Endemic. Originally discovered on the summit region of Mt. Makiling, Luzon; Philippines (northern to central Luzon, Bohol, Mindanao).

Com. name – Alongmaman (llk.).
Exsicc. – Elmer 17765, 1237313 (US).


Shrubs or small trees. Upper leaves simple, lower or larger ones doubly pinnate, thickly coriaceous, rachis terete; petiole channeled above, glabrous; leaflets ovately oblong to broadly lanceolate, 8-20 x 2-6 cm, midrib with 8-12 pairs of obscure nerves, coarsely dentate except basal portion, long-acuminate, base acute; petiolules 1 cm long. Cymes widely spreading, upon stout stalks, solitary or 3-clustered, opposite terminal leaf; branches glabrous, divaricate, few short ultimate ones usually brown-pubescent; flowers terminally clustered, subsessile, yellowish or whitish green; calyx stipe hairy, obscurely 4-toothed; corolla lobes oblong, glabrous; staminal tube notched. Fruits compressed-globose, 1.25 cm across, 4-seeded, turning brownish when mature.

Philippines (Luzon to Mindoro), Taiwan and Botel Tobago. In primary forests at low and medium altitudes; in Mt. Makiling, Luzon, common in the vicinity of Mudspring.

Com. name – Kaliyantan (Tag.).
Exsicc. – Hernaez CA 12398; Ela CA 10066; Manuel CA 9143; Gates CA1747; Lazaro CA 1746 (CAHP); Foxworthy's collector BS 22, 1091608; McGregor BS 221816, 898308 (US).

93. **ELAEOCARPACEAE**

Trees or shrubs, sometimes epiphytic. Leaves simple, entire or toothed, alternate, often with domatia in nerve axils, stipulate. Flowers bisexual or unisexual, in racemes, panicles or cymes; sepals 4-5, free or connate; petals 4-5, free or connate, valvate or imbricate; stamens many, distinct, arising from a disc; anthers mostly 2-celled, dehiscing by 2 terminal pores; disc intrastaminal, often developed into an androphore; ovaries superior, 2- to many-celled; style 1, mostly lobed; ovules 2 to many in each cell, pendulous. Fruits a capsule, berry or drupe; seeds with straight embryo, endosperm copious.

Genera 9, species 275, throughout the tropical and subtropical areas of the world; 2 genera and 51 species in the Philippines.
1. Leaves distichously arranged; flowers few, together, supra-axillary; fruit a berry ................................................................. 1. Muntingia
1. Leaves spirally arranged; flowers in few- to many-flowered racemes, axillary; fruit a drupe .............................................. 2. Elaeocarpus

1. MUNTINGIA Linnaeus

Trees stellate, pubescent. Leaves toothed, inequilateral, distichous. Flowers white, solitary or in pairs; pedicels inserted above leaf axils; sepals 5, lanceolate, valvate; petals entire, obovate; stamens indefinite, free, inserted on an annular, subperigynous disc; ovaries 5- to 7-celled, ovoid, surrounded by a dense ring of white hairs; stigmas subsessile, thick, sulcate-lobed. Fruits fleshy, globose, many-seeded berries.

A monotypic genus; in Mexico and South America; cultivated in many tropical countries.


Trees, 5-10 m high, viscid-pubescent with stellate hairs, branches spreading. Leaves distichous, oblong-ovate to broadly oblong-lanceolate, 8-13 cm long, acuminate, toothed, base inequilateral, one side rounded, other acute; stipules slender, hairy, short, deciduous. Flowers 2 cm in diameter, white, extra-axillary, solitary or in pairs; pedicels erict, 1.5-2.5 cm long; sepals 5, green, reflexed, lanceolate, long-acuminate, long; petals obovate, 1 cm long, deciduous, spreading; stamens many. Fruits globose, red, smooth, very fleshy, berries sweet, 1.5 cm in diameter, filled with numerous, small seeds.

Native of tropical America. Introduced and now naturalized throughout the Philippines, in the vicinity of human habitations, sometimes growing wild.

