gonçalves et al., 2009). The climate of the AQ is typical temperate (Cfb), and the average temperature in the region is 22.3 °C, with an average maximum of 39.5 °C in September 1997 and an average minimum of 5.5 °C in July 1997, as well as an absolute minimum of -1 °C in July 1997 and an absolute maximum of 41 °C in September 1997. There are also records of frost and wind (Gonçalves et al., 2006). The top of Quiriri Hill is at a maximum altitude of 1,538 m. The vegetation has different phytophysiognomies, such as Altomontane vegetation refuges or altitude fields and Altomontane Ombrophilous Dense and mixed forests (Veloso 1992). The term altomontane forest will be used in this work without distinguishing between dense and mixed.

Between 2007 and 2009, seven collecting expeditions were carried out in the AQ region. Collections were produced exclusively at altimetric levels above 1,000 m. The expeditions of Raulino Reitz, Roberto Miguel Klein and Lyman B. Smith between 1956 and 1961 (Reitz et al., 1965) and sporadic collections by the staff from the Museu Botânico Municipal de Curitiba (MBM) were used as a complement.

The descriptions of species, genera and families were based on material collected in the studied area and material from other collectors deposited in the BHCB, CRI, FURB, HBR, JOI, MBM, SPF and UPCB herbaria (acronyms according to Thiers, 2024), duplicates were sent to these herbaria, some genera descriptions were supplemented with specific literature. Virtual material available in the REFLORA and Specieslink database (Centro de Referência e Informação Ambiental, 2025), determined by specialists has been cited by adding *. The descriptions are brief and emphasize the main characteristics that allow it to be identified in the AQ and nearby localities, except for *Eugenia quiriri*, a new and recently described species, that has an expanded description. The measurements were taken in the length x width direction; when a single set of measurements is presented it refers to the length. When necessary, the descriptions were supplemented with additional material, usually from other localities, or also based on reference literature (Landrum, 1981; Legrand & Klein, 1971; Legrand & Klein, 1977a; Legrand & Klein, 1978; Sobral, 2003; Sobral, 2011). To standardize the terms for vegetative and reproductive structures, Sobral (2003) and Lorenzi & Gonçalves (2007) were used.

The descriptions are followed by comments on characteristics to identify and/or compare it with nearby species, aspects of its distribution in the AQ, general distribution based on the literature and data on the conservation status of the species when threatened (CNCFlora), as well as relevant synonyms used in the Flora Ilustrada Catarinense.

Results and discussion

Thirty seven native species of Myrtaceae were found in the AQ region, included in 9 genera, representing 20% of the 185 native species recorded for the state of Santa Catarina (Myrtaceae in Flora e Funga do Brasil 2025), i.e. one out of every 5 species from Santa Catarina occurs in the AQ. The most representative genera are *Myrceugenia* with 11 species, *Myrcia* with 10 and *Eugenia* with 9, followed by *Psidium* with two species, and *Blepharocalyx*, *Myrciaria*, *Pimenta*, *Plinia* and *Siphoneugena* represented by only one species.

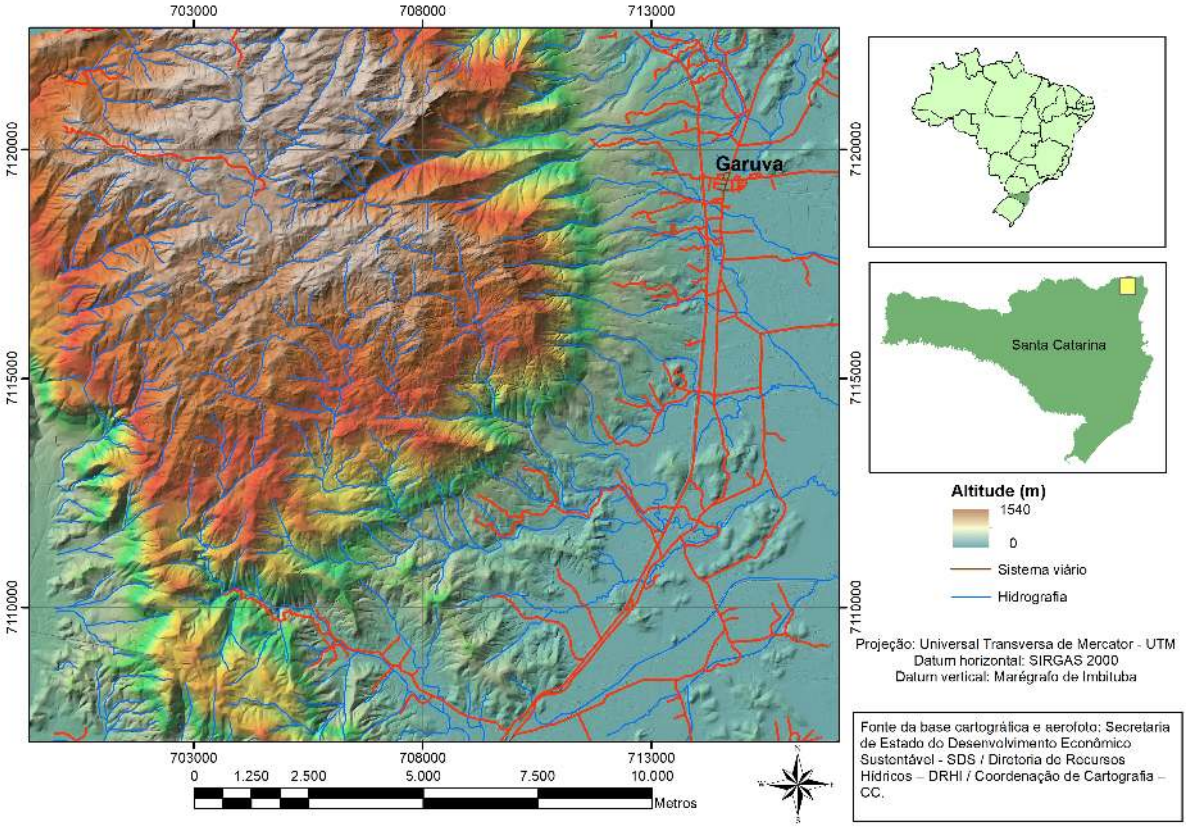

Figure 1: Map showing the Quiriri Mountain Range, highlighting in red the altimetry levels above 1,000 m.

Myrtaceae Juss., Gen. Pl. 322. 1789.

Branching shrubs from the base or up to 8-9 m high trees, bark peeling off in regular or irregular papyraceous blades or plates, leaving a smooth whitish, grayish, orange, brown or reddish surface, or rough bark, with irregularly shaped striations, or even longitudinally fissured. Trichomes present in most species, simple or dibrachial, mainly on leaves and young branches, the abaxial leaf surface, inflorescences and flowers. Leaves opposite, entire, with translucent dots, sometimes mucronate blades. Flowers solitary axillary or terminal inflorescences in glomerulus, fascicle, raceme and panicle types. Immature fruits yellow, reddish, ferruginous, sometimes even very dark blue when ripe, rounded, oblong or oval in shape.

Key to the genera of Myrtaceae of the Alto Quiriri

1. Seeds with bony testa; peltate stigma . . . . . ***Psidium***
1. Seeds with membranous or cartilaginous testa; punctiform stigma.
    2. Cracked bark; discolored leaves with a strong clove scent . . . . . ***Pimenta***
    2. Smooth or rough bark, discolored leaves with no clove scent.
        3. Dichasium inflorescences . . . . . ***Blepharocalyx***
        3. Inflorescences of other types, never dichasium.
            4. Paniculate inflorescences (some three flowered, looking like dichasium) . . . ***Myrcia***
            4. Inflorescences racemes, fascicles, glomerulus or solitary flowers.
                5. Foliaceous cotyledons, folded, solitary flowers aligned in the same plane as the branch and petiole, subtended by a pair of persistent opposite bracteoles . . . . . .***Myrceugenia***
                5. Crass cotyledons, not folded, flowers when solitary, not aligned in the same plane as the branch and petiole, bracteoles present or absent, often deciduous.
                    6. Non curved stamens in the flower bud . . . . . ***Eugenia***
                    6. Curved stamens in the flower bud.
                        7. Peduncles longer than 10 mm, leaves longer than 60 mm and cordate base . . . . . ***Plinia***
                        7. Peduncles up to 10 mm, leaf less than 40 mm and base attenuated.
                            8. Ovary with two ovules per loculus, globose flower bud . . . . . .***Myrciaria***
                            8. Ovary with more than two ovules per loculus, oblong, obovate flower bud . . . . . ***Siphoneugena***

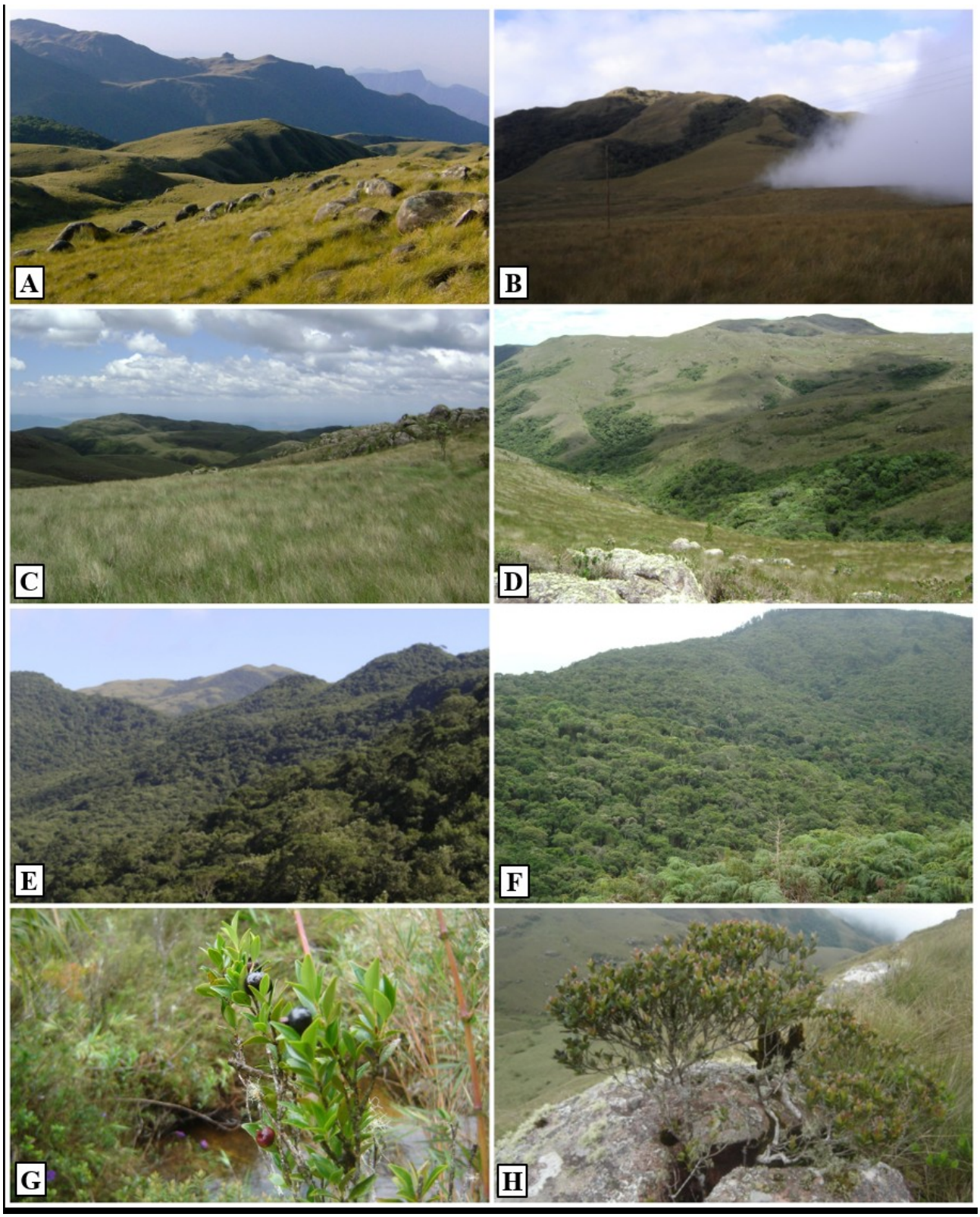

Figure 2: A: Altitude field with a view to the north towards the Rio Bracinho valley, B: Presence of fog near the Quiriri farm, C: Altitude fields and Altomontane forest at 1400m snm, D: Woodlands in the valleys at altitude, E: Eastern slope in the municipality of Garuva, in the Monte Crista region, transition between Montane and Altomontane Ombrophilous Dense Forest, F: Western slope, municipality of Campo Alegre, in the Rio Negro region, transition between Montane and Altomontane Ombrophilous Mixed Forest, with the presence of Pinus sp. in the upper part, G: *Eugenia neomyrtifolia* in a forest environment next to the Rio Quiriri, H: *Myrcia hartwegiana* growing between rocks in the middle of the altitude field.

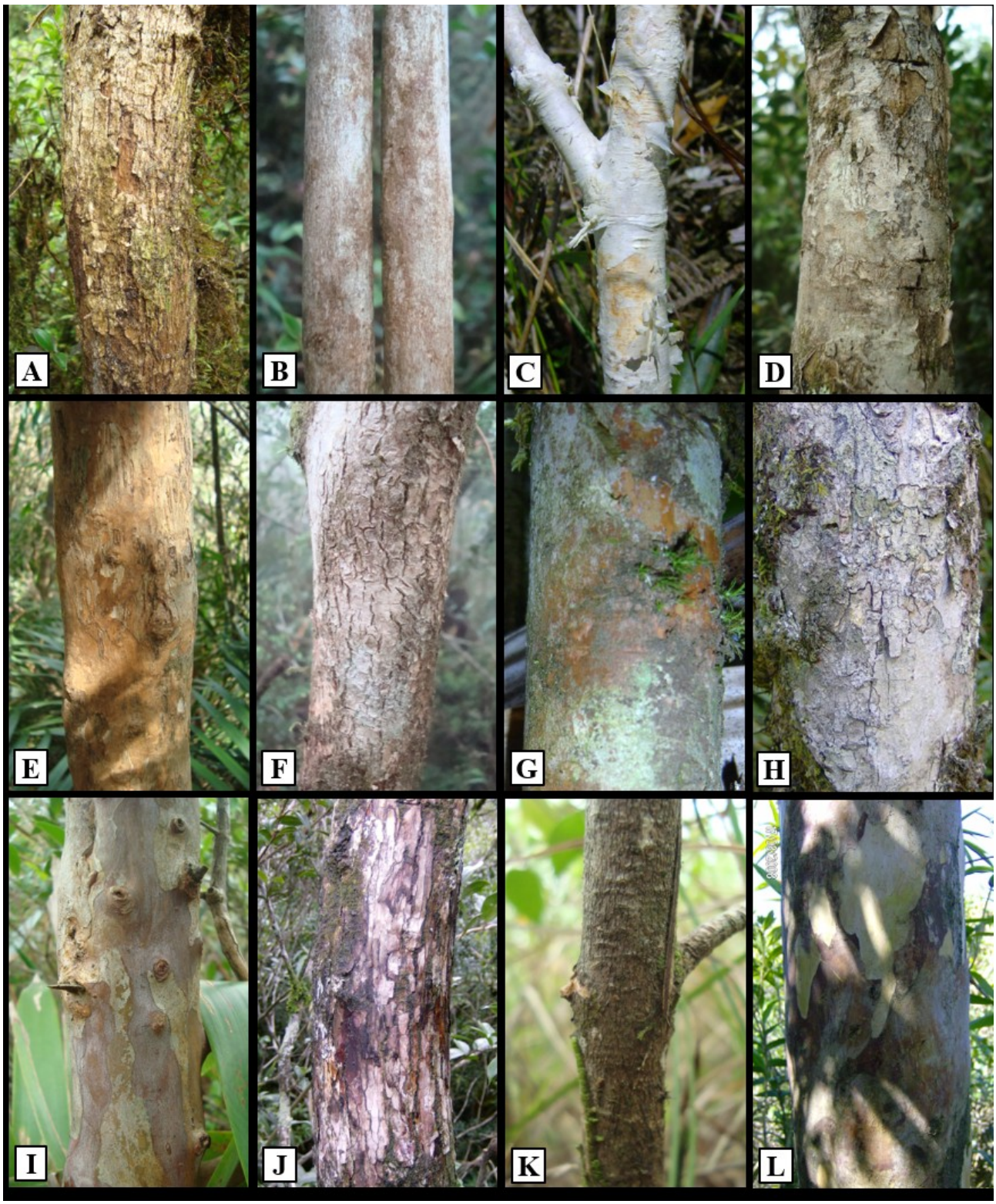

Figure 3: Bark: A. *Eugenia pluriflora*; B. *Eugenia sclerocalyx*; C. *Myrceugenia leptorhyncha*; D. *Myrceugenia seriatoramosa*; E. *Myrcia hartwegiana*; F. *Myrcia rupicola*; G. *Myrcia squamata*; H. *Myrcia subcordata*; I. *Myrciaria delicatula*; J. *Pimenta pseudocaryophyllus*; K. *Psidium ovale*; L. *Siphoneugena reitzii*.

