

ADDITIONS TO THE DICOTYLEDONOUS FLORA OF GOA

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ABSTRACT

The flora of Goa is relatively underexplored as compared to other neighbouring states. The present paper adds 31 dicotyledonous species belonging to 26 genera and 15 families to the flora of Goa.

The modern botanical history of India started with the publication of *Coloquios dos Simples e Drogas da India* by Garcia da Orta (1563). Though this work originated from Goa, no major publications on floristics of Goa followed this for the next three centuries. The first major floristic work on Goa, "Flora de Goa e Savantvadi" was published by Dalgado (1898) to commemorate the completion of 400 years of Portuguese' entry into India. Occasional small publications that followed Dalgado's work have not contributed much to the floristics of Goa, as they mostly dealt with economically important plants. Subsequent to the liberation of Goa from Portuguese rule, Vartak (1966) published "Enumeration of Plants of Gomantak, India" followed by "Flora of Goa, Diu, Daman, Dadra and Nagarhaveli" by Rao (1985 - 86).

In spite of the existence of all the Floras mentioned above, Goa's floristic wealth is not completely known. Dalgado, who brought out the first floristic account of the area was a medical officer based in Savantvadi. He frequently quotes in his book the areas around Savantvadi or "Nas Gattes" (i.e. our Ghats) as localities. There is no

means to find out whether the species dealt by him are really from Goa except in specified cases. Vartak (l.c.) also included the areas outside the territory of Goa state. He frequently refers to the locality as Ghats. Both the publications quoted above do not provide any keys or descriptions of the plants. Rao (l.c.) provided keys and nomenclature in his account, but included large number of species for Goa, either based on Dalgado (l.c.) or based on assumptions. The recent studies by Kulkarni and Janarthanam (1995) added ten species of the family Scrophulariaceae to the area of study. Hence the floristic studies in Goa assume greater significance. The present paper adds 31 dicotyledonous species to the Flora of Goa.

The specimens were collected, processed according to standard herbarium procedure and incorporated into the Herbarium after identification and proper labelling. Identity of specimens is confirmed at BSI, BLAT and MH by comparing with authentic specimens. All the specimens are deposited in the Herbarium of Department of Botany, Goa University. Unless specifically mentioned, all the specimens were

collected by either one or more of the authors. Though reference to Dalgado (l.c.), Vartak (l.c.) or Rao (l.c.) is given in few places, the species are included here due to one of the following reasons:

- a) The specimens were recorded by them outside the territory of Goa state. b) The locality is either not mentioned or mentioned generally as Ghats.
- c) The species are included by Rao (l.c.) based on assumption or included by him on the basis of Dalgado (l.c.) which in turn does not provide any clue to its collection in Goa.

MALPIGHIACEAE

Hiptage benghalensis (L.) Kurz in J. Asiat. Soc. Bengal 14: 36. 1879; Vartak, Enum. Pl. Gomantak 31. 1966; Santapau 28. 1967 (3rd ed.); Kulkarni, Fl. Sindhudurg 56. 1988; Almeida, Fl. Savantwadi 1: 75. 1990; Almeida, Fl. Maharashtra 1: 183. 1996. *Banistertia benghalensis* L. Sp. Pl. 427. 1753. *Hiptage madagholta* Gaertn. Fruct. 2: 169. t. 116. 1791; Hook. f. Fl. Brit. India 1: 418. 1874; Dalgado, Fl. Goa e Savantwadi 26. 1898; Cooke, Fl. Bombay 1: 167. 1967 (reprint ed.).

A woody climber, leaves opposite; inflorescence terminal, flower white, fragrant; petals clawed, crumpled, fruits 3-winged.

Exsiccata: Chorla Ghat, Alt. 370 m, 7.3.97, 589.

Note: Found along the slopes in ghat area.