Com. name – Datiles (Tag., Bik.).
Exsicc. – Estioko, Jr CA 1763, 1765; Aspiras CA 1764; Novero CA 7084; Champhaka CA 8104; Abes CA 1766; Desamero CA 10823; Orldo CA 10824, 10825, 10826 (CAHP).

2. ELAEOCARPUS Linnaeus

Trees or shrubs. Leaves simple, stipulate. Flowers usually perfect, rarely polygamous, in axillary racemes or laterally clustered below foliage; sepals 5, distinct; petals 5, usually laciniate at apex, seldom entire, springing from outside of a cushion-shaped, often 5-lobed torus; stamens usually indefinite, never less than 10, arising from inside of torus, more or less in groups, opposite petals, and alternating with glands of torus; anthers innate, linear, opening
Elaeocarpaceae

by terminal pore; ovaries sessile, 2- to 5-celled, cells 2- to many-ovuled; styles columnar. Drupes with single, bony stone which is 3-, 5- or by abortion. 1-celled, seeds pendulous, 1 in each cell. with fleshy albumen

Species 200 or more in the Old World tropics, a few in subtropical and subtemperate regions: 50 in the Philippines.

1. Leaves obovately oblong or obovate to oblanceolate
   2. Leaves obovately oblong; racemes lateral below foliage, petals appressed-hairy on exterior, finely fimbriated at apex
      1. E. argenteus
   2. Leaves obovately oblong; racemes axillary or crowded at tips of branchlets; petals glabrous except at pilose basal portion
      1. E. argenteus

1. Leaves not obovate
   3. Flowers yellowish, at least 1 cm long; petals densely hairy
   4. Foliage subelliptic to short-oblong
      5. Petioles up to 3 cm long; petals strigose below middle
         1. E. argenteus
      6. Petioles up to 1.5 cm long, puberulous, gradually extended into blade
   5. Petioles one half as long as 3 cm, petals glabrous

1. Elaeocarpus argenteus Merr., Publ. Gov. Lab. Phil. 29: 26, 1905; En. Phil. 3:14, 1923. Figure 107

Trees small, stocky. Leaves numerously crowded, obovate to oblanceolate, 3-5 x 2-3 cm, with 5 pairs of prominent veins beneath, acute or rather blunt and slightly emarginate, base cuneate; petioles 1 cm long. Racemes equaling or exceeding leaves, axillary or crowded at tips of branchlets, erect or ascending, appressed-silvery-pubescent; flowers white, pendulous, subtended by lanceolate bracts; pedicels 5 mm long; sepals 5, lanceolate, glabrous on ventral side. petals nearly as long as pedicels, apex laciniate, glabrous except at pilose basal portion; stamens 30: filaments 1 mm long, sparsely hairy, ovaries ovoid, densely silvery-canescent, 2-celled; styles short. Fruits ovoidly ellipsoid, dark green, bluish purple when ripe; seeds longitudinally rugose.

Endemic Philippines: (Luzon and Visayas); on high mountains; in Mt. Makiling, Luzon. common at the summit.
Figure 107. *Elaeocarpus argenteus*: 1. flowering branch; 2. leaf, dorsal view; 3. flower; 3a. sepal, ventral view; 4. flower, sepals and petals removed; 5. petal, ventral view; 5a. petal, dorsal view; 6. stamen, 3 views; 7. ovary, cross section; 8. ovary, vertical section; 9. fruiting branch; 10. fruit; 11. seed.
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93. Elaeocarpaceae

Com. name – Bakani (Sul.).
Exsicc. – Pancho CA 10976*, Kanigorn CA 12463; Gates CA 1749, 1750; Orlido CA 10648 (CAHP); Elmer 1050118, 1237687; Brown 568357; Curran & Merritt 709042 (US).