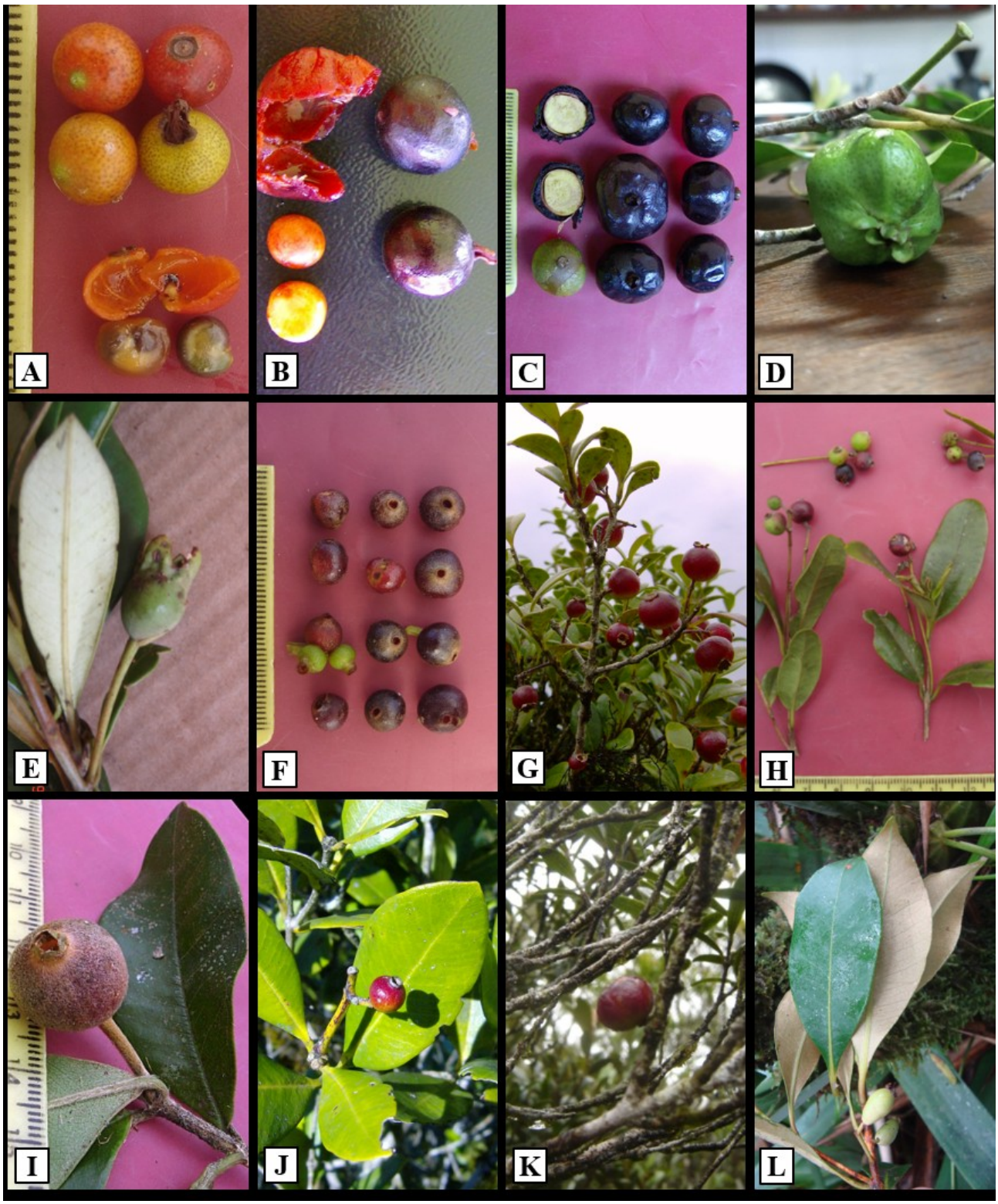

Figure 4: Fruits: A. *Blepharocalyx salicifolius*; B. *Eugenia neomyrtifolia*; C. *Eugenia pluriflora*; D. *Eugenia sclerocalyx*; E. *Myrceugenia myrcioides*; F. *Myrcia glomerata*; G. *Myrcia guianensis*; H. *Myrcia hartwegiana*; I. *Myrcia squamata*; J. *Myrcia subcordata*; K. *Myrciaria delicatula*; L. *Pimenta pseudocaryophyllus*.

***Blepharocalyx* O.Berg, Linnaea 27: 412. 1856.**

Shrubs to 8 m treelets. Branches with smooth bark. Inflorescences axillary, dichasium, 3-7 flowers, tetramerous; peduncles more than 10 mm long, calyx tearing into lobes. Ovary bilocular, with several ovules per loculus. Punctiform stigma. Seed with membranous or cartilaginous testa and vestigial cotyledons (Landrum 1986, Sobral 2003, Lucas et al. 2019).

Genera with two currently recognized species and a Neotropical distribution from the Antilles to Uruguay (Lucas et al. 2019).

***Blepharocalyx salicifolius* (Kunth) O.Berg, Linnaea 27: 413. 1856. (Figures: 4a, 11a, 12a-b).**

Treelets or trees 4-8 m high, rough bark, whitish. Leaves slightly discolored, with no characteristic scent; petiole slightly ridged on the adaxial surface, 5-8 mm, reddish; blades elliptic, 2.5-5 x 1.5-2 cm, glabrous; apex long-acuminate or mucronate, base acute, cuneate or attenuate. Inflorescences axillary, dichasium. Tetramerous flowers; calyx tearing into lobes with glands on the abaxial surface. Fruits globose, 8-10 mm in diameter, red to nigrescent, covered with glands.

This species has vast leaf morphological variation, distribution of trichomes and number of flowers per inflorescence, the reason it was segregated into different morphotypes by Legrand & Klein (1978), three of which would occur in the AQ with two evidenced in field work, however, in the present study, we followed the synonymizations of Landrum (1986). Its distinguishing feature is the presence of translucent glands on both sides of the blade, similar to *E. pluriflora*, although in the latter they are not translucent and are only present on the abaxial surface. In the AQ *Blepharocalyx salicifolius* occurs in the Altomontane Forest, both on the edge of the capons and in the interior. In other localities in the neighboring municipalities, it also occurs in pioneer formations with a marine influence (Restinga), pioneer formations with a fluvial-marine influence (mangrove) and in dense lowland ombrophilous forest (lowland forest). It has a wide distribution in Latin America, occurring in Ecuador, Bolivia, Paraguay, Argentina, Uruguay and in Brazil, in the Federal District, Bahia and Minas Gerais up to Rio Grande do Sul (Landrum, 1986).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, near the weather station, 31 Jan 2009, bud, *F.C.S. Vieira* 2128 (JOI). Ibidem, 18 Oct 1957, fl., *R.Reitz & R.M.Klein 5271* (HBR, US*). Ibidem, 10 Jan 1958, fl., *R.Reitz & R.M.Klein 6130* (HBR). Campo Alegre, lower western slopes of Quiriri, near Rio Negro, 03 Jan 2019, fl., *F.C.S. Vieira 2392* (JOI). Ibidem, 05 Feb 2019, fl. and fr., *F.C.S. Vieira & F.Longen 2497* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Timbó, 18 Dec 2018, bud, *F.C.S. Vieira 2352* (JOI). Joinville, Sambaqui do Cubatão, Apr 2007, fr., *F.C.S. Vieira 1909* (JOI).

***Eugenia* L., Sp. Pl. 1: 470. 1753.**

Shrubs or treelets. Branches with rough bark, peeling off in plates or not, whitish to brownish. Flowers solitary or arranged in glomeruli-like inflorescences, fascicles or racemes. Tetramerous flowers; calyx tearing into four lobes. Ovary bilocular. Punctiform stigma. Straight stamens in the flower bud. Seed with cartilaginous testa; crass cotyledons (Sobral 2003, Lucas et al. 2019).

Pantropical genera with 1000-1226 species (Sobral, 2011; E. J. Lucas et al., 2019; Vasconcelos et al., 2019; Powo, 2025), of which 350-419 occurs in Brazil (Landrum & Kawasaki, 1997; Mazine et al., 2025).

Key to the *Eugenia* species of the Alto Quiriri

1. Inflorescences in bracteate racemes whose central axis often continues its development, presenting normal leaves at the end.
   2. Inflorescences in non-bracteate racemes, fascicles or glomerulus, whose axis always has its development interrupted.
      3. Leaves smaller than 25 mm, shrubs to treelets typical of the Altomontane Forests ..... ***E. neomyrtifolia***
      3. Leaves larger than 25 mm, treelets occurring at altitudes below 1300 m and associated with Mixed Ombrophilous Forest ... . ***E. longipedunculata***
   2. Leaves reaching 75-100 mm, and petioles 13-20 mm, yellowish thickening on the revolute margin always present ..... ***E. sclerocalyx***
1. Leaves rarely reaching 80 mm and petioles always smaller than 10 mm, occasional yellowish thickening on *pluriflora*.
   4. Cordate leaf base, subsessile or sessile leaves ..... ***E. catharinensis***
   4. Attenuated leaf base, petioles longer than 4 mm.
      5. Cinereous and grayish trichomes present in the flower buds, contrasting between hypanthium and sepals, floccose and occasional in the rest, becoming scarce over time ..... ***E. quiriri***
      5. Glabrous or with sparse trichomes.
         6. Leaves with an acuminate to long acuminate apex, chartaceous consistency ..... ***E. kleinii***
         6. Leaves with obtuse/rounded apex, sometimes slightly acuminate, leathery consistency.
            7. Pedicels reaching 12-18mm ... ***E. nutans***
            7. Pedicels reaching a maximum of 6mm.
               8. Blade revolute, more evident in the proximal half, without yellowish thickening on the margin, inconspicuous glands on the abaxial surface ..... ***E. handroana***
               8. Revolute blade with yellowish thickening on the margin, conspicuous, dark-colored glands on the abaxial leaf surface . ***E. pluriflora***

***Eugenia catharinensis* D.Legrand, Sellowia 8: 73. 1957. (Figures: 5a, 6a.)**

Treelets 2 - 4 m, rough bark, whitish to light gray. Whitish trichomes scattered on the abaxial leaf blade and on the midvein of the adaxial surface, peduncles, sepals, petals and fruits, reddish brown on young branches. Leaves dis-

colored, cordate-ovate, 25-60 x 12-28 mm, long acuminate apex, cordate base, petiole sessile or almost sessile, midvein impressed on the adaxial surface and protruding on the abaxial surface, secondary veins inconspicuous. Axillary flowers 1-2. Flower buds globose, 5 x 4 mm, sepals with a rounded apex, ciliated petals, fruit globose, 10-15 x 10 mm, reddish to black when ripe.

Treelets easily recognized for their cordate leaf base and ciliated limb, as well as for its leaves and fruits covered in trichomes. A typical species of the understory of humid places in the AQ, it has been observed sterile, predominantly below 1000 m snm, on both the east and west slopes. Its occurrence is limited to the states of Santa Catarina and Paraná (Sobral, 2011).

Examined material: BRAZIL. Santa Catarina: Campo Alegre, Morro do Iquererim, 09 Jan 1958, fr., *R.Reitz & R.M.Klein 6012* (HBR).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Castelo dos Bugres, 28 Jul 2004, bud, *F.C.S.Vieira 420* (JOI, FUEL). Ibidem, Castelo dos Bugres, 30 Sep 2004, bud, *F.C.S.Vieira 473* (JOI, FUEL). Ibidem, Castelo dos Bugres, 25 Dec 2004, fr., *F.C.S.Vieira 700* (JOI, FUEL).

Eugenia handroana **D.Legrand, Sellowia 13: 320. 1961. (Figure: 5b, 6b.)**

Treelets up to 6 m, rough bark, beige to light gray. Glabrous. Leaves tenuously discolored, somewhat darker on the adaxial leaf blade, elliptic-lanceolate, 40-55 x 10-16 mm, apex acute, base attenuated, petiole 2-4 mm, midvein flat on the adaxial surface and prominent on the abaxial surface, secondary veins inconspicuous on both sides, somewhat noticeable on the abaxial surface. 1-6 flowers in fascicles. Flower buds globose. Fruits elliptic-oblong, carinate, 10-15 x 10 mm, dark purple when ripe.

This treelet is recognizable for its elliptic-lanceolate leaves and carinated fruit. An uncommon species in the AQ, with only one individual found in the locality, it has also been observed sterile at the south in the Serra Queimada and on the Tromba Hill in Joinville. Its occurrence is recorded for the states of Santa Catarina, Paraná and São Paulo (Sobral, 2011).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 08 Oct 1960, fl., *R.Reitz & R.M.Klein 10111* (HBR, US*). Ibidem, Morro do Campo Alegre, 09 Jan 1958, fl., *R.Reitz & R.M.Klein 10053* (HBR). Ibidem, 24 Mar 1961, fr., *R.Reitz & R.M.Klein 10920* (HBR). Ibidem, near Casa de Pedra, 10 Dec 2020, fl., *F.C.S.Vieira, R.J.de Carvalho & L.Gonçalves 3219* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Campo Alegre, Rio dos Bugres, locality of São Miguel, near morro das antenas, 26 Dec 2019, fr., *P.Schwirkowski & C.R.Hantschel 3593* (FURB*).

Eugenia kleinii **D.Legrand, Sellowia 13: 313. 1961. (Figures: 5c, 6c.)**

Treelets 4-5 m, rough bark, light gray to reddish brown on young branches. Glabrous, except for sparse reddish trichomes on the ovary. Leaves tenuously discolored, elliptic-lanceolate, 55-80 x 15-25 mm, long-acuminate apex, cuneate base, petiole 5-7 mm, midvein ridged on the adaxial surface and prominent on the abaxial surface, secondary veins inconspicuous on both sides. Flowers 2-6 in axillary racemes. Flower buds globose, with purplish-red ovary and sepals. Fruits oblong, 30 x 10 mm, dark purple when ripe.

Quite typical treelet with long-acuminate leaves and reddish flower buds in the field. Uncommon species in the AQ, it was found sterile in the Rancho São Tiago catchment. Its occurrence is recorded for the states of Santa Catarina, Paraná, São Paulo and Rio de Janeiro (Sobral, 2011; Mazine et al., 2025).

Examined material: BRAZIL. Santa Catarina: Garuva, near Pirabeiraba Hill, Rancho São Tiago catchment, -48.9492, -26.0596, 21 Sep 2009, sterile, *F.C.S. Vieira 2136* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Castelo dos Bugres, 28 Jul 2004, fl., *F.C.S.Vieira 414* (JOI, FUEL). Ibidem, 28 Jul 2004, fl., fr., *F.C.S.Vieira 415* (JOI, FUEL). Ibidem, 20.VIII.2004, fl., *F.C.S. Vieira 432* (JOI, FUEL). Ibidem, 30 Sep 2004, fl., *F.C.S. Vieira 489* (JOI, FURB, FUEL).

Eugenia longipedunculata **Nied., Nat. Pflanzenfam. 3, Abt. 7: 81 1893. (Figures: 5d, 6d.)**

Treelets 4-6 m tall, scabrous bark, rough, light gray on young branches, shedding and leaving a smooth ochre surface. Glabrous except for sparse trichomes on young leaves, sepals and ovary. Leaves discolored, elliptic, oblong to obovate, 50-85 x 20-30 mm, revolute margin, apex rounded to acuminate, base cuneate, petiole 5-6 mm, midvein ridged on the adaxial leaf blade and prominent on the abaxial, secondary veins inconspicuous on both sides. Flowers of 2-6 in bracteate racemes that continue their development with solitary flowers. Pyriform flower buds. Fruit spherical, 7-10 x 9-15 mm, dark purple when ripe.

This species is very distinctive due to the rough, scabrous bark on the trunk of the adult plant and the inflorescences of bracteate racemes. A frequent species on the western slopes of the AQ, especially in the Rio Negro region around 900-1000 m snm in the Mixed Ombrophilous Forest. Its occurrence is recorded for the states of Minas Gerais, São Paulo, Paraná and Santa Catarina (Sobral, 2011). We found identifications mixed with *E. blastantha* (O.Berg) D.Legrand by Legrand & Klein (1969a). It is very similar to *E. ligustrina* (Sw.) Willd. and it is difficult to differentiate the taxa (Sobral, 2011), as various shapes and sizes of flowers and leaves have been observed in the Campo Alegre region.

Examined material: BRAZIL. Santa Catarina: Campo Alegre, morro do Iquererim, 08 Nov 1956, fl.,

L.B.Smith & R.M.Klein 7370 (HBR, US*). Ibidem, Rancho Paulo Walter near the Rio Negro at the base of Iquererim Hill, 09 Dec 1956, *L.B.Smith & R.M.Klein 8489*, (HBR, US*). Ibidem, Iquererim Hill, 17 Dec 1957, fl., *R.Reitz & R.M.Klein 5170* (HBR).

Additional examined material: BRAZIL. Santa Catarina: Joinville, nascentes do rio Cubatão, 15 Nov 2007, fr., *F.C.S.Vieira 2004* (JOI). Ibidem, Laranjeiras road, 1 Nov 2020, fl., *F.C.S.Vieira 3099* (JOI).

***Eugenia neomyrtifolia* Sobral, Napaea 11:36. 1995. (Figures: 2g, 4b, 5e, 6e.)**

Shrub 1.5 m to treelet 3 m high, rough bark, peeling off in irregular plates, whitish in color, leaving an almost smooth surface. Glabrous, except for a few trichomes on the young parts, flowers and terminal axis of the inflorescence. Leaves slightly discolored; petiole 2-3 mm, blades elliptic, 18-22 x 8-11 mm, glabrous; apex acute, base attenuate. Flowers 2-4 in bracteate racemes that continue their development with solitary flowers, globose flower buds, calyx tearing into oblong lobes. Fruits globose, dark blue to black.

It can be confused with *Myrceugenia regnelliana*, from which it can be distinguished mainly by its bracteate racemes and slightly larger leaves, and from *Siphoneugena reitzii* that has narrower leaves, solitary flowers/glomerulus and reddish bark, whereas in *E. neomyrtifolia* it is whitish. A quite frequent species in the studied area, common in open woodlands and capons along the slopes of Morro Quiriri and Monte Crista, and on the edge of fragments of Altomontane Forest associated with high altitude fields, at altitudes above 1,200m snm, and occasionally between rocks on hilltops. It occurs from Rio de Janeiro to Rio Grande do Sul (Sobral, 2011).

