Selaginella decipiens Warb.\[ Selaginellaceae\[ a new record from China

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Abstract Selaginella decipiens Warb.\[ Selaginellaceae\[ is reported from Guangxi and Yunnan provinces of China. The taxon was previously known from North Vietnam and Northeast India. It can be confused with S. bodinieri Hieron. in general habit and with S. chingii Alston in shape of lateral leaves but is characterized by its large\[ subentire lateral leaves\[ large axillary leaves and very short strobili.

Key words Selaginella\[ Selaginella decipiens Warb.\[ new record\[ China.

Selaginella decipiens Warb.\[ Selaginellaceae\[ is herein reported to occur in Yunnan and Guangxi provinces\[ China. The taxon was previously known only from Northeast India\[ Warburg\[ 1899\[ Alston\[ 1945\[ Baishya \& Rao\[ 1982\[ Dixit\[ 1984\[ 1992\[ and North Vietnam\[ Alston\[ 1951\[ H\[ 1991\[ not recorded from China. An early collection of this species from South Yunnan\[ K. M. Feng 13097\[ PE was named as a new species S. marlipeonis Ching but not published. It was also collected from Southwest Guangxi. In general S. decipiens Warb. shares some common characters with S. bodinieri Hieron. and S. chingii Alston. It superficially resembles the former in general habit and has lateral leaves similar to those of the latter. The differences among them are shown in Table 1.

Selaginella decipiens can be easily distinguished from S. bodinieri and S. chingii by its large\[ subentire lateral leaves on the upper part of the main stems and primary branches\[ uniform leaves on the main stems below the leafy portion\[ large axillary leaves somewhat glabrous roots and very short strobili.


Fig. 1

Plants terrestrial\[ evergreen\[ erect 45 – 80 cm long with a long simple main stem\[ pinnately decompound in upper part\[ blade-like\[ with creeping subterranean rhizomes and stolons. Rhi-zophores restricted to creeping rhizomes and stolons 4 – 9 cm long\[ not including the forked roots\[ rather thick 0.6 – 1.4 mm diam. \[ roots much forked\[ glabrous. Main stem branched from middle part\[ the branches not very regular\[ some much longer\[ and not equal on both sides\[ unbranched main stem 15 – 30 cm tall below the leafy portion 1 – 2 mm diam. in basal part of main stem\[ angulate\[ sulcate. Leaves on main stems or below the leafy portion distant\[ about the same size as

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Table 1  Comparison of Selaginella decipiens with S. bodinieri and S. chinii

<table>
<thead>
<tr>
<th></th>
<th>S. bodinieri</th>
<th>S. chinii</th>
<th>S. decipiens</th>
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</thead>
<tbody>
<tr>
<td>Habit</td>
<td>erect or suberect</td>
<td>creeping or dropping on cliffs</td>
<td>erect</td>
</tr>
<tr>
<td>Rhizophores</td>
<td>restricted to lower part of stem[1] 1.5 – 4 cm long</td>
<td>restricted to lower part of stem[1] 0.5 – 2.5 cm long</td>
<td>restricted to creeping rhizome and stolons[1] 4 – 9 cm long</td>
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<tr>
<td>Roots</td>
<td>hairy</td>
<td>densely hairy</td>
<td>glabrous</td>
</tr>
<tr>
<td>Axillary leaves</td>
<td>2.0 – 3.2 × 0.9 – 1.6 mm</td>
<td>2.0 – 2.8 × 0.8 – 1.3 mm</td>
<td>3.5 – 4.2 × 1.9 – 2.8 mm</td>
</tr>
<tr>
<td>Median leaves</td>
<td>2.4 – 3.4 × 1.2 – 1.8 mm margins denticulate or ciliate at base</td>
<td>0.8 – 1.6 × 0.4 – 1.0 mm margins denticulate</td>
<td>1.2 – 2.0 × 0.4 – 1.0 mm margins denticulate</td>
</tr>
<tr>
<td>Lateral leaves</td>
<td>3.4 – 4.4 × 1.6 – 2.2 mm[acroscopic margin denticulate or ciliate at base][basiscoptic margin entire]</td>
<td>2.5 – 3.2 × 1.1 – 1.4 mm[acroscopic margin minutely denticulate][basiscoptic margin minutely denticulate]</td>
<td>3.0 – 4.6 × 1.4 – 3.0 mm[acroscopic margin subentire][basiscoptic margin entire]</td>
</tr>
<tr>
<td>Strobili</td>
<td>4.0 – 16.0 × 1.4 – 2.4 mm</td>
<td>5.0 – 15.0 × 1.8 – 3.0 mm</td>
<td>3.0 – 6.5 × 1.6 – 2.5 mm</td>
</tr>
<tr>
<td>Megasporocytes</td>
<td>light-yellow[granulate][146.7 – 266.7 × 173.3 – 333.3 μm]</td>
<td>grey[granulate][reticulate][160.0 – 253.3 × 200.0 – 293.3 μm]</td>
<td>whitis or slightly pink[granulate][200.0 – 346.7 × 273.3 – 360.0 μm]</td>
</tr>
<tr>
<td>Microspores</td>
<td>yellow[tuberculate][verrucate][17.3 – 32.0 × 22.7 – 27.2 μm]</td>
<td>orange-red[verrucate][rugulate][19.6 – 32.7 × 18.3 – 39.2 μm]</td>
<td>yellow[tuberculate][rugulate][15.1 – 21.6 × 18.3 – 26.8 μm]</td>
</tr>
</tbody>
</table>

