

Lectotypification of the name *Ormosia fordiana* (Leguminosae: subfamily Papilionoideae) and Its Addition to Flora of Arunachal Pradesh, India

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ओरमोसिया फोर्डियाना (लेग्यूमिनोसी: उपकुल पपीलिओनोइडी) का लेक्टोटाइपिफिकेशन एवं अरुणाचल प्रदेश के वनस्पतिजात में इसका नवीन संयोजन

रोहन मैती, सुधाशुं शेखर दाश एवं अशिहो असोशी माओ

सारांश

प्रस्तुत शोधपत्र में ओरमोसिया फोर्डियाना ऑलिव. (लेग्यूमिनोसी: उपकुल पपीलिओनोइडी) को अरुणाचल प्रदेश के लिये नवीन अभिलेख के तौर पर अभिलेखित एवं इसे 79 वर्षों के अंतराल के बाद पुनःसंग्रहित किया गया है। इस शोधपत्र में ओरमोसिया फोर्डियाना के लेक्टोटाइप को भी नामित किया गया है।

ABSTRACT

Ormosia fordiana Oliv. (Leguminosae subfamily papilionoideae) is reported here as a new record to Arunachal Pradesh and collected after a gap of 79 years from India. Lectotype of the name *Ormosia fordiana* is also designated here.

Keywords: Arunachal Pradesh, Lectotype, New addition, *Ormosia*, Typification

INTRODUCTION

The woody legume genus *Ormosia* of Leguminosae subfamily papilionoideae, was established by G. Jackson in 1811. The genus comprises about 132 species, geographically distributed in North Australia, tropical America and South East Asia (Mabberley, 2008; Hang and Vincent, 2010; Deng, 2014; Sinha & al., 2014). The genus is represented in India by seven species viz. *O. assamica* Yokovlev, *O. coccinea* (Aubl.) Jacks., *O. fordiana* Oliv., *O. glauca* Wall., *O. pinnata* (Lour.) Merr., *O. robusta* Baker

and *O. travancorica* Bedd. (Verma and Roy, 2014; Roy and Verma, 2014; Sinha & al., 2014) among which *O. assamica* and *O. travancorica* are known to be endemic to the India (Sanjappa, 1991).

Few interesting specimens of *Ormosia* were collected from Papumpare District of Arunachal Pradesh and further identified as *Ormosia fordiana* Oliv. The present communication deals with the extended distribution of the species, lectotypification of the name *Ormosia fordiana* Oliv. and collection of the taxon after a gap of almost eight decades from India.

MATERIALS AND METHODS

During floristic survey, few interesting specimens were collected from Papumpare District of Arunachal Pradesh. Flowers were dissected and detailed morphological study was carried out from live specimens. Detail literature studies (Baker, 1876; Oliver, 1896; Yakovlev, 1971; Hang and Vincent, 2010; Roy and Verma, 2014) and critical examination of specimens were performed. The genus *Ormosia* was identified by the combination of its clearly imbricate calyx lobes, ten free stamens, incurved style with a terminal, usually bilobed stigma and seed with a hard testa, often red, black or bicolored. Subsequently the specimens were further compared with the available photographs of authentic specimens deposited at Royal Botanic Garden, Kew [available at <http://apps.kew.org/herbcat/navigator.do>] and identified as *Ormosia fordiana* Oliv. The species can be easily identified in having obovate - elliptic leaflets with attenuate base and caudate apex; 2 persistent bracteoles at the apex of pedicel; vexillum cream-yellow dorsally and purplish ventrally; oblong, obliquely beaked, 1–3-seeded pods. The taxon was erstwhile recorded in India only from Umsaw Reserve Forest, Ri-Bhoi District of the state Meghalaya in 1940 by G.K. Deka and S.R. Sharma. (Roy and Verma, 2014).