RUTACEAE

Atalantia racemosa Wight & Arn. Prodr. 91. 1834; Hook. f. Fl. Brit. India 1: 512. 1875; Vartak, Enum. Pl. Gomantak 33. 1966; Cooke, Fl. Bombay 1: 199. 1967 (reprint ed.); Kulkarni, Fl. Sindhudurg 62. 1988; Almeida, Fl. Savantwadi 1: 80. 1990; Almeida, Fl. Maharashtra 1: 199. 1996.

A shrub usually armed; leaves elliptic; fruit a berry, globose.

Exsiccata: Chorla ghat, Alt. 300 m, 7.3.97, 595.

Note: Found along the hill slopes.

Pamburus missionis (Wight) Swingle in J. Wash. Acad. Sci 6: 338. 1916; Almeida, Fl. Maharashtra 1: 211. 1996. *Limonia missionis* Wight in Hook. J. Bot. Misc 3: 291. t. 33. 1833. *Atalantia missionis*

(Wight) Oliver in J. Linn. Soc. Bot. 5: 25. 1861; Hook. f. Fl. Brit. India 1: 513. 1875; Cooke, Fl. Bombay 1: 200. 1967 (reprint ed.).

A small, armed tree; flowers white, in racemes; fruit 5-faced, mucilaginous.

Exsiccata: Chorla Ghat, 7.3.97, Alt. 300 m, 612.

MELIACEAE

Trichilia affinis (A. Juss.) Almeida, Fl. Maharashtra 1: 230. 1996. *Heynea affinis* A. Juss. Bull. Soc. Nat. Geol. 23: 238. 1830. *Trichilia connaroides* (Wight & Arn.) Benthvelzen in Acta Bot. Neerl. 11: 13. 1962; Rao, Fl. Goa 1: 71. 1985; Kulkarni, Fl. Sindhudurg 71. 1988; Almeida, Fl. Savantwadi 1: 89. 1990. *Heynea trijuga* Roxb. ex Sims. Bot. Mag. 41: t. 1738, Hook. f. Fl. Brit. India 1: 565. 1876; Dalgado, Fl. Goa e Savantwadi 34. 1898; Vartak, Enum. Pl. Gomantak 35. 1966; Cooke, Fl. Bombay 1: 227. 1967 (reprint ed.). *Zanthoxylum connaroides* Wight & Arn. Prodr. 148. 1834.

A medium sized tree; fruits reddish, seeds with white aril.

Exsiccata: Molem-Anmode Road, Alt. 460 m, 28.9.96, 194.

Note: Common along the slopes.

OLACACEAE

Olax psittacorum (Willd.) Vahl, Enum. 34. 1804; Almeida & Almeida in J. Bombay Nat. Hist. Soc. 81(3): 742-43. 1984; Almeida, Fl. Savantwadi 1: 90. 1990; Almeida, Fl. Maharashtra 1: 236. 1996. *Fissilia psittacorum* Willd. Sp. Pl. 1: 194. 1797. *Olax scandens* Roxb. Pl. Cor. 2: t. 102. 1798; Hook. f. Fl. Brit. India 1: 575. 1875; Cooke, Fl. Bombay 1: 234. 1967 (reprint ed.).

A climbing shrub, old wood with curved thorns; flowers white, in axillary racemes.

Exsiccata: Chandranth, 30.1.97, 545.

Note: Branches usually projecting out from the bushes.

HIPPOCRATEACEAE

Loeseneriella ovata (Lam.) Almeida, Fl. Maharashtra 1: 245. 1996. *L. obtusifolia* (Roxb.) A.C. Smith in Amer. J. Bot. 28: 440. 1941; Almeida, Fl. Savantwadi 1: 95. 1990. *Hippocratea obtusifolia* Roxb. Fl. Ind. 1: 166. 1820; Lawson in Hook. f. Fl. Brit. India 1: 623. 1875; Dalgado, Fl. Goa e

Savantvadi 36. 1898; Vartak, Enum. Pl. Gomantak 36. 1966; Cooke, Fl. Bombay 1: 249. 1967 (reprint ed.). *H. africana* (Willd.) Loes. ex Engl. Pflanzenf. W. Afr. 3(2): 240. 1921; Rao, Fl. Goa 1: 76. 1985. *H. ovata* Lam. Illustr. 1: 100. t. 28. f.2. 1791.