those on branches[uniform][green][obliquely ovate-lanceolate][appressed][margin minutely denticulate]. Primary leafy branches 5 – 8 pairs[2 – 3 times pinnately branched][secondary branches 1 – 2 times pinnately branched][branchlets regular][the middle primary branches 7 – 19 cm long][2.5 – 6.5 cm wide][adjacent primary branches on main stem 3.5 – 8.0 cm apart][dorsiventrally flattened][main stem of the leafy portion including leaves 6 – 9 mm wide in the middle][ultimate branches 4 – 5 mm wide including leaves]. Leaves decussately arranged except on the unbranched main stem[dimorphous][herbaceous][surface glabrous][not wrinkled][margin subentire][slightly white-margined]. Axillary leaves on main stem strongly asymmetrical[trapeziform or obliquely widely ovate][3.5 – 4.2 × 1.9 – 2.8 mm][margin minutely denticulate][base exauriculate][on branches ovate. Median leaves more or less symmetrical[those on main stems of the leafy portion obviously larger than those on branches][2.2 – 2.8 × 0.9 – 1.3 mm][on primary branches oblong-lanceolate][contiguous to inbricate][1.2 – 2.0 × 0.4 – 1.0 mm][slightly keeled][apex aristate][often bent backwards][base truncate][margins denticulate]. Lateral leaves asymmetrical[those on main stem of the leafy portion obviously larger than those on branches][4.6 – 6.3 × 2.7 – 3.6 mm][on primary branches ovate-triangular or oblong-falcate][spreading][3.0 – 4.6 × 1.4 – 3.0 mm][apex subacute or obtuse][subentire][the acroscopic base strongly enlarged][broader][overlapping the stem][the basiscoptic base rounded][the acroscopic margin minutely denticulate][the basiscoptic margin entire]. Strobili compact[dorsiventrally complanate][solitary][terminal][3.0 – 6.5 × 1.6 – 2.5 mm][sporophylls dimorphous or strongly dimorphous][margin not white-margined][resupinate][upper sporophylls larger with denticulate sporophyll-pteryx on the inner surface][ovate-lanceolate][margin denticulate][not keeled][apex acute][lower sporophylls ovate][margin denticulate][carinate][apex acuminate to aristate][usually with only microsporangia or only one megasporangium at base of lower side][the rest being microsporangia][microspores yellow][tuberculate][rugulate][15.1 – 21.6 × 18.3 – 26.8 μm][megaspores whitish or slightly pink][granulate][200.0 – 346.7 × 273.3 – 360.0 μm].

Distributions. China[Guangxi][Yunnan][Vietnam][Tonkin][and India][Assam].

Ecology. In dense forests at altitudes of 1200 – 1500 m.
Fig. 1. *Selaginella decipiens* Warb. A. habit; B. axillary leaf; C. lateral leaf; D. median leaf; E. strobilus, dorsal review; F. strobilus, ventral review; G. megasporophyll; H. microsporophyll. Drawn by C. Z. Ji from X. C. Zhang 1130.

Representative specimens examined.

**China. Guangxi** (广西): Longzhou (Longjin) (龙州), D. Q. Zhou 21394 (PE); Napo (那坡), Xiahua (下华), Guinong Mt. (规弄山), X. C. Zhang et al. 1130 (PE). **Yunnan**
Abstract 报道了拟大叶卷柏在中国广西和云南的分布。该种的分布原来只知道在越南北部和印度东北部。它在形体上近似大叶卷柏而侧叶形状和秦氏卷柏的一致，但以其较大的、近全缘的侧叶，以及较大的腋叶和较短的孢子叶穗同上述两种不同。

Key to Selaginella decipiens S. bodinieri and S. chingii
1. Stems erect or suberect.
   2. Stems erect rooting at base lateral leaves subentire ............................................. S. decipiens Warb.
   2. Stems suberect rooting in the lower one-third lateral leaves ciliate at base .............. S. bodinieri Hieron.
   1. Stems creeping rooting at intervals lateral leaves minutely denticulate ...................... S. chingii Alston

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References