Examined material: BRAZIL. Santa Catarina: Garuva, Alto Quiriri, 21 Sep 2007, fl., *F.C.S.Vieira 1939* (SPF). Ibidem, 21 Sep 2007, fl., *F.C.S.Vieira 1946* (SPF). Ibidem, 20 Dec 2007, *F.C.S.Vieira 2012* (JOI). Ibidem, Morro Iquererim, *R.Reitz & R.M.Klein 5250* (HBR). Ibidem, *R.Reitz & R.M.Klein 10032* (HBR). Ibidem, Morro do Campo Alegre, *R.Reitz & R.M.Klein 10316* (HBR).

***Eugenia nutans* O.Berg, Fl. Bras. 14(1): 299. 1847. (Figures: 5f, 6f.)**

Treelet 2-5 m high, bark not seen, light brown and somewhat rough on the branches, the young ones flattened. Glabrous, occasional trichomes on the flowers. Leaves discolored, olive-brown on the abaxial surface, olive-green on the adaxial surface; petioles 6-10 mm, blades elliptic-obovate, 51-72 x 24-33 mm; apex rounded-oblong, base attenuated. Inflorescences axillary or terminal, raceme, 6-8 flowers, pedicels 5-10 mm, bracteoles ovate, flower buds globose, calyx tearing into rounded lobes. Fruits not seen.

It can be distinguished from *E. sclerocalyx* by its smaller leaves, and from *E. pluriflora* by its larger leaf size, as well as by the elliptical-ovate shape of the leaves. It is uncommon in the studied region, occurring sporadically at altitudes close to 1,200 m snm, and is frequent below this limit. It occurs from Minas Gerais to Santa Catarina (Sobral, 2011). Its relevant synonyms are *E. schadrackiana* D.Legrand (Legrand & Klein, 1969a) and *E. eurysepala* Kiaersk. (Morais & Lombardi, 2006).

Examined material: BRAZIL. Santa Catarina: Garuva, Alto Quiriri, Ventania, 12 May 2007, bud, *F.C.S.Vieira 1915* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Castelo dos Bugres, 30 Sep 2004, bud, *F.C.S.Vieira 480* (JOI, FUEL). Ibidem, 25 Nov 2004, fl., *F.C.S.Vieira 629* (JOI, FUEL, FURB).

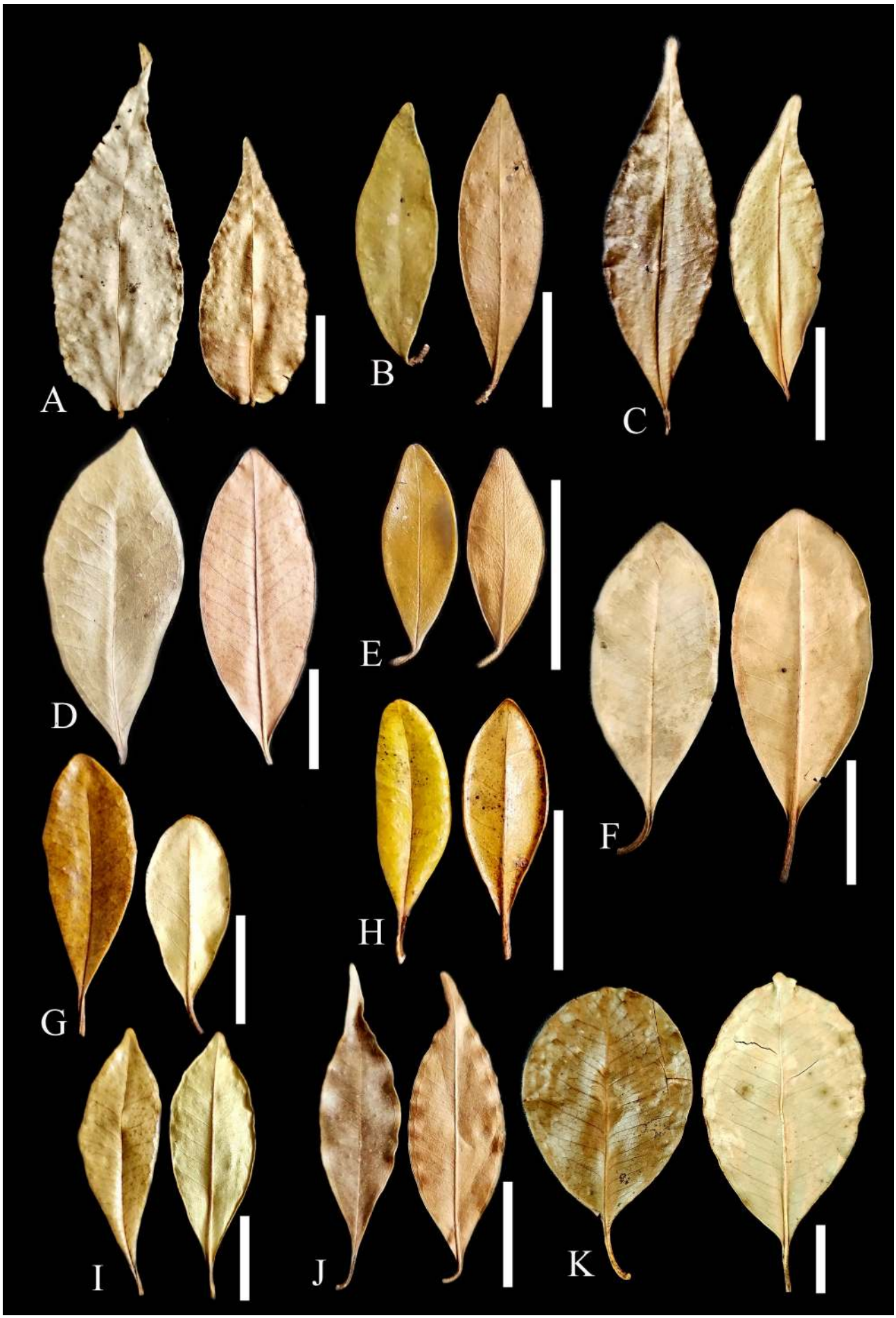

Figure 5: *Eugenia* (Leaves): A. *E. catharinensis* (F.C.S.Vieira 420); B. *E. handroana* (Vieira et al. 3219); C. (F.C.S.Vieira 432); D. *E. longipedunculata* (F.C.S.Vieira 2004); E. *E. neomyrtifolia* (F.C.S.Vieira 2012); F. *E. nutans* (F.C.S.Vieira 1915); G. *E. pluriflora* (F.C.S.Vieira 1280); H. *E. pluriflora* (F.C.S.Vieira 1985); I. *E. pluriflora* (F.C.S.Vieira 2122); J. *E. quiriri* (O.S.Ribas & J.M.Silva 3243); K. *E. sclerocalyx* (F.C.S.Vieira 1811). (vertical white bars = 2 cm).

Figure 6: *Eugenia* (flower buds) - A. *E. catharinensis*, flower bud (F.C.S.Vieira 420); B. *E. handroana* (Vieira et al. 3219); C. *E. kleinii*, (F.C.S.Vieira 415); D. *E. longipedunculata* (F.C.S.Vieira 3099); E. *E. neomyrtifolia* (F.C.S.Vieira 1946); F. *E. nutans* (F.C.S.Vieira 629); G. *E. pluriflora* (F.C.S.Vieira 2445); H. *E. quiriri* (O.S.Ribas & J.M.Silva 3243); I. i (F.C.S.Vieira 1811). (vertical white bars = 1 cm).

***Eugenia pluriflora* DC., Prodr. III: 270. 1828. (Figures: 3a, 4c, 5g-i, 6g.)**

Shrub to treelet 2-4 m high, slightly rough bark, brown, with carenna-like lines, not very elevated and irregular. Leaves discolored, petioles 4-8 mm long; blades elliptic to oblong 35-83 x 10-25 mm, glabrous, with scattered black glands dots on the abaxial surface; apex rounded to acute, base attenuated. Inflorescences fascicle-like, ca. 6 flowers, peduncles 2 mm, bracteoles inconspicuous, flower buds globose, calyx tearing into lobes. Fruits globose, 7-12 x 9-16 mm, bluish black when ripe.

Well characterized in the locality by leaves with dark glands on the abaxial surface and branches with very tenuous carenna-like projections. In the Serra Quiriri it was found at altitudes above 1200 m snm in the western portion, especially in the Morro Quiriri region (1538 m). According to Legrand & Klein (1969a), this species is characteristic and exclusive to the Santa Catarina plateau, also occurring in riparian forests, dry rocky fields, in places with low and sparse vegetation. In Brazil, it occurs from Espírito Santo to Rio Grande do Sul (Sobral, 2011).

Examined material: BRAZIL. Santa Catarina: Garuva, Alto Quiriri, 7 Sep 2005, fr., *F.C.S.Vieira 1290* (JOI, BHCB). Ibidem, 15 Nov 2007, fr., *F.C.S.Vieira 1985* (JOI, SPF). Ibidem, Morro Quiriri, 21 Dec 2007, fr., *F.C.S.Vieira 2091* (JOI, SPF). Ibidem, Serra Quiriri, 31 Jan 2009, ste., *F.C.S.Vieira 2122* (JOI). Ibidem, Morro do Campo Alegre, 24 Mar 1961, *R.Reitz & R.M.Klein 10955* (HBR). Ibidem, Serra do Quiriri, 26 Nov 2015, fr., *J.M.Silva 9162* (RB*). Ibidem, Morro Iquererim, 9 Jan 1958, *R.Reitz & R.M.Klein 6057* (HBR, US*, HAS*, FLOR*, MBM*). Campo Alegre, 02 Feb 2019, fl., *F.C.S.Vieira 2445* (JOI). Ibidem, near Rio Negro, 05 Feb 2019, fl., *F.C.S.Vieira 2479* (JOI).

***Eugenia quiriri* Sobral & F.C.S.Vieira, Phytotaxa 425(2): 97. 2019. (Figures: 5j, 6h.)**

Treelet 3-7 m. Flattened branches with flocculent trichomes when young. Leaves with petioles 4-7 × 0.5-0.6 mm, narrowly elliptic blades 52-71 × 15-21 mm, discolored when young, dark above light brown below when mature, base cuneate; apex acuminate, midvein slightly impressed on adaxial leaf blade, somewhat prominent on abaxial surface, secondary veins 12-15 pairs. Inflorescence in axillary fascicles, with 2-4 flowers, the central axis barely perceptible, pedicels 1.5-4 × 0.3-0.4 mm, tomentose; bracteoles triangular or broadly triangular, glabrous or almost so, contrasting with the pedicels and hypanthium, persistent after anthesis; flower buds globose to slightly obovate, 4-5 × 2-4 mm, hypanthium tomentose, 1. 5 mm, with simple gray or white trichomes, noticeably hairier than the sepals, which are four, with trichomes scattered mainly on the adaxial surface and margins of the abaxial surface, broadly triangular, in two unequal pairs, not covering the globe of the petals, round to obovate, 4 × 3-4 mm, glabrous; stamens not counted, the anthers with one or two glands on the connective; stigma punctiform, glabrous 7-7. 5 mm; ovary with two glabrous locules internally and 5-8 ovules per locule. Fruits not seen.

It is a poorly known species, with only two collections recorded, and so far, it is exclusive to the Quiriri Mountain Range (Sobral et al., 2019). Due to the scarcity of collections and the fact that it was neither observed nor sterile during field expeditions, we suggest that the species be considered for inclusion on the national list of endangered species.

Examined material: BRAZIL. Santa Catarina: Campo Alegre, Serra Quiriri, 11 Feb 2001, fl., *O.S.Ribas & J.M.Silva 3243* (MBM). Ibidem, 18 Aug 2008, fl., *F.C.S.Vieira 2115* (JOI).

***Eugenia sclerocalyx* D.Legrand, Sellowia XIII:311, T. IV et. T. XI.1961. (Figures: 3b, 4d, 5k, 6i.)**

Treelet 4-6 m high, bark not seen. Leaves discolored, dark above, light green below, petioles 15-20 mm, blades elliptic-obovate, 65-100 x 40-50 mm, apex rounded, base cuneate to attenuate. Inflorescences axillary or terminal, racemes, 2-4 flowers. Flowers tetramerous, peduncles 30 mm, bracteoles inconspicuous, flower buds globose, calyx tearing into rounded lobes. Immature fruits slightly ribbed.

It can be confused with *E. nutans*, but its leaves are more than 40 mm wide (versus up to 25 mm), petioles are 15-20 mm long (versus 5-10 mm) and longer peduncles (30 mm versus 5-10 mm). A characteristic species of the hilltops of the Serra do Mar, found at altitudes of 800-1200 m, in the AQ it was found near 1300 m snm. in Altomontane Forest. It occurs in Paraná and Santa Catarina (Sobral, 2011) and is listed as vulnerable (VU) on the national list of endangered species (Centro Nacional de Conservação da Flora, 2025a).

Examined material: BRAZIL. Santa Catarina: Garuva, Alto Quiriri, Morro Campo Alegre, 7 Sep 2005, fl., *F.C.S.Vieira 1284* (JOI, FURB, BHCB). Ibidem, Serra Quiriri, 21 May 2005, *W.S.Mancinelli 254* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Morro da Tromba, 05 Jul 2006, fl., *F.C.S.Vieira 1811* (JOI). Ibidem, Serra Queimada, 21 Apr 2010, fl., *F.C.S.Vieira, R.J.de Carvalho & H.Tomporowski 2158* (FURB, CRI). Ibidem, Serra Queimada, 21 Jun 2019, fl., *F.C.S.Vieira 2618* (JOI).

***Myrceugenia* O.Berg, Linnaea 27:131. 1856.**

Shrubs to treelets 6-8m, rough or peeling in papyraceous plates bark, whitish to brown. Leaves usually discolored, petioles canaliculate on the adaxial surface, rarely cylindrical. Flowers axillary, solitary or up to 4 aligned in the same plane as the petiole and branch, tetramerous; bracteoles arranged in pairs at the base of the flowers, flower buds globose, calyx tearing into four lobes or forming calyptra. Ovary two- or three-lobed. Stigma punctiform. Seeds with membranous testa; foliaceous and folded cotyledons.

Genera with approximately 46 species of disjunct distribution, one of the centers of diversity in the region of

Chile and Argentina with 12 species (Landrum, 1981) and the other located in the eastern portion of South America with 34 species (F. Vieira & Meireles, 2025). Eleven species are recorded in the AQ region.

Key to species of the genera *Myrceugenia* of the Alto Quiriri

1. Calyx modified into a calyptra ..... ***M. ovalifolia***
1. Calyx tearing into lobes.
   2. Hood-like structure at the apex of the sepals ..... ***M. cucullata***
   2. Without the structure described above.
      3. Bracteoles up to 1 mm, leaves up to 10 mm wide.
         4. Bracteoles larger than 2 mm, leaves more than 15 mm wide.
            5. Oblong leaves less than 4 mm wide ..... ***M. hamoniana***
            5. Elliptic leaves, 4-8 mm wide .... ***M. regnelliana***
         4. Petaliferous globe hidden by the valve sepals ..... ***M. myrcioides***
      3. Petaliferous globe visible on mature flower bud and/or imbricated sepals.
         6. Exclusively dibrachiate trichomes.
            7. Simple and dibrachiate trichomes present.
               8. Filiform peduncles larger than 20 mm ..... ***M. leptorhyncha***
               8. Non-filiform peduncles up to 10 mm long.
                  9. Bracteoles ovate to lanceolate, leaf apex acuminate .... ***M. seriatoramosa***
                  9. Orbicular bracteoles, rounded leaf apex ..... ***M. alpigena***
            7. Cylindrical petiole, prominent veins on the abaxial surface .... ***M. pilotantha***
         6. Ridged petiole, inconspicuous veins on the abaxial surface.
            10. Inflorescences occasionally or appearing racemose, mostly solitary flowers, reflexed sepals after anthesis ..... ***M. rufescens***
            10. Flowers solitary, sepals concave after anthesis ..... ***M. hoehnei***

***Myrceugenia alpigena* (DC.) Landrum, Brittonia 32: 372 (1980). (Figures: 7a-b, 8a.)**

Shrub branched from the base; 1-3 m high. Rough bark, brown, ferruginous trichomes on young branches, abaxial leaf surface, petioles and peduncles. Leaves narrowly elliptic to obovate, 25-45 x 10 mm, glabrous on the adaxial surface, apex apiculate or rounded, base attenuate, petioles 2-4 mm. Flowers 1-4 per leaf axil, peduncles not filiform 10 mm, bracteoles 2 mm, usually orbicular, sometimes somewhat elliptical, petaliferous globe visible in bud. Immature fruits globose.

It differs from the typical variety (Landrum, 1981) mainly by the rounded apex leaves with ferruginous trichomes on the young leaves and abaxial leaf surface, as well as the shorter peduncles and orbicular bracteoles. In the AQ it is common on the edge of the Altomontane Forest, it was collected near the Rio dos Alemães and the headwaters of the Rio Quiriri, it also occurs in the Mixed Ombrophilous Forest where it has larger leaves. In Brazil, it occurs from the Serra do Cipó to the Aparados da Serra in the state of Rio Grande do Sul, always in high altitude environments (Kawasaki, 1989; Sobral, 2003). Legrand & Klein (1970) treated the species as *M. bracteosa* (DC.) D.Legrand & Kausel, and emphasized that the plant is characteristic of the eastern edge of the plateau, in the Altomontane Forest. *M. bracteosa* is a distinct species that does not occur in Santa Catarina (see Landrum, 1981).