Trees tall, rather large. Leaves terminally clustered, obovately oblong, 25 x 10 cm, stout midrib with 15 pairs of nerves, serrately toothed except basal portion, rounded and short-acute at apex, base cuneate; petioles 1-2 cm long. Inflorescences lateral below foliage, 3-8 cm long, short-pubescent; flowers 1.5 cm long, yellowish white; pedicels short, bract-subtended; calyx lanceolate; petals appressed-hairy on exterior, lobed, finely fimbriated at apex; anthers short-stalked, cleft at apex, one of divisions tailed. Fruits ellipsoid or obovate,.6 x 4 cm, dull or dark green; meat very fibrous, exceedingly bitter.

Throughout the Philippines, in primary forests up to 1000 m; in Mt. Makiling, Luzon, in the mossy forest to the summit, 900-1109 m.

Com. name – Tabian (Neg.).
Exsicc. – Villamil CA 1751; Gates CA 1752 (CAHP); Villamil 902845, 1293672; Elmer 1050117,1237639 (US).


Trees. Leaves terminally crowded, oblong, 14 x 4 cm, midrib with about 10 pairs of nerves, subentire, subacuminate, abruptly acute or rounded at base; petioles 4-5 cm long, puberulent. Racemes in uppermost leaf axils, equaling foliage, brownish-pubescent; flowers yellowish; pedicels 1-1.5 cm long; sepals broadly lanceolate, 14 mm long, almost one third as wide, tapering toward acute apex, thick, glabrous within; petals slightly exceeding sepals, densely appressed-silky-pubescent on dorsal side, 3 lobes lacinately fringed; stamens indefinite with 2-mm long filaments and 4-5 mm long unequally placed anthers; ovaries pubescent; styles 3.5 mm long, glabrous at least toward distal end. Drupes globose to short-ellipsoid, 2.25 cm in diameter, 5-celled stone longitudinally 10-grooved; seeds solitary.

Throughout the Philippines, in primary forests from 200-1000 m; in Mt. Makiling, Luzon, in the vicinity of Mudspring up to the mossy forest, 300-900 m.

Com. name – Bayukbok (Tag.).
Exsicc. – Elmer 1050119 (US).

Trees stocky. Leaves elliptic, 10 x 5 cm, prominent midrib with 5-7 lateral pairs of nerves, obscurely and crenately dentate, abruptly terminating into an acute point, base rounded or obtuse; petioles 3 cm long. Racemes axillary, ascending, 5-8 mm in length, puberulous; flowers pale white, scattered from near base, 5-8 mm long; pedicels slender, 1 cm long; sepals thick, densely pubescent along edges, lanceolate with large, lighter colored spots; lacerated petals strigose below middle especially toward margins; anthers split at apex. Fruits upon thickened and elongated stalks, oblong, 2 cm long, ringed at base with short-pubescent glands, yellowish red; seeds corrugated.

Endemic. Philippines: Luzon to Mindoro; in primary forests at low altitudes; in Mt. Makiling, Luzon, mostly in the lowlands.

Com. name — *Kalomala* (Tag.).
Exsicc. — Hernaez CA 27157* (CAHP); Dequilia 2245761 (US).


Trees small. Leaves elliptically oblong, 8 x 4 cm, midrib with 5-7 pairs of ascending nerves, entire or obscurely crenate, obtuse at both ends subcuneate at base; petioles 1.5 cm long. Racemes slender, up to 12 cm long, divaricate from below foliage, puberulent; flowers whitish, scattered from base; pedicels subglabrous, 5-8 mm in length; sepals coriaceous, sharply pointed; petals glabrous, slenderly laciniate; anthers parted at apex. Fruits upon thickened pedicels, oblong, 2 cm long, subtended by glandular ring, yellowish to red.

Celebes. Throughout the Philippines, in forests at low altitudes; in Mt. Makiling, Luzon, mostly in the lowlands.

Com. name — *Hunggo* (Bik., Tag.).
Exsicc. — Elmer 1050120 (US).


Trees tall. Leaves lanceolate, 10 x 3 cm, midrib puberulent when young with 12 pairs of lateral nerves with glandular axils, obscurely crenulate,
Figure 108. *Elaeocarpus calomala*: 1. flowering branch; 2. flower; 3. petal; 4. pistil; 5. stamen, 2 views; 6. fruiting branch; 7. seed; 8, ovary, cross section; 9. fruit.