A climbing shrub; inflorescence a raceme; flower buds conical.

Exsiccata: Dudhsagar, 15.1.97, 505.

Note: Found in moist deciduous forests.

CELASTRACEAE

Maytenus senegalensis (Lam.) Excell. in Bot. Soc. Beot Ser. 2, 26: 223. 1952; Almeida, Fl. Maharashtra 1: 243. 1996. *Celastrus senegalensis* Lam. Encycl. 1: 400. 1763. *Gymnosporia montana* Benth. Fl. Aust. 1: 400. 1863; Hook. f. Fl. Brit. India 1: 621. 1875; Cooke, Fl. Bombay 1: 247. 1967 (reprint ed.). *G. emarginata* (Willd.) Thw. Enum. 409. 1864; Rao, Fl. Goa 1: 75. 1985. *Celastrus emarginatus* Willd. Sp. Pl. 1(2): 1128. 1798.

A large shrub or a small spreading tree; leaves ovate, minutely serrate along the margins; inflorescence an axillary cyme; capsule globose; seeds reddish brown.

Exsiccata: Chorla, 8.11.96, 319.

Note: A common plant in moist deciduous forests.

RHAMNACEAE

Scutia myrtina (Burm. f.) Kurz in J. Asiat. Soc. Bengal 44: 168. 1875; Vartak, Enum. Pl. Gomantak 37. 1966; Kulkarni, Fl. Sindhudurg 81. 1988; Almeida, Fl. Savantvadi 1: 98. 1990; Almeida, Fl. Maharashtra 1: 251. 1996. *Rhamnus myrtinus* Burm. f. Fl. Ind. 60. 1768. *Scutia indica* Brongn. Mem Fam. Rhamn. 56. 1826; Lawson in Hook. f. Fl. Brit. India 1: 640. 1875; Cooke, Fl. Bombay 1: 260. 1967 (reprint ed.).

A thorny shrub, thorns recurved; leaves ovate with short petiole; fruits globose, purple, fleshy.

Exsiccata: Chorla, Alt. 460 m, 29.6.97, 701.

FABACEAE

Alysicarpus belgaumensis Wight, Ic. t. 92. 1840; Hook. f. Fl. Brit. India 2: 160. 1879; Vartak, Enum. Pl. Gomantak 92. 1966; Cooke, Fl. Bombay 1: 372. 1967 (reprint ed.); Saldanha, Fl. Karnataka

417. 1984; Kulkarni, Fl. Sindhudurg 103. 1988; Almeida, Fl. Savantvadi 1: 118. 1990.

Annual herb; leaves simple or upper ones trifoliolate; flowers lilac with 'V' shaped white spots at the centre of the standard petal.

Exsiccata: Chorla Ghats, Alt. 450 m, 24.10.96, 254.

Note: Occurs along the open slopes of Ghats.

Crotalaria medicaginea Lam. Encycl. 2: 201. 1790; Hook. f. Fl. Brit. India 2: 81. 1879; Cooke, Fl. Bombay 1: 32. 1967 (reprint ed.); Saldanha, Fl. Karnataka 436. 1984; Rao, Fl. Goa 1: 108. 1985.

An annual herb; flowers yellow; pods oblique-globose, single seeded.

Exsiccata: Taleigao Plateau, Goa University Campus, 12.8.96, 20.

Note: Common on laterite plateaus.

Crotalaria vestita Baker in Hook. f. Fl. Brit. India 2: 67. 1879; Cook 1: 313. 1967 (reprint ed.); Saldanha Fl. Karnataka 442. 1984; Kulkarni, Fl. Sindhudurg 113. 1988; Almeida, Fl. Savantvadi 1: 126. 1990.