Examined material: BRASIL. Santa Catarina: Garuva, Serra Quiriri, 7 Sep 2005, fr., *F.C.S.Vieira 1283* (JOI). Ibidem, 7 Sep 2005, fr., *F.C.S.Vieira 1286* (JOI). Ibidem, 20 Dec 2007, fr., *F.C.S.Vieira 2020* (SPF). Ibidem, 21 Dec 2007, fr., *F.C.S.Vieira 2023* (SPF, JOI). Ibidem, 21 Dec 2007, fr., *F.C.S.Vieira 2035* (SPF). Ibidem, 21 Dec 2007, bud, *F.C.S.Vieira 2040* (SPF, BHCB, JOI). Ibidem, 21 Dec 2007, bud, *F.C.S.Vieira 2045* (SPF, JOI). Ibidem, 23 May 2008, fl., *F.C.S.Vieira 2069* (SPF, BHCB, JOI). Ibidem, 23 May 2008, fl., *F.C.S.Vieira 2088* (BHCB, JOI, SPF). Ibidem, Morro da Quesnelia, 18 Aug 2008, fl., *F.C.S.Vieira 2108* (SPF).

Additional examined material: BRASIL. Santa Catarina: Campo Alegre, 11 Dec 2012, fl., *A.L.Gasper & L.E.Carneiro 3068* (JOI, FURB*, CRI*).

***Myrceugenia cucullata* D.Legrand, Darwiniana 11: 347 (1957) (Figures: 7c, 8b-c.)**

Cespitose shrub from 1.5 m - 3.5 m, rough bark, whitish to gray. Dibrachiate trichomes, whitish to brown, on the petioles, young branches and outer surface of the flowers. Leaves discolored, dark green to brown on the adaxial surface, lighter on the abaxial surface, elliptic 30-70 x 9-22 mm, base attenuated, apex apiculate with rostrum reaching 2 mm, petioles 4 x 1 mm. Flowers solitary, pedicels up to 2 mm, white flowers, bracteoles triangular, 1 mm, sepals broadly triangular, 2 mm, with protuberance at apex forming a hood, petals glandular. Fruits globose, 5-7 x 5-6 mm, black.

Cespitose shrub with elliptical leaves, similar to *M. acutata* D.Legrand, with which it can be confused; however, *M. cucullata* has larger leaves and tends to occur at lower altitudes. In the AQ it has been found in riparian forest at elevations of up to 1100 m, or at lower altitudes on humid slopes. In Brazil it occurs from Rio de Janeiro to Rio Grande do Sul (F. Vieira & Meireles, 2025).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra do Quiriri, gallery forest at the São Tiago

Rancho catchment, 21 Apr 2009, fl., *F.C.S. Vieira 2138* (JOI, HUFSJ). Ibidem, Monte Crista, 22 Dec 1957, fl., *R.Reitz & R.M.Klein 5900* (HBR*).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Pico Jurapê, 11 Jan 2006, fl., *F.C.S.Vieira 1481* (JOI); Ibidem, Morro da Tromba, 23 Feb 2006, fl., *F.C.S.Vieira 1649* (JOI), Ibidem, 23 Feb 2006, fl., *F.C.S.Vieira 1651* (JOI); Ibidem, morro do Finder, 29 Dec 2019, fl., *F.C.S.Vieira 2764* (JOI); Ibidem; Serra Queimada, 30 Sep 2010, fr., *W.S.Mancinelli 1300* (JOI). São Francisco do Sul, morro da Cruz, 1 Jan 2015, *M.L.Brotto 1835* (JOI, MBM).

***Myrceugenia hamoniana* (Mattos) Sobral, Phytotaxa 8: 53 (2010). (Figures: 7d, 8d).**

Shrub 1-2 m high, bark brown to grayish, adult branches glabrous, young ones with brown trichomes. Leaves with petioles up to 2 mm long, oblong blades, 12 x 3 mm, rounded apex, attenuated base, glabrous. Flowers solitary, peduncles not filiform, 2 mm, bracteoles oblong, 1 mm, petaliferous globe visible in bud. Pyriform fruits 6 x 3 mm.

This species is easily recognized by its small, narrow leaves (12 x 3 mm) and pyriform fruits, very similar in general appearance to *M. regnelliana*, although the latter has elliptic, broader leaves and spherical to somewhat oblong fruits. In the AQ this species was found associated with rivers and waterfalls, at altitudes of between 900-1200 m snm, apparently rare in the locality since only two collections were made. It has been treated as a synonym of *Myrceugenia smithii* Landrum. It is considered endemic to the state of Santa Catarina (Landrum, 1981) however, it is also recorded in the states of Minas Gerais and São Paulo (F. Vieira & Meireles, 2025), and listed as endangered (EN) on the national list of endangered species (Centro Nacional de Conservação da Flora, 2025c).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 30 Apr 2006, fr., *F.C.S.Vieira 1781* (JOI, FUEL). Ibidem, 11 Dec 2020, *F.C.S.Vieira 3222* (JOI).

Additional examined material: BRAZIL. MINAS GERAIS: Passa Quatro, Pico do Itaguaré, 26 Jul 2006, *L.D. Meireles, J.A. Nunes & G.G.Castaho 2447* (BHCB*). São Paulo: Capivari, Fazenda da SABESP, at the end of Estrada do Capivara. Ilhota do Rio Capivari, 25 May 1994, fl., *R.J.F. Garcia 533* (CEN*).

***Myrceugenia hoehnei* (Burret) D.Legrand & Kausel, Commun. Bot. Mus. Hist. Nat. Montevideo 2 (no. 28): 5 (1953). (Figures: 7e, 8e.)**

Shrub ca. 3m high, rough bark, grayish or brown. Ferruginous trichomes present on young branches and petioles, lighter on peduncles, bracteoles and sepals. Leaves with 2-4 mm petioles, elliptic blades, 23-30 x 12 mm, acuminate apex, hydathodes at the apex, attenuated base. Flowers solitary, peduncles cylindrical, 5-6 mm, bracteoles oblong, 3 mm, calyx tearing into lobes, petaliferous globe visible in flower bud. Fruits globose to oblate, 4 x 5 mm, black.

The specimens collected in the AQ were uncertain to its proper taxonomic position once many characteristics resembled *Myrceugenia rufescens* (DC.) D.Legrand & Kausel, however its flowers are solitary and arranged on young branches similar to a raceme. It can be confused, in vegetative material, with *M. pilotantha*, but the latter has finely impressed veins, while in *M. hoehnei* they are inconspicuous. This plant is common in the Altomontane Forests of the Serra Quiriri, mainly above an altitude of 1200 m, on the edge of the forests, between granite blocks, usually surrounded by high altitude fields. In Brazil, it occurs from the Serra de Paranapiacaba, in the state of São Paulo, through the cloud formations of Paraná and has its southern limit in the Serra Quiriri (Landrum, 1981). It is on the national list of threatened species listed as vulnerable (VU) (Centro Nacional de Conservação da Flora, 2025b).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 7 Sep 2005, fl., *F.C.S.Vieira 1291* (JOI, BHCB). Ibidem, 7 Sep 2005, fl., *F.C.S.Vieira 1293* (JOI, BHCB). Ibidem, 7 Sep 2005, fl., *F.C.S.Vieira 1298* (JOI, BHCB). Ibidem, 21 Sep 2007, fl., *F.C.S.Vieira 1933* (SPF). Ibidem, 21 Sep 2007, fl., *F.C.S.Vieira 1935* (BHCB, SPF). Ibidem, Rancho Paulo Sales, 21 Sep 2007, fl., *F.C.S.Vieira 1938* (SPF). Ibidem, Alemães fragment, 21 Sep 2007, bud, *F.C.S.Vieira 1950* (BHCB, SPF). Ibidem, Sopé do Morro dos Alemães, 15 Nov 2007, fr., *F.C.S.Vieira 1982* (SPF). Ibidem, Alemães fragment, 15 Nov 2007, fr., *F.C.S.Vieira 1988* (BHCB, JOI, SPF). Ibidem, 15 Dec 2007, fr., *F.C.S.Vieira 1991* (BHCB, SPF, JOI). Ibidem, bridge over Rio Quiriri, 21 Dec 2007, fr., *F.C.S.Vieira 2022* (SPF). Ibidem, Morro do Campo Alegre, 16 Aug 2008, fl., *F.C.S.Vieira 2098* (JOI, BOTU, UESC, SPF). Ibidem, between Morro do Campo Alegre and Morro do Bolo, fl., 16 Aug 2008, *F.C.S.Vieira 2099* (JOI, HUFSJ, ASE, BOTU, SPF). Ibidem, Capão da onça, 17 Aug 2009, bud, *F.C.S.Vieira 2100* (JOI, SPF). Ibidem, 17 Aug 2009, bud, *F.C.S.Vieira 2101* (JOI, SPF). Ibidem, 17 Aug 2009, bud, *F.C.S.Vieira 2102* (JOI, UESC, HUCS, SPF). Ibidem, Tabatinga fragment, 17 Aug 2008, fl., *F.C.S.Vieira 2104* (JOI, BOTU, FURB, CRI, SPF). Ibidem, Morro da Quesnelia, 18 Aug 2008, fl., *F.C.S.Vieira 2107* (JOI, CNMT, CPAP, HVAT, ASE, LUSC, SPF). Ibidem, Morro da Quesnelia, 18 Aug 2008, fl., *F.C.S.Vieira 2108* (JOI, SPF).

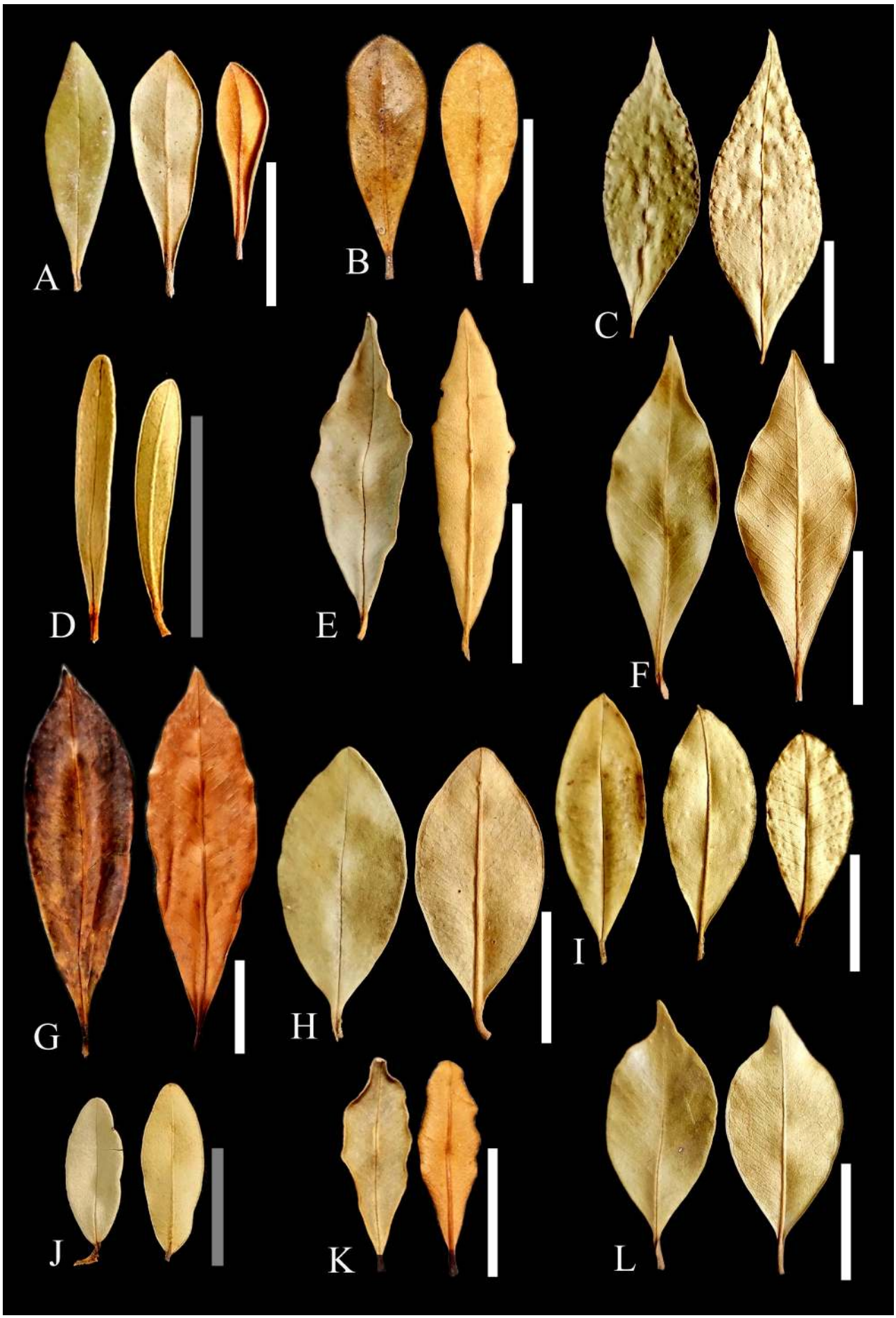

Figure 7: *Myrceugenia* (Leaves): A. *M. alpigena* (F.C.S.Vieira 2069); B. *M. alpigena* (F.C.S.Vieira 2045); C. *M. cucullata* (F.C.S.Vieira 1649); D. *M. hamoniana* (F.C.S.Vieira 1781); E. *M. hoehnei* (F.C.S.Vieira 2101); F. *M. leptorhyncha* (F.C.S.Vieira 2126); G. *M. myrcioides* (F.C.S.Vieira 1949); H. *M. ovalifolia*, (F.C.S.Vieira 2110); I. *M. pilotantha* (F.C.S.Vieira 1990); J. *M. regnelliana* (F.C.S.Vieira 1486); K. *M. rufescens* (Reitz 4788.); L. *M. seriatoramosa* (F.C.S.Vieira 2153). (vertical white bars = 2 cm, vertical gray bars = 1 cm).

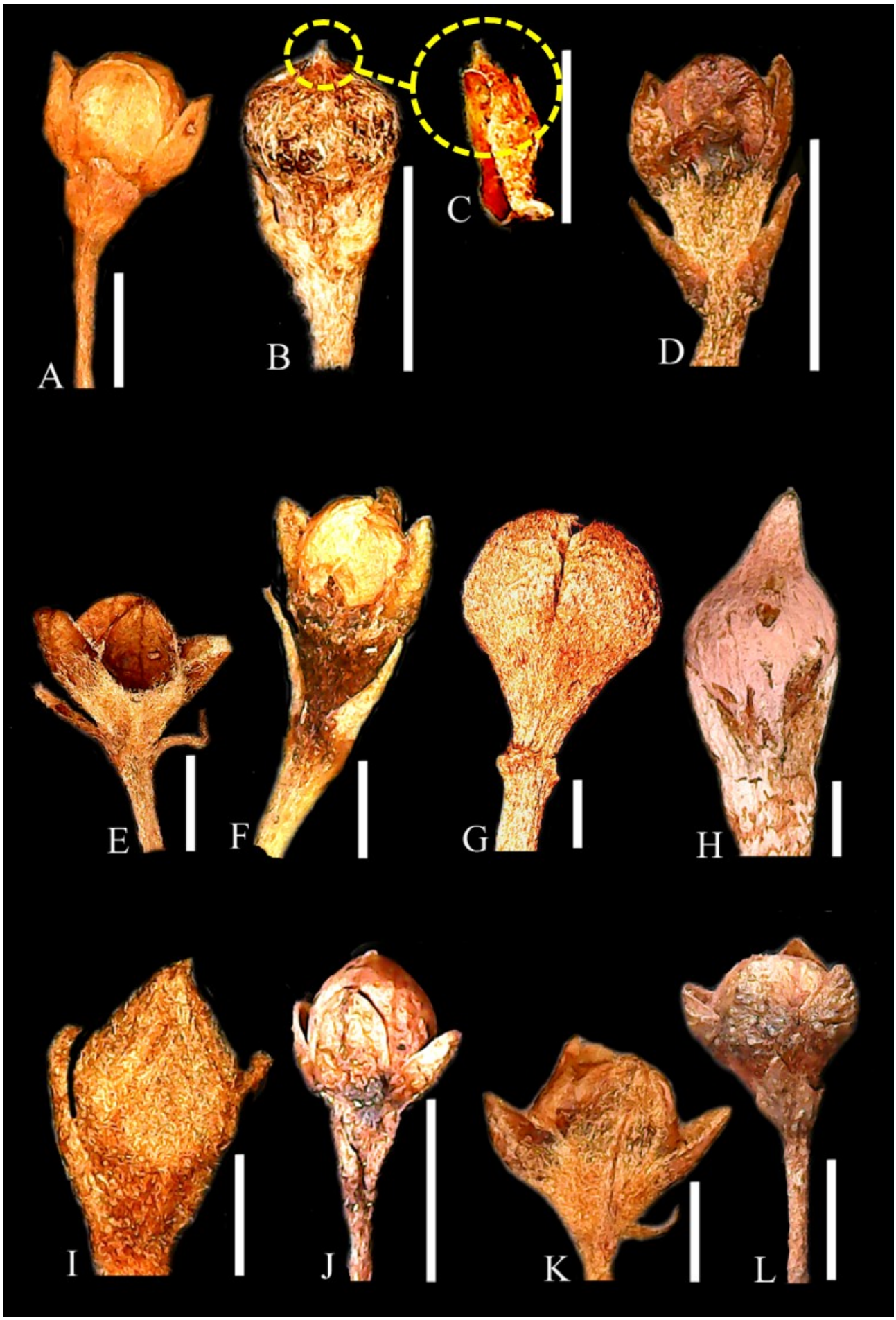

Figure 8: *Myrceugenia* (Flower buds) - A. *M. alpigena* (A.L.Gasper 3968); B-C. *M. cucullata*, cucullus (F.C.S.Vieira 2764); D. *M. hamoniana* (F.C.S.Vieira 3222); E. *M. hoehnei* (F.C.S.Vieira 2101); F. *M. leptorhyncha* (F.C.S.Vieira 2126); G. *M. myrcioides* (Verdi 2014); H. *M. ovalifolia* (F.C.S.Vieira 347); I. *M. pilotantha* (F.C.S.Vieira 3172); J. *M. regnelliana* (F.C.S.Vieira 1486); K. *M. rufescens* (Reitz 4788); L. *M. seriatoramosa* (F.C.S.Vieira 2142). (vertical white bars = 1 cm).

