

Full Length Article

***Miliusa eriocarpa* Dunn and *Mitrephora heyneana* (Hook. f. & Thomson) Thwaites - Annonaceae, New distributional records for Andhra Pradesh, India**

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ABSTRACT

Miliusa eriocarpa Dunn and *Mitrephora heyneana* (Hook. f. & Thomson) Thwaites of the family Annonaceae are the new distributional records for the state of Andhra Pradesh, India. Report of the *Mitrephora heyneana* forms a new generic record to the state. Phytogeographically these species are significant as both are endemic to Southern Peninsular India and Sri Lanka.

Key words: *Miliusa eriocarpa*, *Mitrephora heyneana*, New Records, Endemics, Andhra Pradesh

INTRODUCTION

During our recent explorations in Veligonda hills, we could locate two curious woody plants in Rapur-Chitvel forest in the borders of Kadapa-Nellore districts which were identified as *Miliusa eriocarpa* Dunn and *Mitrephora heyneana* (Hook. f. & Thomson) Thwaites, both representing the family Annonaceae. Perusal of literature (Gamble 1921; Pullaiah and Chennaiah, 1997; Pullaiah and Sandhya Rani, 1999; Pullaiah and Muralidhara Rao, 2002; Suryanarayana and Sreenivasa Rao, 2007; Pullaiah and Karuppusamy, 2008; Reddy CS *et al.*, 2008) has revealed that the present collections form new distributional records for the state of Andhra Pradesh. *Mitrephora heyneana* form a new generic report for the state. Phytogeographically these species are significant as both are endemic to Southern Peninsular India and Sri Lanka (Huber 1985; Kundu 2006).

Miliusa Lesch. ex Candolle found in Austral-Asiatic ranges comprise 50 species (Ratheesh Narayanan *et al.*, 2012). In India, the genus is

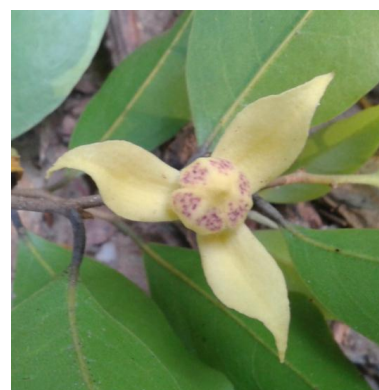
represented by 19 species, of which 15 are endemic to Indian subcontinent (Kundu 2006; Ratheesh Narayanan *et al.*, 2012). *Miliusa eriocarpa* is endemic to Peninsular India and Sri Lanka and so far known from Karnataka, Kerala and Tamilnadu states and both in Eastern and Western Ghats (Ramamurthy 1983; Mitra 1993; Huber 1985; Nenginghal 2004; Sasidharan 2004; Kundu 2006; Richards and Muthukumar, 2012) in evergreen and deciduous forests.

Mitrephora Hook. f. & Thomson comprises about 48 species and have scattered distribution in Tropical Asia and Australasia with centers of diversity in Borneo and Philippines (Weerasooriya and Saunders, 2005). Mitra (1993) and Kundu (2006) recognized 5 species from India including *Mitrephora heyneana* and cited its occurrence in Sri Lanka and India (Tamilnadu and Kerala). Our collection extends its distribution to Andhra Pradesh and since there are no representatives reported for the *Mitrephora* present report forms a new generic record to the state.

MATERIALS AND METHODS

As part of intensive field explorations in southern Eastern Ghats of Andhra Pradesh during summer of 2013, we could locate the species in reference in Rapur forest area, bordering Nellore-Kadapa districts. Representative specimens were collected in quadruplicates and poisoned, dried,

and made into herbarium following Jain and Rao (1977). The herbarium specimens were critically examined with help of standard floras and appropriate websites. The voucher specimens are deposited at Herbarium of department of Botany, Sri Krishnadevaraya University, Anantapuram (SKU).

