Tomoko FUKUDA\textsuperscript{a,*}, Takayuki YAMADA\textsuperscript{b} and Masayuki MAKI\textsuperscript{c}: Chromosome Number of \textit{Microtropis japonica} (Celastraceae) in Japan

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Summary: We counted the chromosome number of \textit{Microtropis japonica} Hallier f. (Celastraceae) collected in Shimoda City, Shizuoka Prefecture, Honshu, Japan. This plant had $2n = 74$ chromosomes. The chromosome number of this species is first reported here and is different from those of other previously reported Celastraceae genera.

\textit{Microtropis japonica} (Franch. \& Sav.) Hallier f. (Celastraceae) is an evergreen shrub that grows up to about 3–5 m in height and flowers from February to March. This species is distributed in the Pacific coast of Kanto region (Boso Peninsula, Shonan district and Izu Peninsula) (Biological Society of Chiba Prefecture 1975, Sugimoto 1984, Flora-Kanagawa Association 2001), Izu Islands (Sugiyama 1983), southwestern Kyushu (Nakanishi 1996), Ryukyu Islands (Shimabuku 1997), and Taiwan Island (including Lanyu Islet) (Editorial Committee of the Flora of Taiwan, Second Edition 1993). According to Merrill and Freeman (1940), the genus \textit{Microtropis} is composed of over sixty species and most of them are distributed in southern China or Southeast Asia. \textit{Microtropis japonica} is the only \textit{Microtropis} species distributed in Japan.

Chromosome numbers of the family Celastraceae are not well studied until now. In regard to native Celastraceae species in Japan, chromosome numbers were previously counted only in a few species, for example, \textit{Celastrus orbiculatus} Thumb. ($2n = 46$; Baranec and Murin 2003) and \textit{Euonymus japonicus} Thumb. ($2n = 32$; Sugiura 1931). In this study, we report the chromosome number of \textit{Microtropis japonica}. This species is interesting in having an unusual disjunct distribution pattern (Horikawa 1962, Nakanishi 1996). This is the first report on the chromosome number of \textit{Microtropis} species.

Materials and Methods

We observed the chromosomes of four \textit{Microtropis japonica} individuals ($N = 4$; individual nos. 2, 12, 15 and 20) collected in Shimoda City, Shizuoka Prefecture, Japan (Table 1). The methods for chromosome observation followed Fukuda et al. (2007) with modification. Root tips were pretreated in 2 mM 8-hydroxyquinoline solution for 3 hours at 4 °C after for 1 hour at room temperature, then fixed

Table 1. Somatic chromosome numbers in four individuals of \textit{Microtropis japonica}

<table>
<thead>
<tr>
<th>Sample number</th>
<th>Chromosome number (2n)</th>
<th>Latitude (N)</th>
<th>Longitude (E)</th>
<th>Altitude (m)</th>
<th>Voucher</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>74</td>
<td>34°40′10.40″</td>
<td>138°57′41.74″</td>
<td>3</td>
<td>TNS-VS-1286496</td>
</tr>
<tr>
<td>12</td>
<td>74</td>
<td>34°40′08.76″</td>
<td>138°57′41.00″</td>
<td>34</td>
<td>TNS-VS-1286497</td>
</tr>
<tr>
<td>15</td>
<td>74</td>
<td>34°40′09.07″</td>
<td>138°57′38.39″</td>
<td>36</td>
<td>TNS-VS-1286498</td>
</tr>
<tr>
<td>20</td>
<td>74</td>
<td>34°40′15.14″</td>
<td>138°57′50.47″</td>
<td>11</td>
<td>TNS-VS-1286499</td>
</tr>
</tbody>
</table>
The genus *Microtropis* has two widely distributed species, *M. discolor* (Wall.) Wall. ex Meisn. and *M. fokienensis* Dunn, and other regional species are considered as local endemics (Merrill and Freeman 1940). It is important to determine the chromosome numbers of other *Microtropis* species including these two species with wide distribution in order to reveal the diversity of the chromosome numbers and ploidy levels in the genus *Microtropis*.

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References