***Myrceugenia leptorhyncha* D.Legrand, Fl. Ilustr. Catarin. (Mirt.): 392 (1970). (Figures: 3c, 7f, 8f.)**

Shrub or treelet 1.5-6 m high, bark whitish, flaking in irregular papyraceous plates. Scattered ferruginous trichomes on young branches. Leaves elliptic-acuminate, 35-45 x 14-20 mm, glabrous, apex acuminate or mucronate, base attenuate, petioles 5 x 1 mm. Flowers 1-2 per leaf axil, peduncles filiform 25-30 mm, bracteoles triangular-lanceolate, 3 mm, petaliferous globe visible in bud. Fruits oblong, 8 x 3 mm, black.

Landrum (1981) treated this species as a synonym for *M. alpigena*, a fact we disagree with so we adopt the concept of Legrand & Klein (1970), because of the more elongated bracteoles, larger pedicels and oblong fruits, as well as the generally dichotomous new branches and whitish bark with a papyraceous consistency, which comes off in irregular plates. This classification is further supported by recently obtained phylogenomic data, which are currently being prepared for publication. In vegetative terms, it is very similar to *Myrceugenia seriatoramosa*, but differs in its orbicular sepals, triangular-ovate bracteoles and larger peduncles, reaching 20-30 mm. It has also been confused with *Myrceugenia franciscensis* (O.Berg) Landrum, although the latter inhabits the Cerrado region of Paraná and southern São Paulo. In the AQ, it was found in the Rios Quiriri and dos Alemães, and is frequent among granite blocks along streams. It occurs high up in the Serra do Mar, from Paraná to the Serra Quiriri in Santa Catarina, at altitudes above 700m snm (Legrand & Klein, 1970).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Sopé do Morro do Campo Alegre, 21 Sep 2007, fr., *F.C.S.Vieira 1937* (BHCB, SPF). Ibidem, foothill of Morro dos Alemães, 21 Sep 2007, *F.C.S.Vieira 1947* (BHCB, SPF). Ibidem, below Rancho Paulo Sales 1120 m, 21 Sep 2007, fr., *F.C.S.Vieira 1948* (BHCB, SPF). Ibidem, foothill of Morro dos Alemães, 15 Nov 2007, fr., *F.C.S.Vieira 1977* (BHCB, JOI, SPF). Ibidem, foothills of Morro dos Alemães, 15 Nov 2007, fr., *F.C.S.Vieira 1979* (JOI, SPF). Ibidem, 20 Dec 2007, *F.C.S.Vieira 2011* (JOI, SPF). Ibidem, riparian forest of Rio Quiriri, 21 Dec 2007, fr., *F.C.S.Vieira 2049* (BHCB, SPF, JOI). Ibidem, along Rio Quiriri, 30 Jan 2009, fl., *F.C.S.Vieira 2123* (SPF, JOI, ASE). Ibidem, along Rio Quiriri, 30 Jan 2009, fl., *F.C.S.Vieira 2124* (SPF, JOI). Ibidem, along Rio Quiriri, 30 Jan 2009, fl., *F.C.S.Vieira 2126* (SPF, JOI, UPCB).

***Myrceugenia myrcioides* (Cambess.) O.Berg, Linnaea 27: 134. 1856. (Figures: 4e, 7g, 8g.)**

Shrub, 2 m high, rough bark, gray to light brown. Leaves oblong, 30-80 x 12-30 mm, glabrous, apex acuminate, base attenuate, discolored, dark green on the adaxial surface, lighter on the abaxial surface, petioles 6 x 1 mm. Bracts oblong apiculate, 8 mm. Flowers solitary, peduncles 18-30 mm long; petaliferous globe hidden in the bud by the valvar lobes of the calyx. Immature fruits oblong, 20 x 17 mm, with erect sepals.

A variable species in terms of leaf shape, but very characteristic for its fruits with erect sepals, as well as the valvar sepals in the bud. In the studied area, this species was found along the Rio dos Alemães and observed sterile near Casa de Pedra, in the AQ region. This plant is widely distributed in Brazil, from the state of Rio de Janeiro to Rio Grande do Sul, in various forest formations (Landrum, 1981). The morphotype found in the AQ corresponds to *M. acrophylla* var. *ulei* (Burret) D.Legrand, mentioned by Legrand & Klein (1970), and the typical variety is also mentioned by these authors for the Quiriri mountain range; however, the altitude is imprecise (1000-1300) and the word "pinheiral" is mentioned, corroborating our observations that the variety is common in the Mixed Ombrophilous Forest at altitudes close to 1000 m.

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Riparian forest along Rio dos Alemães, 22 Sep 2007, fr., *F.C.S.Vieira 1949* (BHCB).

Additional examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Morro do Campo Alegre, 20 Jan 1961, fl., *R.Reitz & R.M.Klein 10673* (HBR). Urubici, Morro da Igreja, PNSJ, 23 Apr 2009, fl., *M. Verdi, R.P.Rasckel & G.Klemz 2014* (JOI, FURB*, HUCS*, CESJ*, UEC*).

***Myrceugenia ovalifolia* (O.Berg) Landrum, Brittonia 36:163. 1984. (Figures: 7h, 8h.)**

Treelet 3 - 8 m high, bark flaking off in irregular plates, white to grayish, glabrous except for reddish-brown trichomes on the abaxial leaf surface and on the young branches. Leaves with petioles up to 6 mm long, elliptic-obovate blades, 42 x 22 mm, rounded apex, attenuated base, revolute margin, chartaceous consistency. Flowers axillary, peduncles elliptic, 10-13 mm, bracteoles somewhat orbicular, apiculate, 4 mm, sepals modified into calyptra, petals not seen. Fruits tenuously oblong, 8 x 5 mm, with a circular scar at the apex.

Very characteristic plant for its robust, chartaceous leaves with a revolute margin and the presence of a calyptrate calyx, an aspect that has only been found in two species of this genera (Landrum, 1981), although only *M. ovalifolia* has been recorded in the state of Santa Catarina. In the locality, it was found on the western slopes of the mountains and has also been observed in the Mixed Ombrophilous Forest. On a broader level, it occurs from Rio de Janeiro to Rio Grande do Sul (Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, western slope, 18 Aug 2008, *F.C.S.Vieira 2110* (JOI, HUCS, CNMT, ASE).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Serra Queimada, 30 Mar 2006, *F.C.S.Vieira 1760* (JOI). Ibidem, Serra Queimada, 30 Mar 2006, *F.C.S.Vieira 1765* (JOI, FUEL). Ibidem, Castelo dos Bugres, 06 Jun 2004, *F.C.S.Vieira 347* (JOI, FURB, FUEL). Ibidem, Castelo dos Bugres, 26 Mar 2005, *F.C.S.Vieira 928* (JOI, FUEL).

***Myrceugenia pilotantha* (Kiaersk.) Landrum, Brittonia 32. 374. 1980. (Figure: 6j, 9j.)**

Shrub ca. 2 m occasionally treelet 3-4 m high, brown bark, branches densely covered with ferruginous trichomes. Leaves discolored, blades elliptic or obovate, 45-55 x 21-24 mm, glabrous on the adaxial surface, sparse trichomes on the abaxial surface, apex apiculate or mucronate, base acute, petioles 6 x 1 mm. Flowers solitary, 1-3 per leaf axil, peduncles not filiform, 2 mm, bracteoles oblong or acuminate, 5-6 mm, petaliferous globe visible in bud. Fruits globose.

Species characterized by the pendant shape of the branches and the new branches covered in ferruginous trichomes, as well as by its inflorescences which resemble racemes and can be confused with *Myrceugenia rufescens*, that has true racemes. In the AQ it occurs on the edge of dense ombrophilous forest in the Altomontana and Montana formations, at altitudes between 800-1300 m snm. In Brazil, it is distributed from Bahia to Rio Grande do Sul (Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, near Rancho Paulo Sales, 12 May 2007, fl., *F.C.S.Vieira 1921* (JOI). Ibidem, 12 May 2007, fl., *F.C.S.Vieira 1924* (JOI, BHCB). Ibidem, below Rancho Paulo Sales, 21 Sep 2007, fr., *F.C.S.Vieira 1944* (SPF, BHCB). Ibidem, Alemães fragment, 15 Nov 2007, fr., *F.C.S.Vieira 1990* (SPF, BHCB, JOI).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Castelo dos Bugres, 07 Dec 2008, fl., *F.C.S.Vieira 2116* (JOI, SPF). PARANÁ: Piraquara, 04 Dec 2020, fl., *F.C.S.Vieira 3172* (JOI, SPF).

***Myrceugenia regnelliana* (O.Berg) D.Legrand & Kausel, Commun. Bot. Mus. Hist. Nat. Montevideo ii. No. 28, 11 (1953). (Figure: 7j, 8j.)**

Shrub 2-3 m high, mature bark gray, rough falling and leaving almost smooth brown surface, simple and dibrachiate trichomes present, young branches densely covered with ferruginous trichomes, adults glabrous. Leaves elliptic, 8-18 x 3-6 mm, glabrous except for sparse trichomes on the abaxial surface, rounded apex, attenuated base, petioles 1 x 0.5 mm. Flowers solitary on 3-5 mm non-filiform peduncles; bracteoles narrowly elliptic 1 mm, petaliferous globe visible in bud. Fruits globose to oblong, 3-7 x 3-5 mm, black.

A species of marked polymorphism, with leaves of varying dimensions. Specimens with small leaves, as in the description, are common in the Alto da Serra Quiriri, in an area of Altomontane Forest, while specimens with larger leaves (30-40 x 20-30 mm) are common along the riparian forests with the presence of "bracatinga" (*Mimosa scabrella* Benth.), on a small raised plateau known as Chato do Quiriri, common on the edge of the Altomontane Forest, occurring between 1100-1500 m altitude. In Brazil, it is distributed from the state of Rio de Janeiro to Rio Grande do Sul, always in high altitude formations and on the plateau (Landrum, 1981). It was treated as *Myrceugenia regnelliana* var. *itatiaiensis* by Legrand & Klein (1970: 426).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 7 Sep 2005, fr., *F.C.S.Vieira 1287* (BHCB). Ibidem, 7 Sep 2005, fr., *F.C.S.Vieira 1297* (BHCB, JOI, FURB). Ibidem, Sopé do Morro dos Alemães, 15 Nov 2007, fl., *F.C.S.Vieira 1978* (JOI, SPF). Ibidem, 15 Nov 2007, fr., *F.C.S.Vieira 1980* (SPF, BHCB). Ibidem, bridge over Rio Quiriri, 20 Dec 2007, fl., *F.C.S.Vieira 2016* (SPF, BHCB). Ibidem, 20 Dec 2007, fr., *F.C.S.Vieira 2023* (SPF, BHCB, JOI). Ibidem, Morro Bradador, 20 Dec 2007, fr., *F.C.S.Vieira 2027* (SPF, BHCB, JOI). Ibidem, Rio Quiriri near Fazenda, fl., *F.C.S.Vieira 2042* (BHCB, JOI, SPF). Ibidem, bridge over Rio Quiriri, 23 May 2008, fl., *F.C.S.Vieira 2089* (SPF, BHCB, JOI). Ibidem, Serra Quiriri, 20 Dec 2007, *F.C.S.Vieira 2017* (SPF, JOI). Ibidem, 20 Dec 2007, fr., *F.C.S.Vieira 2018* (SPF, JOI). Ibidem, 20 Dec 2007, Rio Quiriri near Fazenda, fl., *F.C.S.Vieira 2041* (SPF, JOI).

Additional examined material: BRAZIL. Santa Catarina: Jurapê, 11 Jan 2006, *F.C.S.Vieira 1486* (BHCB, FUEL, JOI).

***Myrceugenia rufescens* (DC.) D.Legrand & Kausel, Common. Bot. Mus. Hist. Nat. Montevideo 2(28):8. 1953. (Figure: 7k, 8k)**

Shrub 1-3m. Rough bark, dark gray to brown. Rufescent trichomes on new branches, young leaves, petioles, peduncles, bracteoles and flowers. Leaves discolored, obovate to oblanceolate, leathery, 25-58 x 12-18 mm, apex rounded to acuminate, sometimes with a small mucro, base cuneate, margin slightly revolute, chartaceous texture; petiole slightly ridged on the adaxial surface, 5 x 1.5 mm. Peduncles isolated or grouped in small terminal buds, or 1-2 axillary flowers; flower buds globose, peduncles 10 x 1 mm; bracteoles narrowly oblong with a rounded apex, 3.5 x 0.6 mm; sepals triangular with a rounded apex 2 x 1 mm; petals orbicular 3 x 4 mm, with some glands; ovary 4-locular in the examined material, 2-4 locular according to Landrum (1981).

Very similar to *M. hoehnei*, distinguished mainly by the raceme-like inflorescence (Legrand & Klein 1970, Landrum, 1981). Typical species of the Altomontane formations, from Minas Gerais to Santa Catarina.

Examined material: BRAZIL. Santa Catarina: Campo Alegre, Morro do Iquererim, 5 Sep 1957, fl., *R.Reitz & R.M.Klein 4780* (HBR). Ibidem, 5 Sep 1957, fl., *R.Reitz & R.M.Klein 4788* (HBR). Ibidem, 18 Dec 1957, fl., *R.Reitz & R.M.Klein 5191* (HBR).

***Myrceugenia seriatoramosa* (Kiaersk.) D.Legrand & Kausel, Commun. Bot. Mus. Hist. Nat. Montevideo 2 (no. 28): 5 (1953). (Figures: 3d, 7l, 8l.)**

Treelet 5-6 m high, rough bark, white, flaking in irregular plates, branches glabrous or sparsely covered with non-ferruginous trichomes. Leaves with 4-mm petioles, elliptic blades, 42-50 x 18-20 mm, apex acuminate, base attenuate. Flowers 1-4 axillary, pedicels 9 mm, bracteoles

ovate, 3 mm, calyx tearing into lobes, petaliferous globule visible in bud.

The striking features of this species are the orbicular sepals, oval bracteoles and short peduncles, less than 1 cm long. It resembles *Myrceugenia alpigena* var. *alpigena* in vegetative material, however, the latter has triangular sepals, erect in the fruit and apiculate bracteoles, with a prominulous midvein on the abaxial surface. It occurs at altitudes of 900-1200 m above sea level, and in some places is found near rivers. It inhabits high montane forests, from the Itatiaia National Park in Rio de Janeiro, to the top of the mountains in the south of the state of São Paulo and the Serra do Mar in Paraná (Landrum, 1981), as well as the Serra Quiriri and the Castelo dos Bugres mountain range in Santa Catarina (F. C. S. Vieira & de Quadros, 2010).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Cloud Forest, 7 Sep 2005, fr., *F.C.S.Vieira 1286* (JOI, BHCB). Ibidem, Riparian Forest, 12 May 2007, fl., *F.C.S.Vieira 1919* (JOI, BHCB). Ibidem, 12 May 2007, fl., *F.C.S.Vieira 1923* (JOI). Ibidem, foothill of Morro do Campo Alegre, 21 Sep 2007, fr., *F.C.S.Vieira 1936* (BHCB, SPF). Ibidem, Rio Três Barras, 21 Sep 2007, fr., *F.C.S.Vieira 1942* (SPF). Ibidem, near Rancho São Tiago, 22 Apr 2009, fl., *F.C.S.Vieira 2142* (JOI, HUFSJ, SPF). Ibidem, 22 Apr 2009, fl., *F.C.S.Vieira 2143* (JOI, HUFSJ, SPF). Ibidem, 22 Apri 2009, fl., *F.C.S.Vieira 2149* (JOI, FURB, SPF). Ibidem, Gallery forest over Rio Três Barras, 22 Apr 2009, fl., *F.C.S.Vieira 2153* (JOI, UFSJ, SPF).

Myrcia DC., Dict. Class. Hist. Nat. 11:401. 1827.

Subshrubs, shrubs or trees, bark whitish to dark, peeling in irregular plates, leaving a smooth or rough surface. Inflorescences in panicles of 3 to 30 flowers (Legand & Klein 1969b). Flowers pentamerous, calyx tearing into lobes or modified into a calyptra. Ovary bilocular to trilocular. Stigma punctiform. Seed with a chartaceous-membranaceous testa; foliaceous and folded cotyledons.

The genera have 800-850 species with an exclusive distribution in the Neotropical region, with high diversity in the Amazon and the Antilles, and even greater richness in the Cerrado and the Atlantic Rainforest (E. Lucas et al., 2018). Ten species were found in the AQ.