Chowdhery & al. (1996) reported only one species *O. robusta* (Wight) Baker from Arunachal Pradesh. Thus, collection of *O. fordiana* makes a new distributional record of the taxon from the state of Arunachal Pradesh. The taxon is also collected after a gap of 79 years from India.

In this present communication, detailed description along with digital photographs and distributional details are provided.

TAXONOMIC TREATMENT

Ormosia fordiana Oliv. in Hooker's Icon. Pl. 25(1): pl.2422. 1895 (pub. 1896). *Ormosia acuminata* Graham ex Wall. in Numer. List n. 5973. 1831, nom. illeg.; *Ruddia fordiana* (Oliv.) Yakovlev in Bot. Zhurn. (Moscow & Leningrad) 56(5): 655. 1971. [Fig. 1 – 3]

Type (lectotype, designated here): - CHINA: Prov. Kwang Tung, North – West River, *s.d.*, *native collector, comm.* C. Ford 231, (K barcode K000759670 [digital image!]),

Fig. 1.

Tree upto 18 m tall; young branches and leaves densely rusty brown pubescent; leaves imparipinnate, 20–35 cm; petiole 5.0–6.5 cm, base pulvinous; leaflets 5–9; blades obovate – elliptic, terminal leaflet 14.5–20.0 × 4.5–6.5 cm, lateral leaflets 9.0–17.0 × 3.0–5.0 cm, apex caudate, margin entire, base attenuate, thinly leathery, glabrous, uncostate reticulate venation, midvein raised abaxially, impressed adaxially, lateral veins 11 pairs; petiolule 0.6–0.9 cm, grooved, rusty pubescent; panicles terminal on young branches, 20–30 cm; peduncle and pedicel densely appressed rusty pubescent; pedicel 9–12 mm; bracts linear - lanceolate, *c.* 8 mm, densely appressed rusty brown pubescent; bracteoles 2, at pedicel apex, lanceolate, *c.* 2–4 mm, densely appressed rusty brown pubescent; flowers 1.8–2.2 cm across; calyx persistent, *c.* 1.4 cm; teeth unequal, oblong - lanceolate, slightly obtuse, 0.9–1.0 cm long, upper 2/3 of upper pair connate, densely appressed rusty pubescent on both surfaces; tube short and wide open *c.* 0.4 × 0.3 cm; corolla papilionaceous; vexillum orbicular, cucullate, *c.* 1.8 × 1.6 cm when flattened, upper margin strongly inflexed; wings elliptic - obovate, *c.* 1.7 × 0.5 cm, apex obtuse, claw short; keels similar to wings, *c.* 1.8 × 0.7 cm; stamens 10, unequal, all fertile; filaments compressed at base, 0.9–1.6 cm; anthers dorsifixed, *c.* 1 mm long; ovary flattened, *c.* 0.9 × 0.2 cm densely appressed rusty brown silky pubescent; style incurved, *c.* 1.2 cm long, pubescent, stigma bilobed; pod oblong, 6.0–9.0 × 4.0–6.0 cm, apex obliquely beaked; valves woody, dehiscent, 2–3 mm thick, externally glabrescent, internally glossy; seeds 1–3, oblong, obtuse at ends, 2.0–2.5 × 1.0–1.5 cm, slightly flattened; hilum suborbicular, 3–4 mm.

Flowering: May – July. *Fruiting:* July – October.

Distribution: India (Arunachal Pradesh, Meghalaya) [Fig. 4]; Bangladesh, China, Myanmar, Philippines, Thailand and Vietnam.

Nomenclatural notes: Oliver (1896) described *O. fordiana* based on the specimen collected by native collector from Kwang Tung province, North – West River (China) having collection number 231 communicated to C. Ford. Thuan & al. (1987) cited a specimen (Ford 231, Guangdong China K) in: Flore du Cambodge, du Laos et du Vietnam, Vol. 23. It would have been inadvertently lectotypified the name *Ormosia fordiana*, had he been cited the same specimen mentioned in the protologue. As he failed to mention the same specimen (collected by a native collector from Kwang Tung provinces of China and communicated to C. Ford) the inadvertent lectotypification does not stand. During our study, we traced one specimen (K barcode K000759670



Fig. 1: Proposed Lectotype image of *Ormosia fordiana* Oliv.
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Fig. 2: *Ormosia fordiana* Oliv.: A. Habit; B. Leaves; C. Portion of Stem showing bark; D-E. Flowering twig; F. Fruiting twig.