Fig. 1 Habit of *Miliusa eriocarpa*Fig. 2 Flower of *M. eriocarpa*Fig. 3 Fruiting of *M. eriocarpa*Fig. 4 Habit of *Mitrephora heyneana*Fig. 5 Flower of *M. heyneana*Fig. 6 Fruiting of *M. heyneana*

RESULTS AND DISCUSSION

Miliusa eriocarpa Dunn in Gamble, Fl. Pres. Madras 1:21.1915. *Miliusa indica* Leschen. ex DC. var. *tomentosa* Hook. f. & Thomson in Fl. Brit. India 1: 86. 1872.

Description: Shrub, 3-4 m high; stem bark black in colour, young branches strigose. Leaves simple, alternate, lamina ovate-oblong to oblong-lanceolate, 5-8.6 × 1.8-3.5 cm, obtuse to acuminate at apex, base rounded, margins entire, upper surface green, glabrous, lower surface pubescent with straight hairs especially on midrib, secondary veins 9-14 pairs; petiole 2 mm long, tomentose. Flowers solitary, axillary, sometimes 2; green, flesh-coloured to dark red; pedicel 4-5 mm long, pubescent. Sepals 3, ovate, 2.5 × 1.2 mm, acute, glabrous, margins hairy. Petals 6, valvate, outer petals smaller than inner petals, sepal-like, lanceolate, 2-4 × 1 mm long, surfaces glabrous, margins hairy; inner petals ovate, acute, 9-13 × 4-5 mm long, green to dark red colour, surface glabrous. Stamens numerous, 1 mm long, filament sub sessile, angles truncate. Carpels 4-8, 2 mm long. Fruits 1-seeded, pubescent.

Fl. May -Sep: **Fr.** July - Nov.

Ecology: In dry deciduous forest, along the streams.

Population: Only 15 mature plants were located.

Distribution: Endemic to Southern Peninsular India and Sri Lanka (Karnataka, Kerala, Tamilnadu, Andhra Pradesh). Andhra Pradesh- Kadapa and Nellore districts.

Representative specimens: Rapur-Chitvel Ghat Road (Elevation: 434 m), 19-06-2013 BR & MCN 45919 (SKU).

Mitrephora heyneana (Hook. f. & Thomson) Thwaites. Enum. Pl. Zeyl. 8. 1864; Hook.f. & Thomson in Fl. Brit. India 1:77. 1872. *Orophea heyneana* Hook.f. & Thomson, Fl. Ind. 110. 185

Description: Tree, 5-8 m tall; stem bark black in colour, young branches pubescent. Leaves simple, alternate, lamina ovate-lanceolate, 6-11.5 × 1.5-3.8 cm, narrowed, acute to acuminate at apex, base rounded, margins entire, glabrous, upper surface green and lower pale green in colour; petiole 5 mm long, pubescent. Inflorescence axillary, cymose, 1-3 flowered. Flowers creamish-yellow with pink tinge; pedicel 5-6 mm long, pubescent. Sepals 3, ovate, 1.8 × 2 mm, acute, upper surface glabrous, lower surface pubescent. Petals 6, valvate; outer petals bigger than inner petals,

ovate-lanceolate, 10-16 × 5-7 mm, narrowly clawed at base, yellow, 5-veined, glabrous, margins pubescent; inner petals trapezoid, 6-8 × 3-4 mm, acute, clawed at base, yellow with pink streaks and spots, upper surface villous, lower glabrous. Stamens numerous, 1mm long, anthers oblong cuneate, connectives rounded and flat, filament sub sessile. Carpels 6-8, style short, stigma sub capitate. Berries 1-2 seeded, rusty.

Fl. March-June: **Fr.** Apr-Dec.

Ecology: In dry deciduous forest especially on hill tops.

Population: Only 50 mature plants were located.

Distribution: Endemic to Southern Peninsular India and Sri Lanka (Kerala, Tamilnadu, Andhra Pradesh). Andhra Pradesh- Kadapa and Nellore districts.

Representative specimens: Rapur-Chitvel Ghat Road (Elevation: 440 m), 21-03-2013 BR & MCN 45976 (SKU).

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