

## Karyomorphological studies of six species of *Lachenalia* (Asparagaceae)\*

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ラケナリア属（キジカクシ科）6種における核形態学的研究

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### Summary

Chromosome studies in six species of *Lachenalia* were made. The chromosome numbers of  $2n=14$ , 18 or 28 were counted. Chromosome number of *L. angelica* ( $2n=14$ ) was reported here for the first time, and of *L. attenuata* ( $2n=18$ ) and *L. youngii* ( $2n=18$ ) were different from the numbers of previous reports.

**Keywords:** Karyotype, Chromosome number, *Lachenalia*, *Lachenalia angelica*, *Lachenalia attenuata*, *Lachenalia youngii*

### Introduction

*Lachenalia* is an ornamentally meritorious genus in the family Asparagaceae. This genus consists of 133 species (139 taxa), and is endemic to South Africa and Namibia (Duncan 2012). In *Lachenalia*, chromosome studies have been done in 94 species (Duncan 2012), and demonstrated their chromosome numbers of  $2n=10$ , 12, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 32, 36, 40, 42, 44, 49 and 56 (e.g. Mofett 1936, de Wet 1957, Fernandes and Neves 1962, Crosby 1986, Johnson and Brandham 1997, Hamatani *et al.* 1998, 2004, 2007, Spies *et al.* 2000, 2002, 2008, 2009, Spies 2004 and Hamatani 2011). Based on the previous information of their chromosome numbers, the basic chromosome number of this genus have been concluded (Spies *et al.* 2011), and detail karyomorphological studies were held on some reports (e.g. Mofett 1936, Hamatani *et al.* 1998, 2004, 2007, 2009, 2010, Spies 2004 and Hamatani 2011). However, many of the previous information were remitted only their chromosome number, therefore there are still remaining the necessities for detail observations about the chromosome character of *Lachenalia* species.

In this study, we made cytogenetical observations on six species of *Lachenalia* for the first time.

### Material and Methods

Plant species observed in this study are listed in Table 1. The material plants were cultivated in the Hiroshima Botanical Garden.

For the chromosome observation, root tips were harvested and pretreated in 2mM 8-hydroxyquinoline at 20°C for two hours, before they were fixed and stored in the 3:1 ethanol and acetic acid below freezing

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