A sub-erect, densely pubescent herb; flower yellow; pods oblong, glabrous with persistent style.

Exsiccata: Chorla ghat, Alt. 300 m, 8.11.96, 325.

Note: Found growing on cut surfaces and open slopes of Ghats.

Erythrina suberosa Roxb. Fl. Ind. 3: 253. 1832; Hook. f. Fl. Brit. India 2: 189. 1876; Cooke, Fl. Bombay 1: 392. 1967 (reprint ed.); Saldanha, Fl. Karnataka 460. 1984.

A moderate sized deciduous tree; flowers crimson red in colour. in densely crowded racemes.

Exsiccata: Taleigao Plateau, Goa University Campus, 8.2.97, 558.

Note: Common in open areas.

Indigofera linifolia (L.f.) Retz. Obs. Bot. 4: 29. 1786; Hook. f. Fl. Brit. India 2: 92. 1876; Dalgado, Fl. Goa e Savantvadi 45. 1898; Vartak, Enum. Pl. Gomantak 41. 1966; Cooke, Fl. Bombay 1: 330. 1967 (reprint ed.); Saldanha, Fl. Karnataka 471. 1984; Rao, Fl. Goa 1: 124. 1985; Kulkarni, Fl. Sindhudurg 128. 1988; Almeida, Fl. Savantvadi 1: 137. 1990. *Hedysarum linifolium* L. f. Suppl. Pl.

331. 1781.

An erect silvery white herb; leaves linear, acute; flowers axillary, red. Pods globose, apiculate with white hairs.

Exsiccata: Taleigao Plateau, Goa University Campus, 23.9.96, 176.

Note: Found on lateritic plateaus.

Indigofera trita L.f. Suppl. Pl. 335. 1781; Hook. f. Fl. Brit. India 2: 96. 1876; Cooke, Fl. Bombay 1: 335. 1967 (reprint ed.); Saldanha, Fl. Karnataka 475. 1984.

A diffuse annual herb; leaves trifoliate; corolla salmon red in colour.

Exsiccata: Lolium, 24.8.96, 68.

Note: Common on open lateritic plateaus.

Paracalyx scariosa (Roxb.) Ali in Univ. Studies Karachi 5: 95. 1968; Saldanha, Fl. Karnataka 481. 1984; Kulkarni, Fl. Sindhudurg 129. 1988; Almeida, Fl. Savantwadi 138. 1990. *Cylista scariosa* Roxb. Pl. Cor. t. 92. 1795; Hook. f. Fl. Brit. India 2: 219. 1876; Dalgado, Fl. Goa e Savantvadi 55. 1898; Vartak, Enum. Pl. Gomantak 44. 1966; Cooke, Fl. Bombay 1: 412. 1967 (reprint ed.); Rao, Fl. Goa 1: 110. 1985.

A climber with prominent calyx; calyx membranous, large, papery, covering golden yellow corolla.

Exsiccata: Chorla, Alt. 460 m, 7.3.97, 587.

Note: Common on trees and bushes along open hill slopes.

Vigna radiata (L.) van Welzen var. *sublobata* (Roxb.) Verdc. in Kew Bull. 24 : 559. 1970; Saldanha, Fl. Karnataka 503. 1984; Almeida, Fl. Savantwadi 1: 148. 1990. *Phaseolus sublobatus* Roxb. Fl. Ind. 3: 288. 1832; Cooke, Fl. Bombay 1: 402. 1967 (reprint ed.). *P. trinervius* Heyne in Wall. Cat. 5603; Hook. f. Fl. Brit. India 2: 203. 1879; Dalgado, Fl. Goa e Savantvadi 53. 1898.

Annual climber with pubescent pods.

Exsiccata: Goa University Campus, Taleigao Plateau, 23.9.96, 166.

Note: Common on bushes of open plateaus.

