Entada reticulata Gagnep. (Leguminosae-Mimosoideae),
Newly Recorded for Thailand

WONGSATIT CHUAKUL* & IVAN C. NIELSEN**

ABSTRACT

Entada reticulata Gagnep. is reported for the first time in Thailand, with a full
description and illustrations. Two variants of E. reticulata are recognized: the red-
flowered and the green-flowered forms.

Entada reticulata Gagnep. Not. Syst. 2: 59 (1911); in Fl. Gén. I-C. 2: 64. 1913;

E. tamarindifolia Pierre ex Gagnep., l.c.; in Fl. Gén. I-C. 2: 63. 1913, p.p.; Pham Hoang

Trailing or climbing shrub. Leaves bipinnate, alternate, petioles 1–1.6 cm long,
rachis puberulous, 1.4–3 cm long; pinnae 2 pairs, 4–9 cm long; the terminal pinnae
transformed into tendrils; leaflets opposite, 8–19 pairs per pinna, 6–16 by 2–5 mm,
narrowly oblong, apex retuse, mucronate, velutinous on both surfaces. Inflorescence
axillary, spiciform raceme, 5–12 cm long, rachis puberulous; pedicel ca 1 mm long. Sepal
green or dark red, 1–1.2 mm long, united, campanulate, 5-toothed, velutinous. Petal green
or dark red, 5, free, 3–4 mm long, oblong-lanceolate to oblanceolate, acute, eglandular.
Stamens 10, fertile, free; anthers glabrous; filaments up to 5 mm long. Ovary superior,
sessile, glabrous, 1.5–2 mm long; style about 5 mm long. Pod 4.5–13 cm long and 1.2–
1.9 cm broad, at first green, glabrous, curved and turned brownish when ripe; valves
splitting transversely at maturity into 1-seeded segments; exocarp coriaceous, loosening,
leaving the persisting endocarp as a closed envelope around seed; endocarp
chartaceous; the segments falling away from the suture, which persists as an empty
frame. Seeds 8–8.5 mm in diameter, 4–9, subglobular with a brown hard sclerotesta.

The genus Entada comprises approximately thirty species widely distributed in
tropical areas of the World and about nine species in Asia. I. C. Nielsen (1985) reported
three species from Thailand, two giant climbers, i.e. Entada rheedii Spreng. and E.
spiralis Ridl. and one trailing or climbing shrub, E. glandulosa Pierre ex Gagnep.

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In comparison with *E. glandulosa*, it was found that *E. reticulata* is smaller in almost characters, except the many more number of pairs of leaflets (Table 1). There are two forms of *E. reticulata*, from different areas. They differ significantly in their sepal and petal color and petal shape. The red-flowered form was found in Phu Lon Forest, Sri Mueang Mai District, Ubon Ratchathani Province, its sepal and petal is dark red and its petal is oblong-lanceolate, whereas the green-flowered form possessing green sepal and petal and oblong-lanceolate petal was collected in Kaeng Sri Khot Forest, Sirindhon District, Ubon Ratchathani Province.

The voucher specimens of *E. glandulosa* (Wong 213) and *E. reticulata* (Green-flowered: Wong 214, 215; Red-flowered: Wong 216, 217) were deposited at Bangkok Herbarium, Botany Section, Botany and Weed Science Division, Department of Agriculture, Ministry of Agriculture and given serial number as BK 62478, BK 62476, BK 62479, BK 62477 and BK 62475, respectively.

Table 1 Comparative characters of *Entada reticulata* Gagnep. and *E. glandulosa* Pierre ex Gagnep.