Key to the *Myrcia* species of the Alto Quiriri

1. Calyx modified on calyptra ..... ***M. glomerata***
1. Calyx tearing into five lobes.
  2. Anthers with thecae arranged obliquely.
    3. Anthers with thecae arranged in parallel.
      4. Leaves with acuminate apex .... ***M. catharinensis***
      4. Leaves with rounded apex.
        5. Panicles with up to 3 flowers; leaves larger than 50 mm ..... ***M. squamata***
        5. Panicles with 5-20 flowers; leaves smaller than 50 mm .... ***M. hartwegiana***
    3. Midvein on the abaxial surface more than 3 mm wide at the base, presence of cataphylls at the base of the internodes .... ***M. subcordata***
  2. Midvein on the abaxial surface 2 mm wide at the base or less, cataphylls absent at the base of the internodes.
    6. Leaves oblong-lanceolate, 4 times or more long than wide, hypanthium null or short.
      7. Leaves elliptic, 3 times or less long than wide, hypanthium prolonged.
        8. Leaf apex long-acuminate, rostrate, panicles with 10 flowers or more .. .. ***M. splendens***
        8. Leaf apex only acuminate, triflorous inflorescences ..... ***M. rupicola***
      7. Leaves more than 5 cm long, secondary and tertiary veins of the same caliber forming evident reticulation on both sides, prominent above ..... ***M. aethusa***
    6. Leaves less than 5 cm long, secondary and tertiary veins inconspicuous on both sides, without reticulation, tenuously protruding on the abaxial surface.
      9. Membranous leaves, midvein ridged on the adaxial surface, brief hypanthium, bilocular ovary ..... ***M. selloi***
      9. Chartaceous leaves, midvein flat or tenuously ridged on the adaxial surface, prolonged hypanthium, trilocular ovary ..... ***M. guianensis***

Myrcia aethusa (O.Berg) N.Silveira, Roessleria 7(1): 67. 1985. (Figures: 9a, 10a.)

Treelet 3-8 m high, brown bark. Leaves discolored, elliptic, 30-50 x 13-20 mm, glabrous, apex acuminate, base cuneate, midvein ridged on the adaxial surface, secondary and tertiary veins forming dense evident reticulations, petioles 4-8 mm. Inflorescence axillary, panicle, ca. 5 flowers, flower buds 14 x 16 mm. Fruits globose, 8 x 8 mm, dark purple.

It can be confused with *M. hartwegiana* and *M. subcordata*, distinguished from them by the acuminate leaf apex and the smaller number of flowers in the inflorescence. The species is found above 1300 m snm, in the Altomontane Dense Ombrophilous Forest, with the slopes facing south. It occurs from Rio de Janeiro to Rio Grande do Sul (Sobral, 2003). It has been cited as *M. oligantha* O.Berg (Sobral, 2003) and *M. richardiana* (O.Berg) Kiaersk. (Legrand & Klein, 1969b).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Altomontane forest, 31 Jan 2009, bud, *F.C.S.Vieira 2120* (JOI, SPF). Ibidem, Altomontane forest, 31 Jan 2009, bud, *F.C.S.Vieira 2125* (JOI, SPF). Ibidem, Morro do Iquererim, 17 Oct 1957, fr., *R.Reitz & R.M.Klein 5168* (HBR).

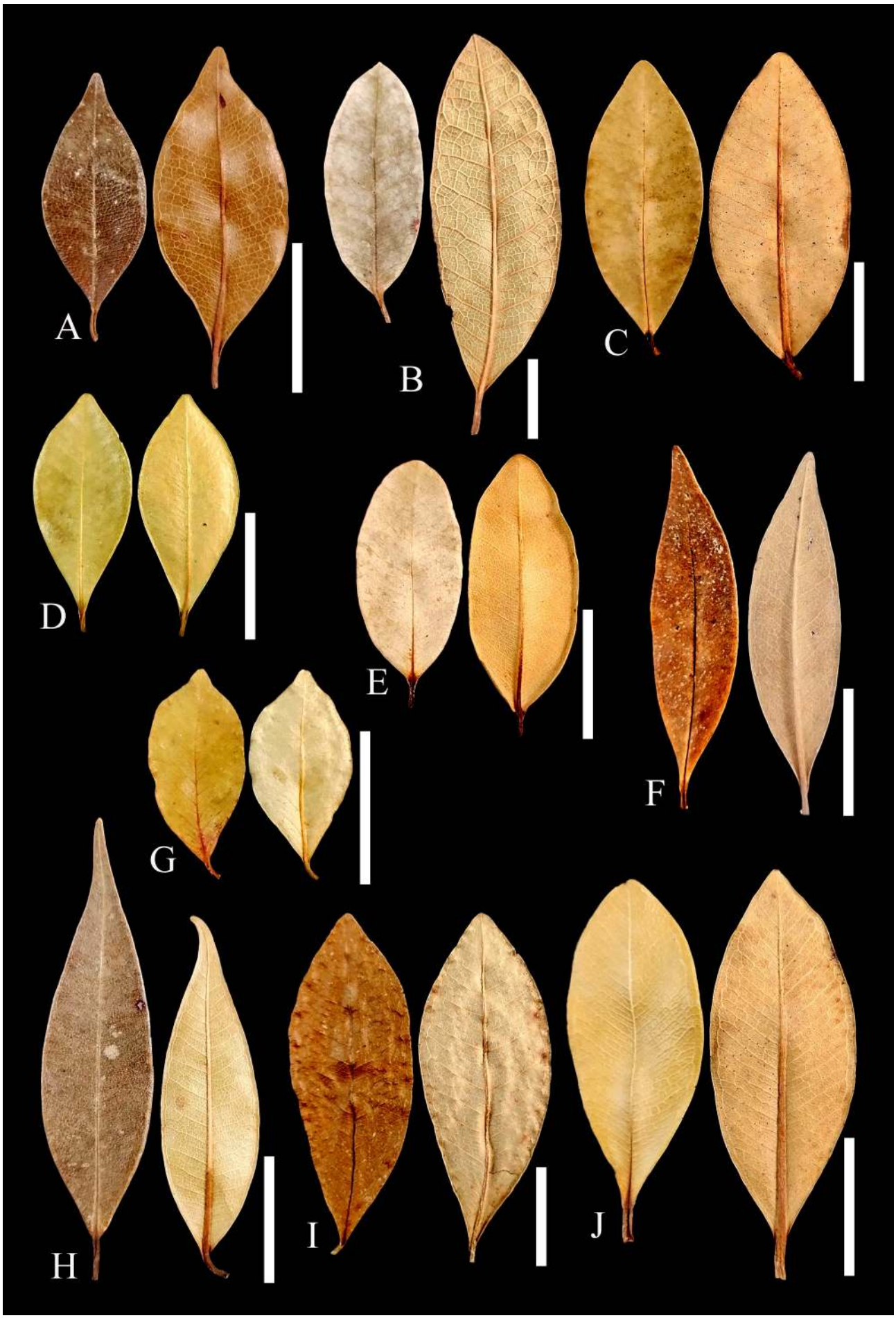

Figure 9: *Myrcia* (Leaves): A. *Myrcia aethusa* (F.C.S.Vieira 2125); B. *M. catharinensis* (F.C.S.Vieira 2113); C. *M. glomerata* (F.C.S.Vieira 2003); D. *M. guianensis* (F.C.S.Vieira 1934); E. *M. hartwegiana* (F.C.S.Vieira 2010); F. *M. rupicola* (F.C.S.Vieira 1983); G. *M. selloi* (F.C.S.Vieira 2402); H. *M. splendens* (Silva 9175); I. *M. squamata*, (F.C.S.Vieira 381); J. *M. subcordata*, (F.C.S.Vieira 2127). (vertical white bars = 2 cm).

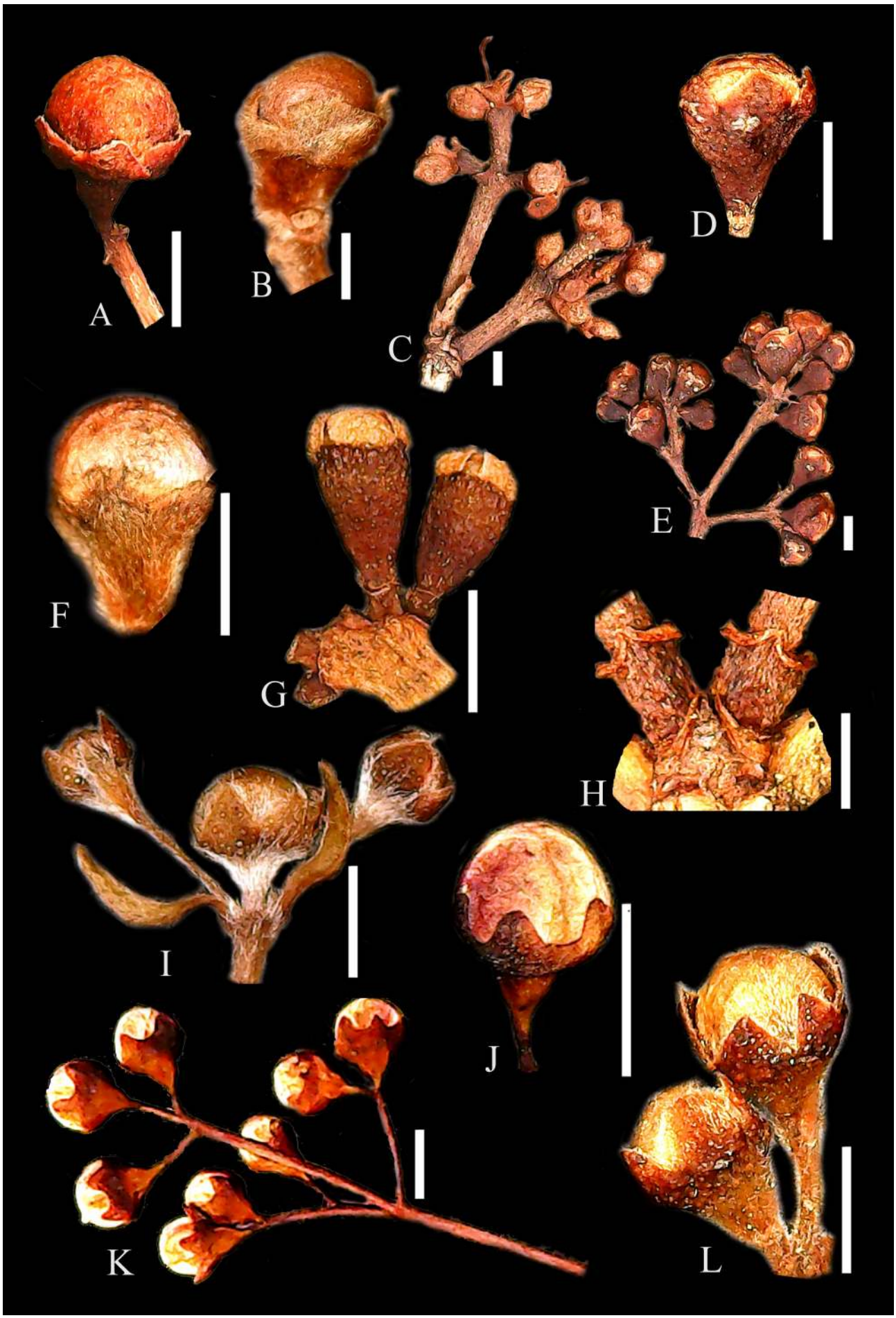

Figure 10: *Myrcia*: A. *Myrcia aethusa*, flower bud (F.C.S.Vieira 2125); B. *M. catharinensis*, flower bud (F.C.S.Vieira 2481); C. *M. glomerata*, inflorescence (Ribas); D-E. *M. guianensis*, flower bud and inflorescence (F.C.S.Vieira 2096); F. *M. hartwegiana*, flower bud (F.C.S.Vieira 1768); G-H. *M. subcordata*, flower bud and cataphylls (F.C.S.Vieira 1970); I. *M. rupicola*, inflorescence, (F.C.S.Vieira 2119); J-K. *M. selloi*, bud and inflorescence, (F.C.S.Vieira 2028); L. *M. splendens* (Silva 9175). (vertical white bars = 1 cm).

***Myrcia catharinensis* (D.Legrand) NicLugh., Kew Bull. 67(2): 240-242. 2012. (Figures: 9b, 10b.)**

Treelets up to 5 m, rough bark, light brown. Yellowish-white trichomes on the abaxial leaf surface, mainly on the veins, yellowish-ferruginous on the young branches, peduncles, sepals and petals. Leaves slightly discolored, lanceolate-ovate, 50-94 x 20-30 mm, glabrous on the adaxial surface, acute apex, rounded to cuneate base, revolute margin especially near the petiole, the latter 3 x 2 mm, veins impressed on the adaxial surface and prominent on the abaxial surface, 7-12 pairs of secondary veins. Flower buds globose, 5.5 x 4.5 mm, sepals wider than long. Fruits globose, 15 x 20 mm, yellow to red when ripe.

A very characteristic species due to its leaves with impressed veins on the adaxial surface and covered in trichomes on the abaxial surface. In the AQ it occurs on the western slope in transition to the Mixed Ombrophilous Forest, where it is most widely distributed. Due to the characteristics highlighted by Lughadha et al. (2012), we have chosen to use M. catharinensis instead of Myrcia hepetala DC. (Sobral 2003). It occurs in the Mixed Ombrophilous Forest and occasionally in the Dense Ombrophilous Forest of the southern states of Brazil (Lughadha et al. 2012).

Examined material: BRAZIL. Santa Catarina: Campo Alegre, Alto Quiriri, western slope, 18 Aug 2008, fr., *F.C.S.Vieira 2113* (JOI). Ibidem, 05 Feb 2019, bud, *F.C.S.Vieira 2481* (JOI). Ibidem, Morro do Iquererim, 05 Feb 1958, fl., *R.Reitz & R.M.Klein 6462* (HBR).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Campina dos Farias, 01 Jan 2020, bud, *F.C.S.Vieira 2775* (JOI).

***Myrcia glomerata* (Cambess.) G.P.Burton & E.Lucas, Phytotaxa 460: 26. 2020. (Figure: 4f, 9c, 10c.)**

Treelet 3 m high, rough bark, light gray. Leaves discolored, blades elliptic or obovate, 40-65 x 25-30 mm, glabrous; apex rounded or obtuse, base cuneate, petiole 4 mm. Panicle inflorescence, peduncles 2-5 cm, calyx lobes tearing into calyptra. Fruits subglobose, 3-5 x 3-5 mm, red.

An uncommon species in the studied area, it is only found in transition areas between Dense Ombrophilous Forest and Mixed Ombrophilous Forest, on west-facing slopes. In Brazil, it occurs in all the states of the South and Southeast regions, as well as neighboring countries such as Argentina, Bolivia, Ecuador, Paraguay and Peru (**2020**). It was formerly treated by Legrand & Klein (1971) as *Calyptranthes concinna* DC.

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 20 Dec 2007, bud, *F.C.S.Vieira 2038* (JOI).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Serra Queimada, 20.II.2008, fr., *F.C.S.Vieira 2003* (JOI). Campo Alegre, 17 Jan 1996, fl. *Ribas 976* (MBM, JOI).

***Myrcia guianensis* (Aubl.) DC., Prodr. 3:245.1828. (Figures: 4g, 9d, 10d-e.)**

Shrub or treelet 1.5-7 m high, rough bark, white, peeling in irregular plates. Glabrous. Leaves discolored, petioles 2-4 mm, blades elliptic or obovate, 20-30 x 10-15 mm, glabrous, apex acuminate, acute or obtuse, base cuneate, mid and secondary veins inconspicuous on the adaxial surface, barely evident on the abaxial surface. Inflorescence terminal, panicles, ca. 20 flowers. Fruits globose, 7-8 mm in diameter, red.

It stands out in the field for its abundant reddish fruits and white bark, which has a rough texture and comes off in irregular plates, unlike *M. selloi*, which has clear but smooth bark. A common species in the Serra Quiriri, it is frequent at altitudes of between 900-1500 m snm. and is common among granite outcrops and on the edges of forests. It has a wide distribution, occurring from the northern part of South America to southern Brazil (Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 7 Sep 2005, bud, *F.C.S.Vieira 1295* (JOI, BHCB). Ibidem, 7 Sep 2005, fr., *F.C.S.Vieira 1299* (JOI, BHCB). Ibidem, Bradador hill, 21 Sep 2007, bud, *F.C.S.Vieira 1934* (SPF). Ibidem, foothill of Morro dos Alemães, 15 Nov 2007, bud, *F.C.S.Vieira 1934* (SPF). Ibidem, below Rancho Paulo Sales, 21 Sep 2007, fr., *F.C.S.Vieira 1943* (SPF). Ibidem, near Morro Pirabeiraba, 14 Nov 2007, fl., *F.C.S.Vieira 1971* (SPF). Ibidem, foothill of Morro dos Alemães, 15 Nov 2007, bud, *F.C.S.Vieira 1976* (SPF). Ibidem, foothills of Morro dos Alemães, 15 Nov 2007, bud, *F.C.S.Vieira 1981* (SPF). Ibidem, Tabajara fragment, 23 May 2008, fr., *F.C.S.Vieira 2078* (SPF). Ibidem, road fragment, 23 May 2008, fr., *F.C.S.Vieira 2084* (SPF). Ibidem, western slope of Morro Campo Alegre, 16 Aug 2008, fl., *F.C.S.Vieira 2096* (BHCB, JOI, SPF).

***Myrcia hartwegiana* (O.Berg) Kiaersk., Enum. Myrt. Bras.:109. 1893. (Figures: 2h, 3e, 4h, 9e, 10f.)**

Shrubs or treelets 1.5-6 m high, brown bark, whitish to yellowish-ferruginous trichomes on petioles, young branches, peduncles and flowers. Leaves discolored, elliptic or oblong, 30-45 x 15-20 mm, apex obtuse, base attenuated, midvein ridged on the adaxial surface, margin revolute, petioles 3-5 mm. Inflorescence axillary, panicle, ca. 10 flowers. Fruits globose, 6-10 mm in diameter, reddish to black when ripe.