LYTHRACEAE

Rotala macrandra Koehne, Bot. Jahrb. 1: 176. 1880;

Cook in Boissiera 29: 54. 1979; Kulkarni, Fl. Sindhudurg 173. 1988; Joseph & Sivarajan in Proc. Indian Acad. Sci. (Plant Sci.) 99: 185. 1989.

Aquatic annual herb; leaves orbicular, sessile; flowers pink with exserted stamens.

Exsiccata: Carambolim lake, 2.12.96, 431; Ciba campus, 4.1.97, 456.

Note: Common in temporary pools and lakes; Endemic to Western Ghats.

Rotala malampuzhensis R.V. Nair (J. Bombay Nat. Hist. Soc. 72: 57. 1975 nom. invalid) ex Cook in Boissiera 29: 98. 1979; Joseph & Sivarajan in Proc. Indian Acad. Sci. (Plant Sci.) 99: 186. 1989.

A gregarious annual; leaves linear-lanceolate; calyx tube bright pink; petals 3; stamens inserted.

Exsiccata: Taleigao Plateau, Goa University Campus, 13.9.96, 148.

Note: Common in flooded rice fields and temporary ponds; Endemic to Western Ghats.

Rotala verticillaris L. Mant. Pl. 2: 175. 1771; Cook in Boissiera 29: 23. 1979; Rao, Fl. Goa 1: 177. 1985. Joseph & Sivarajan in Proc. Indian Acad. Sci. (Plant Sci.) 99: 196. 1989. *Ammania rotala* Clarke in Hook. f. Fl. Brit. India 2: 567. 1879, non F. Muell (1858); Dalgado, Fl. Goa e Savantvadi 77; Vartak, Enum. Pl. Gomantak 53. 1966; Cooke, Fl. Bombay 1: 539. 1967 (reprint ed.).

An aquatic herb; leaves in whorls of 4-10, linear; acute; flowers pink; stamens included.

Exsiccata: Lolium, 24.8.96, 78.

Note: Abundant in temporary pools and ponds.

RUBIACEAE

Randia rugulosa (Thw.) Hook. f. Fl. Brit. India 3: 113. 1880; Cooke, Fl. Bombay 2: 28. 1967 (reprint ed.); Kulkarni, Fl. Sindhudurg 211. 1988. Almeida, Fl. Savantwadi 1: 215. 1990. *Griffithia rugulosa* Thw. Enum. 159. 1859. *G. speciosa* Beddoe, Ic. t. 37. 1874. *Catunaregam rugulosum* (Thw.) Tirvengadam in Bull. Mus. Nat. Hist. Nat. Paris 35: 20. 1978.

A large armed climbing shrub; fruit globose; seeds rugulose.

Exsiccata: Chorla, Alt. 360 m, 24.10.96, 271.

Note: Very common in open areas of Ghats.

LOBELIACEAE

Lobelia nicotianaefolia Roth ex Schultes in Roem. & Schultes, Syst. 5: 47. 1819; Clarke in Hook. f. Fl. Brit. India 3: 327. 1881; Dalgado, Fl. Goa e Savantvadi 108. 1898; Vartak, Enum. Pl. Gomantak 66. 1966; Cooke, Fl. Bombay 2: 131. 1967 (reprint ed.); Rao, Fl. Goa 2: 240. 1985; Kulkarni, Fl. Sindhudurg 233. 1988; Almeida, Fl. Savantvadi 1: 237. 1990.

A rare herb with hollow stem; flowers in terminal raceme; filaments connate to form a tube.

Exsiccata: Chorla, Alt. 430 m, 8.11.96, 317.

Note: Occasional along the open slopes.