<table>
<thead>
<tr>
<th>Characters</th>
<th><em>E. glandulosa</em></th>
<th><em>E. reticulata</em> (green-flowered)</th>
<th><em>E. reticulata</em> (red-flowered)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pinnae length (cm)</td>
<td>7–9</td>
<td>4–8.5</td>
<td>7–9</td>
</tr>
<tr>
<td>petiole length (cm)</td>
<td>2–3</td>
<td>1.1–1.6</td>
<td>1–1.4</td>
</tr>
<tr>
<td>rachis length (cm)</td>
<td>2.5–4.5</td>
<td>1.4–3</td>
<td>1.4–2</td>
</tr>
<tr>
<td>Leaflets:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pairs</td>
<td>6–8</td>
<td>12–19</td>
<td>8–17</td>
</tr>
<tr>
<td>width (mm)</td>
<td>7–9</td>
<td>2–3</td>
<td>3–5</td>
</tr>
<tr>
<td>length (mm)</td>
<td>15–30</td>
<td>6–12</td>
<td>10–16</td>
</tr>
<tr>
<td>Inflorescence:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>length (cm)</td>
<td>12–15</td>
<td>5–7</td>
<td>6–12</td>
</tr>
<tr>
<td>florets number</td>
<td>67–100</td>
<td>32–52</td>
<td>36–66</td>
</tr>
<tr>
<td>sepal color</td>
<td>brownish red</td>
<td>green</td>
<td>dark red</td>
</tr>
<tr>
<td>petal color</td>
<td>green</td>
<td>green</td>
<td>dark red</td>
</tr>
<tr>
<td>petal shape</td>
<td>oblong-lanceolate</td>
<td>oblong-lanceolate</td>
<td>oblong-lanceolate</td>
</tr>
<tr>
<td>Pod:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>width (cm)</td>
<td>(2.5)3–3.7</td>
<td>1.2–1.8</td>
<td>1.7–1.9</td>
</tr>
<tr>
<td>length (cm)</td>
<td>(14)25–29</td>
<td>4.5–13</td>
<td>10.5–12</td>
</tr>
<tr>
<td>seeds number</td>
<td>(7)10–11</td>
<td>4–9</td>
<td>5–7</td>
</tr>
<tr>
<td>seed diameter (mm)</td>
<td>12–16</td>
<td>8–8.5</td>
<td>8–8.5</td>
</tr>
<tr>
<td>segment length (cm)</td>
<td>2–2.5</td>
<td>1.4–1.5</td>
<td>1.4–1.5</td>
</tr>
</tbody>
</table>

**Distribution.**—Cambodia, Laos, and Thailand. In Thailand the green-flowered form was collected from Kaeng Sri Khot Forest, Sirindhon District, Ubon Ratchathani Province and the red-flowered form was collected in Phu Lon Forest, Sri Mueang Mai District, Ubon Ratchathani Province. The root is used as a medicinal plant in treatment of chronic wounds and abscesses by local application and young pod as vegetable like some other legumes.
Ecology.— In dry mixed deciduous forests and dry deciduous dipterocarp forests; especially on limestone and altitude up to 500 m.

Vernacular.— Bar bon (ไทยฉัน).

MATERIAL STUDIED

Wong 214 (BK 62476): flower of the green-flowered form of E. reticulata Gagnep.
Wong 216 (BK 62477): flower of the red-flowered form of E. reticulata Gagnep.
Wong 217 (BK 62475): pod of the red-flowered form of E. reticulata Gagnep.

ACKNOWLEDGEMENTS

Thanks are due to Mr. Subin Laokok, a local herbalist for information regarding medicinal use of this plant. We are most grateful to Mrs. Chaweewan Chaikaew for valuable suggestions.

REFERENCES

Figure 1. *Entada reticulata* Gagnep.: 1. branch with inflorescence 2. leaflet 3a. petal (green-flowered) 3b. petal (red-flowered) 4. pistil 5. stamen 6. anther 7. floret 8. pod 9. endocarp 10. seed 11. segment of pod. Wong 214 (BK 62476), Wong 215 (BK 62479) and Wong 216 (BK 62477).
Figure 2. *Entada reticulata* Gagnep. (red-flowered).

Figure 3. *Entada reticulata* Gagnep. (green-flowered).
Figure 4. *Entada reticulata* Gagnep., pod.