It can be confused with *M. rupicola*, from which it can be distinguished by its broader leaves and obtuse apex. An abundant shrub in the studied area, it is distributed at altitudes between 950-1538 m and often occurs in isolation in the Altitude Fields associated with granite outcrops as well as in the forests. It is distributed from Minas Gerais to Rio Grande do Sul (Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 7 Sep 2005, fr., *F.C.S.Vieira 1281* (JOI, BHCB). Ibidem, 7 Sep 2005, fr., *F.C.S.Vieira 1288* (JOI, BHCB). Ibidem, 7 Sep 2005, fr., *F.C.S.Vieira 1296* (JOI, BHCB). Ibidem, 21 Sep 2007, fr., *F.C.S.Vieira*

1945 (SPF, JOI). Ibidem, 20 Dec 2007, *F.C.S.Vieira 2010* (JOI, SPF). Ibidem, 21 Dec 2007, bud, *F.C.S.Vieira 2029* (BHCB, JOI, SPF). Ibidem, 21 Dec 2007, fr., *F.C.S.Vieira 2030* (SPF). Ibidem, 21 Dec 2007, bud, *F.C.S.Vieira 2034* (BHCB, SPF). Ibidem, 21 Dec 2007, bud, *F.C.S.Vieira 2037* (BHCB, SPF). Ibidem, 23 May 2008, bud, *F.C.S.Vieira 2070* (SPF). Joinville, 14 Apr 2006, bud, *F.C.S.Vieira 1768* (SPF, JOI).

***Myrcia rupicola* D.Legrand, Sellowia 13:289.1961. T. I, 8 et T. VIII, 8. (Figures: 3f, 9f, 10i.)**

Treelets 3-5 m high, rough bark, grayish-white, peeling in irregular plates. Leaves discolored, petioles 3-6 mm, blades elliptic-oblong, 30-45 x 13-20 mm, glabrous, apex acuminate or attenuate, base acute, midvein inconspicuous on adaxial surface. Inflorescences with up to 3 flowers, flat peduncles. Fruits elliptic, 7 x 5 mm, red when ripe.

It is similar to *Myrcia hartwegiana*, distinguished by its narrower and longer leaves. In the Serra Quiriri it occurs in riparian forests, hilltops, and in the edge region of the Altomontane Forest at elevations between 1100-1300 m snm. It occurs in the states of Minas Gerais, São Paulo, Paraná and Santa Catarina, and listed as endangered (EN) on the national list of endangered species (Legrand & Klein, 1969b; M. Santos et al., 2025; Centro Nacional de Conservação da Flora, 2025d).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, 21 Sep 2007, *F.C.S.Vieira 1941* (BHCB). Ibidem, Morro Pirabeiraba, 14 Nov 2007, fl., *F.C.S.Vieira 1969* (BHCB, SPF, JOI). Ibidem, foothill of Morro dos Alemães, 15 Nov 2007, fl., *F.C.S.Vieira 1983* (JOI, SPF). Ibidem, 15 Nov 2007, bud, *F.C.S.Vieira 1986* (JOI, SPF). Ibidem, 15 Nov 2007, *F.C.S.Vieira 1989* (SPF). Ibidem, 31 Jan 2009, bud, *F.C.S.Vieira 2119* (SPF). Ibidem, 22 Apr 2009, fr., *F.C.S.Vieira 2147* (SPF).

***Myrcia selloi* (Spreng.) N.Silveira, Loefgrenia 89: 5. 1986. (Figures: 9g, 10j-k.)**

Treelets 3-6 m high, bark white, flaking off in rigid, irregular plates, with a smooth surface remaining. Leaves concolorous, petioles 2-4 mm, blades elliptic or obovate, 25-35 x 10-15 mm, glabrous, apex acuminate, base cuneate, attenuate, midvein inconspicuous on adaxial surface. Inflorescence axillary, panicles, ca. 20 flowers, globose, 9 x 9 mm. Fruits 8-10 mm.

Shrub to treelet with white bark, peeling off in rigid, irregular plates, which can be confused with M. guianensis (see comments on the latter species). In the AQ it has been found above 1200 m snm. It is distributed from Paraná to Rio Grande do Sul, in the Mixed Ombrophilous Forest in the Montana and Altomontana formations (Sobral, 2003). It was described as *Myrcia lajeana* D.Legrand (Legrand & Klein, 1969b), but we agree with the circumscription proposed by De Lannoy et al. (2019), considering it a synonym of *M. selloi*.

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Morro dos Alemães, 15 Nov 2007, fr., *F.C.S.Vieira 1972* (BHCB, SPF). Ibidem, 15 Nov 2007, bud, *F.C.S.Vieira 1987* (JOI, SPF). Ibidem, Rio Quiriri, 20 Dec 2007, fr., *F.C.S.Vieira 2009* (BHCB, JOI, SPF). Ibidem, 20 Dec 2007, fr., *F.C.S.Vieira 2019* (BHCB, JOI, SPF). Ibidem, Morro Quiriri, 21 Dec 2007, bud, *F.C.S.Vieira 2028* (BHCB, JOI, SPF). Ibidem, 23 May 2008, *F.C.S.Vieira 2074* (BHCB).

***Myrcia splendens* (Sw.) DC., Prodr. 3:244. 1828. (Figures: 9h, 10l.)**

Treelets up to 6m, rough bark, gray to light brown, inner surface reddish. White or yellowish trichomes on the abaxial leaf surface, young branches and flowers. Leaves lanceolate-ovate, 35-55 x 9-16 mm, glabrous on the adaxial surface; apex long-acuminate to rostrate; base cuneate; margin tenuously revolute; petioles 2-4 mm; veins impressed on the adaxial surface and prominent on the abaxial surface; secondary veins 15 pairs or more. Flower buds obconic, 3 x 2 mm, with bracteoles; sepals triangular. Fruit oblong, 9 x 4 mm, dark blue when ripe.

A very characteristic species due to its lanceolate leaves with a long acuminate to rostrate apex. In the AQ it occurs on the western slope in transition to Mixed Ombrophilous Forest. It has a wide distribution in the Neotropics, from Mexico to southern Brazil, and some of the names used in the literature in southern Brazil include *Myrcia rostrata* DC. (Legrand & Klein, 1969b) and *Myrcia fallax* (Rich.) DC. (Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Campo Alegre, Lower slopes of Morro Iquererim, 9-10 Dec 1956, bud, *Smith & Klein 8503* (HBR, US*). Garuva, 26 Nov 2015, *Silva et al. 9175* (JOI, MBM).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Castelo dos Bugres, 9 Dec 2008, bud, Ibirama, near the city, riverside, 26 Jan 1957, fr., *Klein 2179* (HBR, NY*, US*).

***Myrcia squamata* (Mattos & D.Legrand) Mattos, Loefgrenia 125: 4. 2008. (Figures: 3g, 4i, 9i).**

Treelets up to 5m, rough bark, brown. Trichomes white to grayish, dense on the petioles, mature branches and the midvein of the abaxial surface, sparse on the abaxial leaf surface, yellowish to ochre on the branches and young leaves and flowers, rufescent on the fruits. Leaves discolored, elliptic to obovate 55-70 x 15-30 mm, glabrous on the adaxial surface; apex acuminate or rounded; base acute or attenuate; petioles 2-4 mm; veins impressed on the adaxial surface and prominent on the abaxial surface; secondary veins 10-15 pairs; prominent glands on the abaxial blade surface, one or more per areole. Inflorescence with three flowers. Flower buds obconic, 4 x 3 mm; sepals rounded. Fruit spherical, 10-15 x 10-15 mm, reddish when ripe.

A species distinguished by its elliptical leaves and rufescent reddish fruits, as well as by its habitat generally in the understory of the Altomontane Forest, typical

of the upper slopes and hilltops of the Serra do Mar in the extreme northeast of Santa Catarina, with dispersal at altimetry levels between 700-1000 m snm (F. C. S. Vieira & de Quadros, 2010). It occurs in Brazil, in the states of São Paulo, Paraná, Santa Catarina and Minas Gerais (M. Santos et al., 2025).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 4 Jul 2004, fr., *F.C.S.Vieira 402* (JOI). Ibidem, fr., *F.C.S.Vieira 1873* (JOI, UPCB).

Additional examined material: BRAZIL. Santa Catarina: Joinville, Morro Jurapê, 11 Jun 2006, fl., *F.C.S.Vieira 1477* (JOI). Ibidem, Castelo dos Bugres, 24 Jun 2004, fr., *F.C.S.Vieira 381* (JOI). Ibidem, 25 Jan 2005, fl., *F.C.S.Vieira 800* (JOI). Ibidem, 21 Feb 2005, fl., *F.C.S.Vieira 844* (JOI). Ibidem, 26 Mar 2005, fl., *F.C.S.Vieira 921* (JOI). Ibidem, Morro da Tromba, 23 Feb 2006, *F.C.S.Vieira 1658* (JOI). São Paulo: Piquete, Pico dos Marins, 05 Sep 2013, fr., *E.P.Fernandez et al. 76* (RB*MBM*).

***Myrcia subcordata* DC., Prodr. 3: 253 1828. (Figures: 3h, 4j, 9j, 10g-h.)**

Shrubs to trees 6-7 m high, bark peeling off in irregular plates, variable color, light-colored, reddish inner surface, cataphylls at the base of the internodes. Glabrous in most structures. Leaves discolored, elliptic to oblong 40-65 x 15-30 mm; apex acute to rounded; base acute or attenuated; petiole 6-10 mm; midvein impressed on the adaxial surface and very prominent on the abaxial surface; secondary and tertiary veins tenuously prominent on both sides, 20-25 pairs of secondary veins. Panicle inflorescence of 20-30 flowers. Flower buds obconic, 3 x 2 mm; sepals rounded. Fruit globose, 4-6 mm in diameter, bluish to black when ripe.

Species that can be confused with M. aethusa, differing by the presence of cataphylls at the base of the nodes and by the predominantly rounded leaf apex in M. subcordata, while in *M. aethusa* it is acuminate and without cataphylls. Legrand & Klein (1969b) treated it under *Myrcia breviramis* (O.Berg) D.Legrand, found on hilltops in the Serra do Mar, as well as in the Altomontane Forest, reporting the existence of alpine forms with leathery leaves, smaller (3 cm) and rounded apex. It occurs in Brazil in the states of Goiás, Minas Gerais, São Paulo, Paraná and Santa Catarina (M. F. Santos et al., 2018).

Examined material: BRAZIL. Santa Catarina: Garuva, Rancho Paulo Sales, fr., 12 May 2007, *F.C.S.Vieira 1910* (JOI, BHCB, FURB, MBM). Ibidem, Morro Pirabeiraba, 14 Nov 2007, bud, *F.C.S.Vieira 1970* (JOI, SPF). Ibidem, near the dam, 21 Dec 2007, bud, *F.C.S.Vieira 2047* (SPF). Ibidem, near the weather station, 31 Jan 2009, fl., *F.C.S.Vieira 2127* (JOI, SPF).

***Myrciaria* O.Berg, Linnaea 27:320. 1856.**

Subshrubs, shrubs or trees, smooth bark branches, peeling in irregular to longitudinal plates. Leaves with a greenish abaxial surface, without a clove-like scent. Inflorescences an axillary raceme or glomerulus. Tetramerous flowers; peduncles smaller than 1 cm; calyx tearing into inconspicuous lobes, bilocular ovary, with two ovules per loculus. Stigma punctiform. Seed with separate cotyledons.

An exclusively American genera that occurs from Mexico to Uruguay (Sobral, 1993). According to Landrum & Kawasaki (1997) there are around 30 species in Brazil, mainly in the southeast (Morais & Lombardi, 2006).

***Myrciaria delicatula* (DC.) O.Berg, Mart. Fl. Bras. 14 (1): 362. 1857 (Figures: 3i, 4k, 11b, 12c).**

Treelet 3-5 m high, smooth bark, reddish, brown or dark gray, peeling in thin, long, leathery plates. Leaves slightly discolored, petiole 1-2 mm, blades lanceolate to linear, 25-35 x 6-8 mm, glabrous. Axillary glomerulus inflorescences with 2-6 flowers. Ovary bilocular, 2 ovules per loculus. Fruits 10 mm in diameter, reddish.

This species stands out for its smooth, red, brown or dark gray bark, which comes off in long, thin plates. It can be confused with *Siphoneugena reitzii*, but *Myrciaria delicatula* has linear-lanceolate and longer leaf blades (25-35 mm) while *S. reitzii* are elliptical and shorter (15-22 mm). In the AQ it is characteristic of the Altomontane Forest, occurring at elevations above 1000 m snm, but it is widely distributed in the Mixed Ombrophilous Forest from the southern states to São Paulo, and also occurs in Argentina and Paraguay (Legrand & Klein, 1978; Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Alto Quiriri, *F.C.S.Vieira 593* (JOI, BHCB, FURB, FUEL). Ibidem, Monte Crista, 20 Dec 2006, *F.C.S.Vieira 1782* (JOI, FURB). Ibidem, near Morro Bradador, 21 Sep 2007, fr., *F.C.S.Vieira 1932* (JOI, SPF). Ibidem, in the altomontane field between the rocks, 21 Dec 2007, fr., *F.C.S.Vieira 2044* (BHCB, SPF).

Additional examined material: BRAZIL. Santa Catarina: Campo Alegre, Morro do Iquererim, fr., *R.Reitz & R.M.Klein 5320* (HBR).

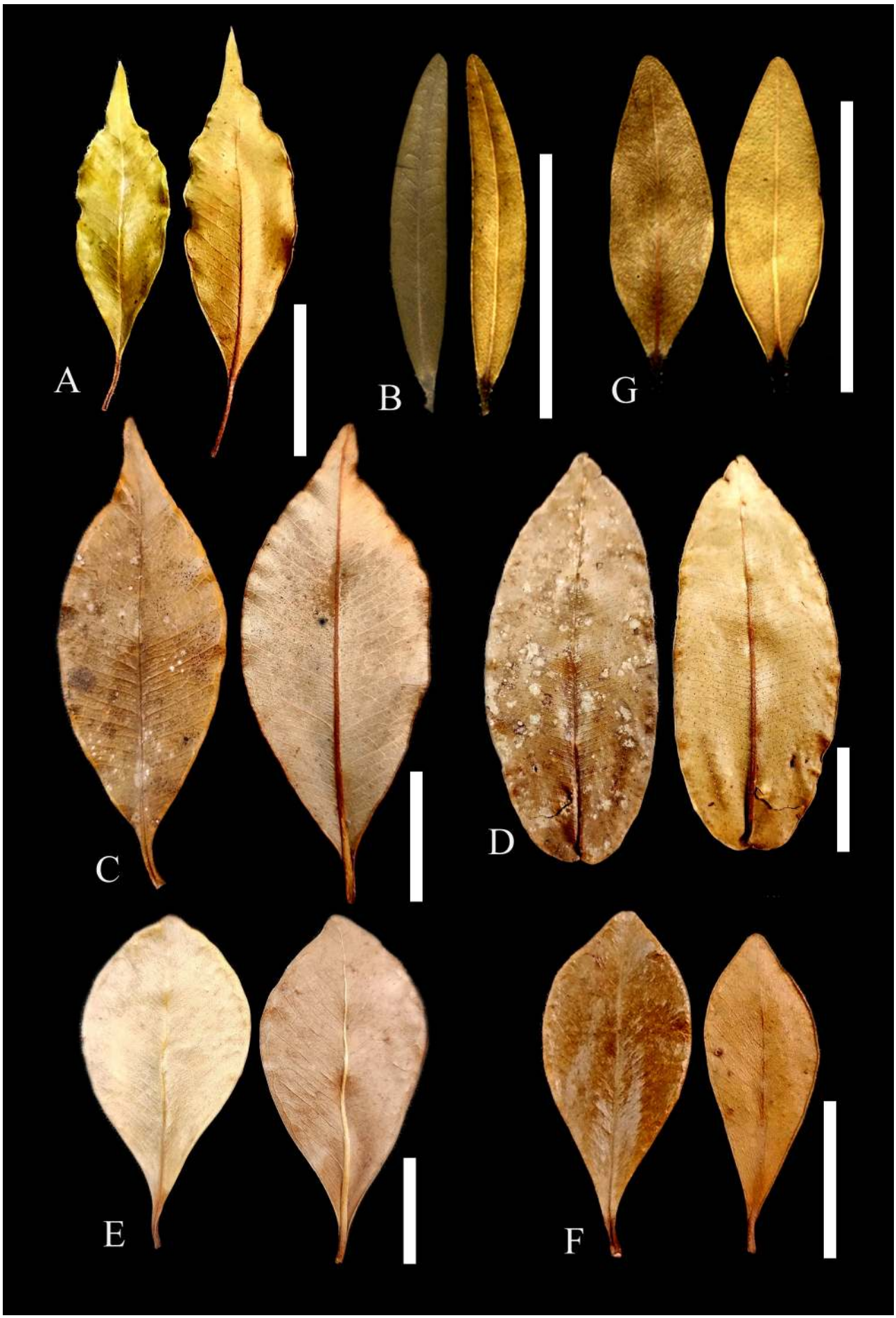

Figure 11: Leaves: A. *Blepharocalyx salicifolius* (F.C.S.Vieira 2128); B. *Myrciaria delicatula* (F.C.S.Vieira 1932); C. *Pimenta pseudocaryophyllus* (F.C.S.Vieira 1876); D. *Plinia cordifolia* (F.C.S.Vieira 634); E. *Psidium cattleyanum* (F.C.S.Vieira 2144); F. *Psidium ovale* (F.C.S.Vieira 2152); G. *Siphoneugena reitzii* (F.C.S.Vieira 2498). (vertical white bars = 2 cm).