APOCYNACEAE

Chonemorpha fragrans (Moon) Alston in Ann. Perad. 11: 203. 1929; Rao, Fl. Goa 2: 255. 1986; Kulkarni, Fl. Sindhudurg 249. 1988; Almeida, Fl. Savantvadi 1: 252. 1990. *Echites fragrans* Moon, Cat. 20. 1824. *E. macrophylla* Roxb. Fl. Ind. 2: 13. 1832. *Chonemorpha macrophylla* (Roxb.) G. Don, Gen. Syst. 4: 76. 1837; Hook. f. Fl. Brit. India 3: 661. 1882; Dalgado, Fl. Goa e Savantvadi 120. 1898; Vartak, Enum. Pl. Gomantak 74. 1966; Cooke, Fl. Bombay 2: 202. 1967 (reprint ed.).

A liana; leaves opposite, sub-cordate; flowers in axillary racemes, large, white in color, fragrant.

Exsiccata: Anjunem Dam, 29.6.97, 693.

Note: Large, showy, white flowered liana; usually along the streams on tree canopies during monsoons.

Rauvolfia densiflora (Wall.) Benth. ex Hook. f. Fl. Brit. India 3: 633. 1882; Vartak, Enum. Pl. Gomantak 53. 1966; Cooke, Fl. Bombay 2: 189. 1967 (reprint ed.); Kulkarni, Fl. Sindhudurg 252. 1988; Almeida, Fl. Savantvadi 1: 254. 1990. *Tabernaemontana densiflora* Wall. in Bot. Reg. 15: t. 1273. 1829. *Rauvolfia decurva* Hook. f. Fl. Brit. India 3: 633. 1882.

A small shrub; leaves whorled, lanceolate; flowers in dense racemes; corolla spreading, twisted, white.

Exsiccata: Chorla, Alt. 460 m, 29.6.97, 691.

Note: Found in forest areas of Ghats.

Rauvolfia tetrphylla L. Sp. Pl. 208. 1753. *R. canescens* L. Sp. Pl. (ed.2) 1: 303. 1762; Cooke,

Bombay 2: 190. 1967 (reprint ed.).

A small shrub; leaves whorled; flowers white; fruits red.

Exsiccata: Lolium Plateau, 24.8.96, 57.

Note: Introduced and naturalized; common along roadsides and in open areas.

ACANTHACEAE

Hemigraphis elegans Nees var. *crenata* C.B. Clarke in Hook. f. Fl. Brit. India 4: 425. 1884; Cooke, Fl. Bombay 2: 435. 1967 (reprint ed.).

A prostrate herb with lilac flowers.

Exsiccata: Chandranth, 30.1.97, 556.

Note: Common in forests as an undergrowth; endemic to Western Ghats.

Hygrophila pinnatifida (Dalz.) Sreem. Bull. Bot. Surv. India 10(2): 222. 1968; Kulkarni, Fl. Sindhudurg 327. 1988. Almeida, Fl. Savantvadi 1: 322. 1990. *Nomaphila pinnatifida* Dalz. in Hook. Kew J. Bot. 3: 38. 1851; Cooke, Fl. Bombay 2: 423. 1967 (reprint ed.). *Cardanthera pinnatifida* (Dalz.) Benth. in Gen. Pl. 2: 1074. 1876; Clarke in Hook. f. Fl. Brit. India 4: 405. 1885; Vartak, Enum. Pl. Gomantak 80. 1966.

An erect herb; leaves pinnatifid; flowers purple.

Exsiccata: Sanquelim, 16.3.97, 621.

Note: Found along the stream on the rocks.

Justicia betonica L. Sp. Pl. 15. 1753; Clarke in Hook. f. Fl. Brit. India 4: 525. 1885; Dalgado, Fl. Goa e Savantvadi 142. 1898; Vartak, Enum. Pl. Gomantak 82. 1966; Rao, Fl. Goa 2: 326. 1986; Kulkarni, Fl. Sindhudurg 329. 1988; Almeida, Fl. Savantvadi 1: 323. 1990. *J. ramosissima* Roxb. Fl. Inda. 1: 129. 1832. *J. betonica* L. var. *ramosissima* C.B. Clarke in Hook. f. Fl. Brit. India 4: 525. 1885; Cooke, Fl. Bombay 2: 486. 1967 (reprint ed.). *Adhatoda ramosissima* Nees in Wall. Pl. As. Rar. 3: 103. 1832.