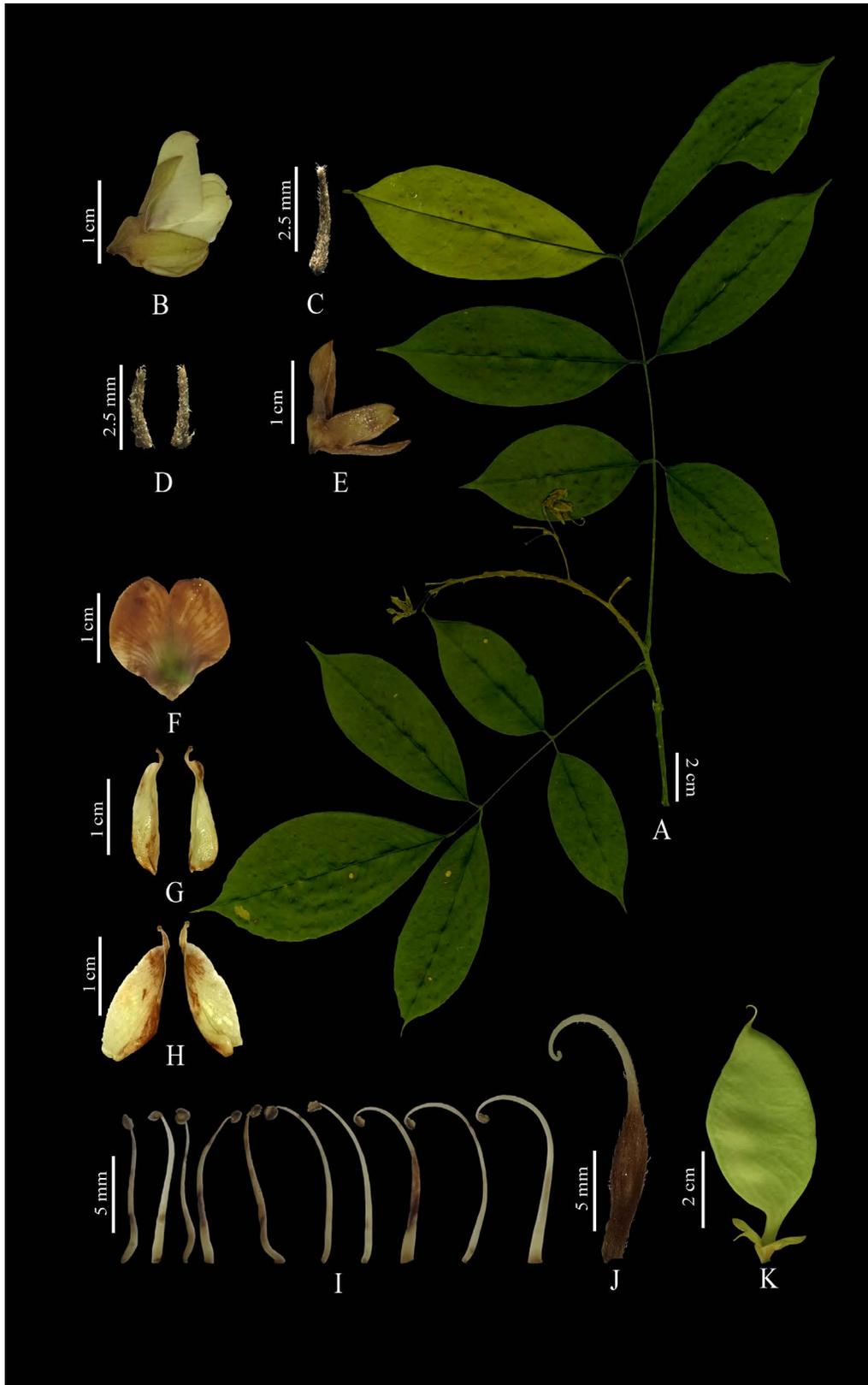


Fig. 3: *Ormosia fordiana* Oliv.: A. Flowering branch; B. Flower; C. Bract; D. Bracteoles; E. Calyx; F. Vexillum; G. Wings; H. Keels; I. Stamens; J. Gynoecium; K. Fruit.

digital image!) in K, collected by native collector with collection number 231, from the same locality mentioned in the protologue and was communicated to C. Ford. As the specimen annotated the same notes as mentioned in protologue, we consider it as the original materials and thus selected here as the lectotype.

Specimens examined: INDIA, Arunachal Pradesh, Papumpare, Ganga lake side, 27.076677 N, 93.566080 E, 09.06.2019, R. Maity 001; 27.076655 N, 93.566093 E, 09.06.2019, R. Maity 002.

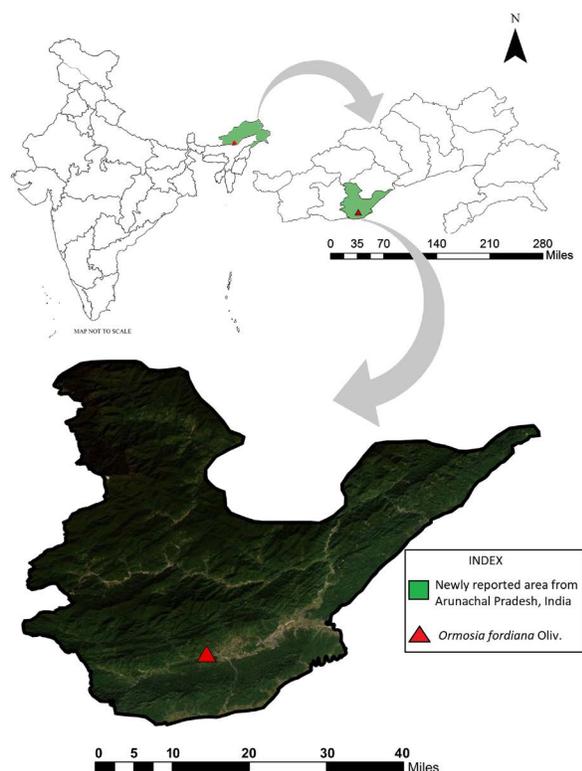


Fig. 4: Distributional map of *Ormosia fordiana* Oliv. in India.

NOTES

Earlier from India, specimens of *Ormosia fordiana* were collected in 1940 only by G. K. Deka and S. R. Sharma in flowering and fruiting respectively, from Umsaw Reserve Forest, Meghalaya. Several floristic works have been made in the state of Meghalaya by Kanjilal & al., 1938; Joseph, 1982; Balakrishnan, 1981; Haridasan and Rao, 1985; but there was no mention of this taxon. Roy and Verma in 2014 reported this taxon from India for the first time based on the collections of G. K. Deka and S. R. Sharma deposited

and preserved at herbarium of Botanical Survey of India, Eastern Regional Centre, (ASSAM) but could not locate any living specimen from the reported area of Meghalaya (Roy and Verma, 2014). The present communication not only deals with the extended distribution of the species but it also reports the location of living specimens of *O. fordiana* for the first time from India and collected after almost eight decades of collection by G. K. Deka and S. R. Sharma. Thus, the reported location in this communication might be the only location in India where the taxon is found at present. Further exploration is very much required for population census and introduction of seedlings in botanical gardens for ex-situ conservation.

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