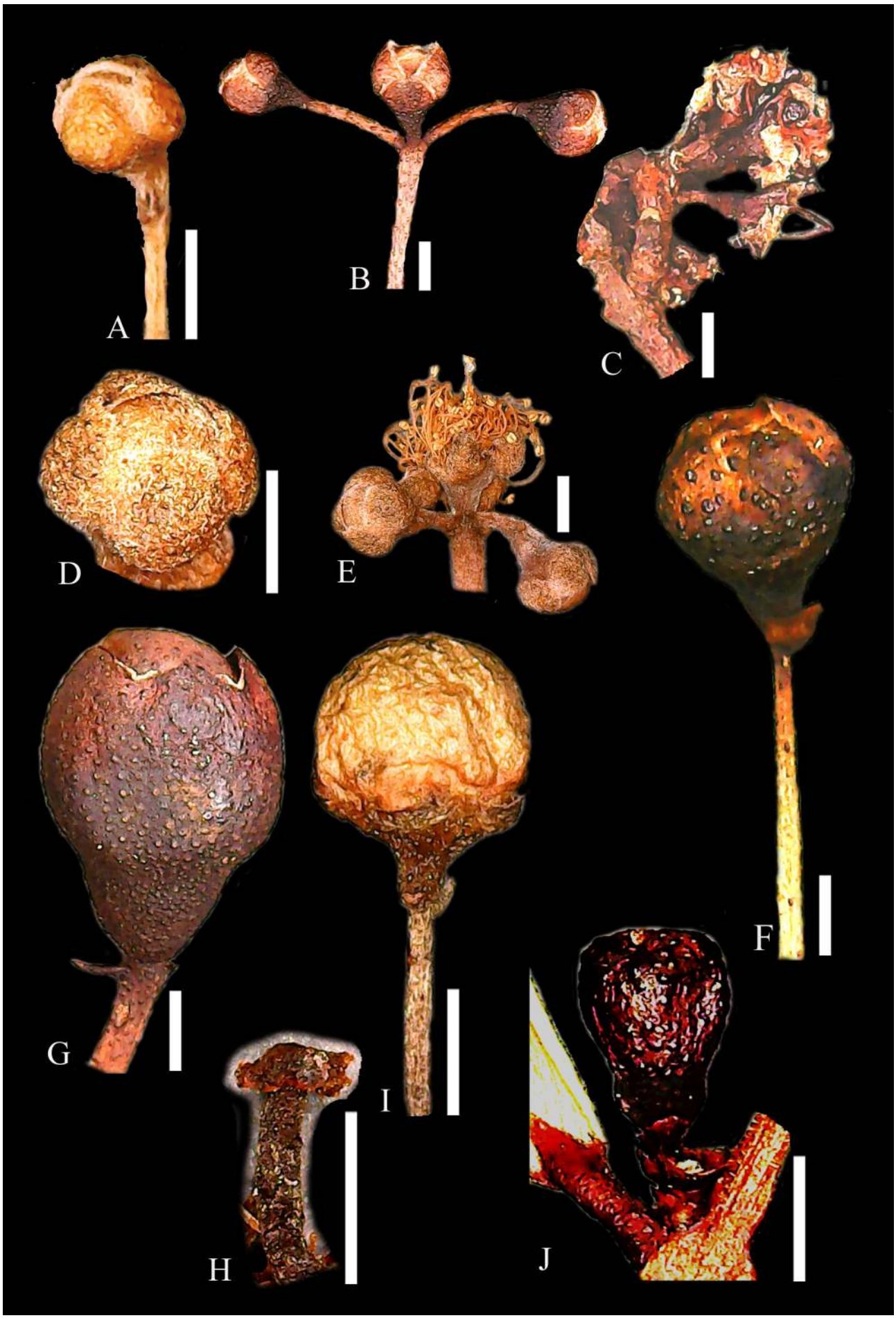

Figure 12: A-B. *Blepharocalyx salicifolius*, flower bud (F.C.S.Vieira 2128) and dichasium (F.C.S.Vieira 2352); C. *Myrciaria delicatula*, glomerulus (F.C.S.Vieira 1782); D-E. *Pimenta pseudocaryophyllus*, flower bud and dichasium (F.C.S.Vieira 1876); F. *Plinia cordifolia*, flower bud (F.C.S.Vieira s.n); G-H. *Psidium cattleyanum*, flower bud and peltate stigma (Brotto 1845); I. *P. ovale*, flower bud, (F.C.S.Vieira 2150); J. *Siphoneugena reitzii*, flower bud (F.C.S.Vieira 1917). (vertical white bars = 1 cm).

***Pimenta* Lindl., Coll. Bot.: t. 19. 1821.**

Shrubs or trees. Rough bark branches, longitudinally fissured. Leaves with a coppery color on the abaxial surface, with a scent similar to cloves. Inflorescence of dichasium or panicle type, 3-15 flowers. Tetramerous flowers, peduncles longer than 10 mm, calyx tearing into lobes. Ovary bilocular. Seed with cartilaginous testa; vestigial cotyledons.

Genera with 15 species, one of which occurs in Brazil (Landrum & Kawasaki, 1997).

***Pimenta pseudocaryophyllus* (Gomes) Landrum, Brittonia 36:242.1984. (Figures: 3j, 4l, 11c, 12d-e.)**

Treelets 6-7 m high, rough bark, longitudinally fissured. Leaves discolored, light green on the adaxial surface, gray, coppery, ferruginous to brown on the abaxial surface, characteristic clove scent when crushed, petioles 3-5 mm, blades lanceolate or oblong-lanceolate, 50-85 x 20-30 mm, glabrous, apex acute, base cuneate or attenuated; midvein inconspicuous on the adaxial surface, prominent on the abaxial surface. Inflorescences axillary dichasium. Fruits oblong, 12 x 2 mm, nigrescent.

This species is easily recognized by its fissured bark and leaves, usually with a coppery hue on the abaxial surface, and by the characteristic clove scent when crushed. It occurs in the Altomontane Forest at altitudes ranging from 1200m to 900m above sea level. The species occurs in Bolivia and Brazil, in the states of Bahia, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul (Landrum, 1986; Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, Morro do Campo Alegre, 7 Sep 2005, fr., *F.C.S.Vieira 1285* (JOI, BHCB). Ibidem, Monte Crista, fl., 08 Jul 2006, *F.C.S.Vieira 1876* (JOI). Ibidem, Tabajara fragment, fr., 23 May 2008, fr., *F.C.S.Vieira 2083* (JOI).

***Plinia* L., Sp. Pl.: 516.1753.**

Treelets or trees. Leaves with a greenish abaxial surface, without a clove-like scent. Inflorescences glomerular raceme type, usually with cauliflory. Flowers 4-5 meres; peduncles longer than 10 mm; calyx tearing into lobes; bilocular ovary. Cotyledons crass, separated.

Currently 43 species of *Plinia* are recognized for Brazil, with more than a half occurring in the Southeast region (*Plinia* in Flora do Brasil 2025).

***Plinia cordifolia* (D.Legrand) Sobral, Hoehnea 21:202.1994. (Figures: 11d, 12f.)**

Treelets 3-5 m high, rough bark. Leaves discolored, petioles null or up to 1 mm, blades ovate-oblong or cordate, 60-85 x 25-45 mm, apex acuminate, base cordate, glabrous. Inflorescences branched fascicles of 2-4 flowers, or solitary axillary flowers. Fruits globose, 20-30 mm in diameter, nigrescent, arranged in bare nodes.

The main characteristics are its cordate base leaves and its flowers and fruits arranged in bare nodes. It is an uncommon species in the studied site, found only at altitudes close to 900-1200m snm in humid environments. A synonym used in the south of Brazil was *Myrciaria cordifolia* D.Legrand (Legrand & Klein, 1978), emphasizing its preference for humid locations, but already above 600 m snm and as well as Sobral (2003) they cite its distribution in Brazil in the states of Paraná, Santa Catarina and Rio Grande do Sul. It is considered an endangered species in the vulnerable (VU) category by Negrão & Moraes (2019).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 15 Nov 2003, fr., *F.C.S.Vieira 124* (JOI). Ibidem, 20 Nov 2004, fr., *F.C.S.Vieira 596* (FURB). Joinville, Castelo dos Bugres, 25 Nov 2005, *F.C.S.Vieira 634* (JOI).

***Psidium* L., Sp. Pl.1:470.1753.**

Shrubs to trees. Branches with bark peeling off in irregular plates, leaving a smooth or rough to somewhat fissured surface, light beige-white, orange to red in color. Leaves with a greenish color on the abaxial surface, no clove-like scent, inconspicuous veins on the adaxial surface, somewhat noticeable on the abaxial surface. Flowers solitary, axillary or terminal, 4-5 meres; peduncles 3-10 mm long; calyx tearing into almost regular to irregular lobes; stigma peltate. Seed with bony testa.

Genera with 70 species, occurring from Mexico and the Caribbean to Argentina (Landrum & Kawasaki, 1997). Two species were found in the AQ.

Key to the *Psidium* species of the Alto Quiriri

1. Shrubs to treelets, leaves larger than 5 cm, solitary flowers, flower buds 8-10 mm in diameter ..... ***P. cattleyanum***
1. Shrubs, leaves smaller than 5 cm, solitary flowers sometimes subtended by linear leaves that appear to be inflorescences, flower buds 3-4 mm in diameter ..... ***P. ovale***

***Psidium cattleyanum* Sabine, Trans. Hort. Soc. London 4: 317. 1822. (Figures: 11e, 12g-h.)**

Shrubs or treelets 6 m high, smooth bark, red to brown, peeling off in irregular chartaceous plates, leaving a smooth surface. Leaves slightly discolored, petioles 4-6 mm, blades obovate or elliptic-obovate, 60-70 x 30-40 mm, apex acuminate or obtuse, base cuneate or elliptic. Flowers solitary, axillary; flower buds globose, 8-10 mm diameter, pedicels 2-4 mm. Fruits globose, 20-30 x 20 mm, yellow when ripe.

Its striking feature is its smooth, reddish-brown bark, peeling off in irregular, chartaceous plates, as well as its yellowish edible fruits. Found in the AQ between 950-1250 m snm, on the edge of the Altomontane Forest or in

the altitude fields; it can also be seen in neighboring municipalities in Restinga areas. In Brazil, it occurs in most Brazilian coastal states (Tuler et al., 2017).

Examined material: BRAZIL. Santa Catarina: Garuva, Serra Quiriri, near Rancho São Tiago, 22 Apr 2009, fr., *F.C.S.Vieira 2146* (SPF).

Additional examined material: BRAZIL. Paraná: Piraquara, 09 Jan 2015, *Brotto 1845* (JOI, MBM).

***Psidium ovale* (Spreng.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 15: 485,1941. (Figures: 3k, 11f, 12i.)**

Shrub 2-4 m high, smooth bark brown on young branches, when mature it flakes off in beige-white, rough, somewhat fissured, long, woody plates. Leaves discolored, with a smell reminiscent of Eucalyptus, petioles 3-4 mm, obovate blades, 15 x 10-12 mm, glabrous, rounded apex, attenuated base, inconspicuous veins on both surfaces. Flowers solitary, sometimes subtended by linear leaves, flower buds 3-4 mm in diameter, globose, pedicels 3-5 mm. Fruits not seen.

Common shrub on hilltops, between 900 and 1200 m snm, rare above this altitude in the AQ. Similar to *P. cattleyanum*, it differs due to its smaller, obovate leaves with a smell similar to *Eucalyptus*, white bark, peeling off in long white woody plates. Legrand & Klein (1977a) called it *P. spathulatum* Mattos, mentioning that it is rare in the Serra do Tabuleiro, while in the Morro Quiriri complex it is quite common. It occurs in the states of Paraná and Santa Catarina and in all the southeastern states (Tuler et al., 2017).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 22 Apr 2009, fl., *F.C.S.Vieira 1779* (JOI). Ibidem, Serra Quiriri, Três Barras road, 22 Apr 2009, bud, *F.C.S.Vieira 2150* (SPF). Ibidem, Serra Quiriri, caminho de Três Barras, 22 Apr 2009, bud, *F.C.S.Vieira 2152* (JOI).

***Siphoneugena* O.Berg Linnaea 27: 344.1856.**

Shrubs to trees. Branches with smooth bark. Leaves with a greenish abaxial surface. Inflorescences raceme, axillary, inconspicuous. Flowers 4-5-merous; peduncles smaller than 10 mm; calyx tearing into lobes, hypanthium deciduous after anthesis, leaving a circular scar. Bilocular ovary. Seed with membranous testa; cotyledons crass, separated.

Genera with 10 species, distributed from Puerto Rico to northern Argentina, and the center of diversity in the southeast of Brazil, with a large percentage of species in the Atlantic Forest Biome (Proença, 1990; Proença, 2025). It apparently has a preference for high-altitude environments (Morais & Lombardi, 2006).

***Siphoneugena reitzii* D.Legrand, Sellowia 8: 78.1857. (Figures: 3l, 11g, 12j.)**

Tree 5-8m high, bark brown to reddish, peeling off in irregular plates, leaving a smooth surface. Leaves discolored, petioles 1-2 mm, blades elliptic or oblong, 15-22 x 03-05 mm, reddish in early summer, apex rounded, base attenuated. Flower buds oblong-obovate, with deciduous hypanthium after anthesis, well characterized by the pronounced ovary and differentiated from the calyx by the infundibuliform tube shape.

The tree has intermittently peeling, smooth and knotty bark, a characteristic which distinguishes it in general from other small-leaved "cambuís" (such as *Myrciaria delicatula*) in the region, the details for differentiating it have been mentioned under *M. delicatula*. It occurs in the Altomontane Forest of the Serra Quiriri, preferably above 1200 m snm, and in Brazil from São Paulo to Rio Grande do Sul, in the Mixed Ombrophilous Forest, and in the altomone formations of the Dense Ombrophilous Forest (Legrand & Klein, 1977a; Proença, 1990; Sobral, 2003).

Examined material: BRAZIL. Santa Catarina: Garuva, Monte Crista, 12 May 2007, bud, *F.C.S.Vieira 1917* (JOI, BHCB). Ibidem, Rio Quiriri near the dam, 21 Dec 2007, bud, *F.C.S.Vieira 2046* (BHCB, JOI, SPF). Ibidem, Tabatinga fragment, 21 May 2008, fl., *F.C.S.Vieira 2056* (JOI, SPF). Ibidem, near the Quiriri River, 17 Aug 2008, fl., fr., *F.C.S.Vieira 2105* (JOI, SPF). Ibidem, western slopes, 05 Mar 2019, bud, *F.C.S.Vieira 2498* (JOI).

Conclusion

The AQ region has a high diversity of species from Myrtaceae, totaling 37 species, most of which were found by Raulino Reitz and Roberto Miguel Klein six decades ago (Reitz et al., 1965), except for three species: *Eugenia quiriri*, *Myrceugenia seriatoramosa* and *Myrcia squamata*. Other species are mentioned on the digital platform (*Campomanesia* sp., *Eugenia chlorophylla* O.Berg, *Eugenia subavenia* O.Berg, *Myrceugenia acutiflora* (Kiaersk.) D.Legrand & Kausel, *Myrcia hatschbachii* D.Legrand; Centro de Referência e Informação Ambiental, 2025), in literature for nearby vegetation formations (Sobral et al., 2019; F. C. S. Vieira, 2020) or have been observed (*Eucalyptus* sp.) for Serra Quiriri, but field expeditions, new determinations and bibliography review have shown that either they are inaccurate determinations, or they are located at altitudes below 1000 m snm, or they are not native, or they are typical of the Ombrophilous Dense or Mixed Montane Forest Formation, and therefore are not the subject of this study, as they are not characterized as typical Altomontane Forest species (Legrand & Klein, 1969a; Legrand & Klein, 1969b; Legrand & Klein, 1970). Five species are classified by risk of extinction: in the vulnerable (VU) category, *Eugenia sclerocalyx*, *Myrceugenia hamoniana*, *Myrceugenia hoehnei* and *Plinia cordifolia*, and in the endangered (EN) category *Myrcia rupicola*, so the AQ region is an important site for preserving these species, in addition to its ecological and phytophysiognomic peculiarities which also highlight the importance of conserving all this mountain range. Comparing the 37 species recorded in this study (20% of Santa Catarina's native species) with other studies of the family in the state (25 in "Lagoa do Peri" by Pellis et al., 2021; 17 in "Baía

de Babitonga" by F. Vieira and Esemann-Quadros, 2005; 16 in "Parque Nacional São Joaquim" by Wagner and Fiaschi, 2020), it is clear that this is one of the most biodiverse Myrtaceae sites in the state of Santa Catarina.

Acknowledgements

This project was possible due to the establishment of partnerships with essential institutions, to which we are deeply grateful, including: UNIVILLE through Dr. Karin Esemann de Quadros and Dr. Cynthia Hering; the Military Environmental Police of Santa Catarina, which provided full support for access to the collection sites; the University of São Paulo (USP) and its Institute of Biosciences and the Laboratory of Plant Systematics "Sobre as Ondas" that accepted the project; CAPES for the postgraduate fellowship and the Associação Joinvilense de Montanhismo (AJM) through field partners such as Leandro Gonçalves and Angelita Ferreira, but mainly to the Geographer Reginaldo José de Carvalho who accompanied all the field expeditions and was a guide in the fog and adverse weather conditions that made orientation difficult, and other Biologists such as Estevão Jasper Comitti, Fabrício Schmitz Meyer and Werner Siebje Mancinelli.

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