An undershrub; flowering bracts large, brown, membranous with purple veins.

Exsiccata: Chorla, Alt. 430 m, 8.11.96, 313.

Note: Rare; on hill slopes.

Nilgirianthus barbatus (Nees) Bremck. Mat. Mon. Strob. 172. 1944; Vartak, Enum. Pl. Gomantak 81. 1966; Kulkarni, Fl. Sindhudurg 336. 1988;

Almeida, Fl. Savantwadi 326. 1990. *Strobilanthes barbatus* Nees in Wall. Pl. As. Rar. 3: 85. 1832; Clarke in Hook. f. Fl. Brit. India 4: 437. 1885; Cooke, Fl. Bombay 2: 445. 1967 (reprint ed.).

A large shrub; stem winged; leaves lanceolate, petiole winged; flowers in axillary and terminal spikes, white in colour.

Exsiccata: Nirankarichi Rai, 20.2.97, 576.

Note: Rare; found near the stream; endemic to Western Ghats.

LAMIACEAE

Anisomeles indica (L.) Kuntze, Rev. Gen. Pl. 2: 512. 1891; Vartak, Enum. Pl. Gomantak 86. 1966; Kulkarni, Fl. Sindhudurg 353. 1988; Almeida, Fl. Savantwadi 1: 343. 1990. *Anisomeles ovata* R. Br. in Ait. Hor. Kew. ed. 2. ii 364. 1811; Hook. f. Fl. Brit. India 4: 672. 1885; Dalgado, Fl. Goa e Savantwadi 151. 1898. *Nepeta indica* L. Sp. Pl. 571. 1753; Cooke, Fl. Bombay 2: 543. 1967 (reprint ed.).

An erect pubescent herb; stem angled; flowers pinkish, in cymes.

Exsiccata: Cotigao, 21.1.97, 519; Chandranath, 30.1.97, 546.

Note: Most common as an undergrowth in forests.

ARISTOLOCHIACEAE

Thottea siliquosa (Lam.) Ding Hou in Blumea 27(2): 327. 1981; Saldanha, Fl. Karnataka 1: 84. 1984; Kulkarni, Fl. Sindhudurg 372. 1988; Almeida, Fl. Savantwadi 359. 1990. *Apama siliquosa* Lam. Encycl. 1: 91. 1783. *Bragantia wallichii* R. Br. ex Wight & Arn. Edinburgh New Philos. J. 15: 181. 1833; Hook. f. Fl. Brit. India 5: 73. 1886; Vartak, Enum. Pl. Gomantak 89. 1966; Cooke, Fl. Bombay 3: 15. 1967 (reprint ed.).

An undershrub; leaves lanceolate, trinerved; flowers solitary, axillary, purple in colour; capsules

linear.

Exsiccata: Dhavali, near Ponda, 12.1.97, Urmila 491.

Note: A common undergrowth in forests.

EUPHORBIACEAE

Mallotus repandus (Willd.) Muell.-Arg. in Linnaea 34: 197. 1865; Hook. f. Fl. Brit. India 5: 442. 1887; Dalgado, Fl. Goa e Savantwadi 172. 1898; Vartak, Enum. Pl. Gomantak 95. 1966. *Croton repandus* Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4: 206. 1803.

A straggling shrub; leaves softly stellate, glandular pubescent; flowers minute, pistillate in panicles, staminate in racemes.

Exsiccata: Cotigao, 21.1.97, 516.

ACKNOWLEDGEMENT

We are thankful to the Goa State Council for Science and Technology for financial assistance. We also express our thanks and gratitude to the Directors of BLAT, BSI and MH for permitting us to consult their herbaria and libraries.

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